



St. George's Barracks

Transport Assessment

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IN PARTNERSHIP WITH



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Contents

1.0	Introduction	3
2.0	Project Background	4
3.0	Community Engagement.....	5
4.0	Planning Context.....	7
5.0	Existing Conditions	9
6.0	Development Proposals	28
7.0	Development Scenarios	32
8.0	Trip Generation and Distribution.....	36
9.0	Future year Assessments	39
10.0	Sustainable Development Opportunities	54
11.0	Residual Impacts and Mitigation.....	56
12.0	Summary and Conclusions	65
	Figures.....	67

Appendices

- Appendix 1: Traffic Assignment Figures
- Appendix 2: Build Out Programme and Trip Rates
- Appendix 3: TRICS Data Sheets
- Appendix 4: Mitigated Junction Drawings
- Appendix 5: Traffic Survey Data
- Appendix 6: Junction Modelling Outputs

1.0 INTRODUCTION

- 1.1. Campbell Reith Hill LLP (CampbellReith) has been appointed by Rutland County Council (RCC) and the Defence Infrastructure Organisation (DIO) to provide highway and transportation planning advice and to undertake a Transport Assessment to support a potential Local Plan Allocation for the redevelopment of St Georges Barracks located in Edith Weston, Rutland.
- 1.2. The proposed development seeks to comprehensively redevelop the existing St Georges Army Barracks and associated land to provide, refurbish and modernise a Shopping Centre that is currently in administration and in a poor state of repair. The uses proposed are appropriate to the context of the local area and comprise the provision of:
 - Up to 2,315 residential dwellings (C3), of which 2,215 are to come forward as part of the main site, 70 units at the Officers Mess and 30 units at the existing primary school;
 - Up to 62,200 sqm of commercial floorspace (office / general industry / light industrial / storage and distribution – use classes B1a/b/c, B2 and B8) as well as community facilities and associated retail spaces; and
 - Replacement three form entry primary school.
- 1.3. The quantum of development is such that a full Transport Assessment (TA) is required to support this proposal to understand and identify any impacts on the existing network as a direct result of the emerging masterplan. In preparing this TA reference has been made to the following:
 - The updated National Planning Policy Framework (July 2018);
 - The National Planning Practice Guidance;
 - Emerging Rutland Local Plan; and
 - Manual for Streets.
- 1.4. This TA is subdivided into ten chapters, the chapters being:
 - Chapter 1: Introduction;
 - Chapter 2: Project Background;
 - Chapter 3: Community Engagement
 - Chapter 4: Policy Context;
 - Chapter 5: Existing Conditions;
 - Chapter 6: The Site and Development Proposals;
 - Chapter 7: Trip Generation and Distribution;
 - Chapter 8: Future Year Assessments and Development Scenarios;
 - Chapter 9: Sustainable Development Opportunities;
 - Chapter 10: Residual Impacts and Mitigation;
 - Chapter 11: Residential Travel Plan Objectives; and
 - Chapter 12: Summary and conclusions.

2.0 PROJECT BACKGROUND

- 2.1. Following the Ministry of Defence's declaration (2016) that the existing St Georges Barracks site would be surplus to operational requirements by 2020, work has progressed to identify options for future development.
- 2.2. Rutland County Council (RCC) have recognised the development opportunity and have entered into a partnership with the Ministry of Defence (MOD) to achieve a solution that co-designs the best outcomes for delivery of housing, supporting infrastructure, commercial development and leisure and recreation.
- 2.3. A key feature of the partnership is that it allows RCC and, importantly the surrounding community, an opportunity to shape and influence future growth within Rutland through the revised Local Plan process.
- 2.4. As part of the initial work, a concept masterplan was produced to understand the full development potential of the site. Sitting alongside the masterplan was a high-level Transport Assessment produced by Aecom (April 2018), outlining the potential impact of the development on the existing highway network.
- 2.5. A series of public consultation events were held in eight locations across the County to present the initial potential development proposals, including the concept masterplan and supporting information. Feedback to the scheme was actively encouraged and has been incorporated within the development of the detailed masterplan, of which this transport assessment sits alongside.
- 2.6. It is the intention that the detailed masterplan and associated technical documents will provide the necessary justification for RCC to include the potential development at St Georges Barracks in their revised Local Plan which is due to be published towards the end of 2018.
- 2.7. The next version of the masterplan has been produced by EHDC-RegenCo to reflect these recommendations. This proposes a development of 2215 homes on the main garrison site; 14 hectares of employment space (capable of generating at least 1 job for each home); a replacement 3-form entry Primary School; a new local centre with shops, health and well-being, and community facilities; an heritage zone around the site of the Grade II* listed Thor Missile site; extensive landscaped buffer areas; and significant infrastructure enhancements and improvements including highways, public transport, walking and cycling and utilities. Proposals for potential 'community ownership' of some assets have also been made.
- 2.8. Further details of all of these elements are included in the overall 'evolving masterplan' package of documents produced by the wider EHDC-RegenCo Team.

3.0 COMMUNITY ENGAGEMENT

- 3.1. As mentioned in Section 2, a series of consultation events were held across Rutland with the intention of informing the local community of the potential development proposals and obtaining constructive feedback to influence further, detailed masterplan work.
- 3.2. A full analysis of the community engagement was carried out by RCC which took into account the comments received by questionnaires, emails, face to face conversations, online surveys and petitions. This feedback has been coupled with the MOD's requirements for the redevelopment of St George's Barracks and a set of 40 recommendations that will help to shape the evolving masterplan have been developed.
- 3.3. There were a number of comments received regarding the size and scale of the development, the importance of infrastructure and local transport provision – all of which are directly related to the outcomes of this Transport Assessment.

Size and Scale of Development

- 3.4. The key comments received regarding the suggested size and scale of the development were:
- Reduce the number of dwellings to between 1,500 and 2,700;
 - Removal of eastern satellite site (circa 500 dwellings);
 - Local Centre to be central to any new community;
 - Further details on possible phasing and timescales for development.

Importance of Infrastructure

- 3.5. In terms of infrastructure, the following comments were received through the community engagement process:
- Transport Assessment to be further developed;
 - Access to the north, via Wytchley Warren Lane to be included with separate access points for residential and commercial traffic;
 - Proposals for traffic calming measures and improvement measures for the surrounding villages;
 - Proposals to be outlined for construction traffic.

Local Transport Provision

- 3.6. While improvements to the existing road network will be necessary, additional comments were received with regard to sustainable travel measures which include:
- Sustainable transport package to come forward as part of the proposals including dedicated bus links to local service centres and existing transport hubs;
 - Cycling to be considered holistically and connections between the proposed site and the existing infrastructure to be provided;
 - Electric vehicles and emerging technology should be considered;

- Park and Ride facility for Rutland water should be explored within the site;
- Consideration of the likely parking provision throughout the development.

4.0 PLANNING CONTEXT

This section of the Transport Assessment sets out the current and relevant planning and transport policies at national, regional and local level that are likely to be applied to the development proposals.

4.1. National planning and transport policies

4.1.1. The national planning and transport policies and guidance that are relevant to the transport elements of the development proposals are set out in the following documents:

- The National Planning Policy Framework (NPPF); and
- The web-based National Planning Practice Guidance.

4.1.2. The 'National Planning Policy Framework' was first published in March 2012 and updated in July 2018. This is the current planning guidance document for England. This aims to encourage a more sustainable approach to transport that reduces the negative environmental impacts associated with the private car remains. It aims to balance the transport system in favour of sustainable transport modes and give people a choice about how they travel.

4.1.3. Section 9 of the revised NPPF has focusses on "Promoting Sustainable Transport" with provides further guidance on considering development proposals, which include:

- *Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *Safe and suitable access to the site can be achieved for all users; and*
- *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to and acceptable degree.*

4.1.4. Paragraph 109 reinforces that 'Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

4.1.5. The Planning Practice Guidance states that Travel Plans, Transport Assessments and Statements 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.

4.1.6. They support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.

4.2. Rutland County Council – Emerging Local Plan (2016 - 2036)

4.2.1. As the potential development of St Georges Barracks has progressed significantly since the 2017 Consultation Draft Local Plan was first put forward, there is a need to consider the redevelopment potential of St George's through the Local Plan process.

4.2.2. A further round of public consultation is therefore being undertaken and Rutland County Council is seeking views on the potential implications of including development of the St. George's site for the new Rutland Local Plan. A snapshot of the proposed Policy relating to the development has been taken from the Local Plan and is included below:

Policy RLPxx – St George's Garden Village

Planning permission will be granted for the creation of a new Garden Village of between 1,500 and 3,000 dwellings at St George's. The new community must be developed as a comprehensive mixed use scheme in accordance with a finalised masterplan prepared for the whole site and to be agreed by the Council.

The finalised and agreed masterplan must demonstrate how it will deliver a sustainable new community based on the following Rutland Garden Village principles:

1. Ensures that the potential development funds the delivery of appropriate services and facilities to support and benefit the well-being of both the new and existing, neighbouring communities.
2. Sets out a clear vision for the development of the new community and facilitates a programme of community engagement throughout the master-planning process.
3. Establishes a Community Trust (which will be transferred to the new community with residents/ Parish Councils as Trustees) to ensure the creation of a flourishing and vibrant community, making it a place where people want to live and work in the future.
4. Provides a genuinely mixed community with new homes of various types and tenures which meet the needs of residents in terms of size, affordability and choice of ownership, including appropriate provision for local people to enter onto the housing market.
5. Provides a range of work choices to allow residents to choose to live and work at home, within the new community and the County, and act as a focal point for new enterprise.
6. Ensures that the new settlement is developed within a set of high-quality design principles concerning the use of appropriate styles and materials which ensures that the development respects both its immediate context and reflects its location within Rutland.
7. Design and development that protects and, where possible, enhances the natural environment within the site through the creation of significant areas of public open space, a network of green corridors and the creation of new habitat to support an overall increase in biodiversity across the whole site and its relationship to the wider County.
8. Promotes the incorporation of sustainably designed "future proof" homes and workplaces.
9. As part of the first phase, ensures the develop a new local centre which will become the heart of the new community and the potential primary focus for cultural, recreational, education, health shopping and leisure activities.
10. Ensure that the layout of the development looks to facilitate extensive safe routes for walking and cycling, particularly to the local centre, the related employment areas providing linkages to the existing neighbouring community.
11. Ensure that as far as possible public transport opportunities are established and enhanced in order to provide convenient and accessible choices to the new community.

These principles should be embedded into the planning, development, delivery and ongoing lifetime of the community. Community infrastructure will be provided for the first phase of development to ensure new community can develop from the very start.

4.2.3. The following planning policy documents remain relevant to the proposed development at St George's, including the saved policies from the previously adopted Local Plan (2001) highlighted in the April 2018 Transport Assessment:

- Core Strategy Development Plan Document (DPD) – adopted July 2011;
- Site Allocations and Policies DPD – adopted October 2013; and
- Minerals Core Strategy and Development Control Policies DPD – adopted October 2010.

5.0 EXISTING CONDITIONS

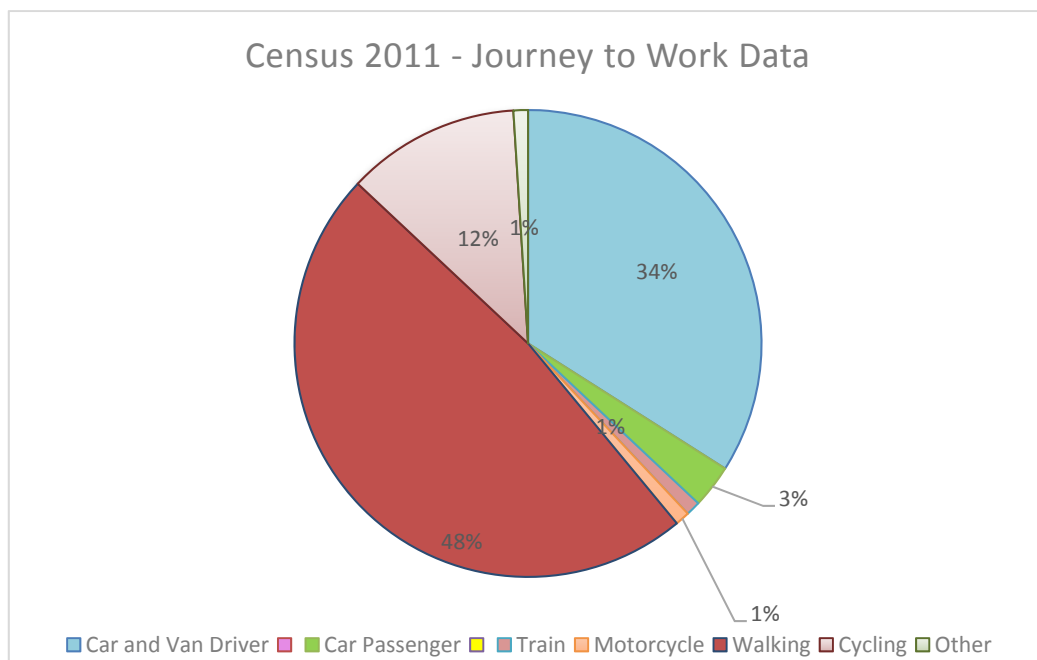
This section of the Transport Assessment sets out the existing land uses currently permitted within the development site, and seeks to establish the baseline conditions on the local transport network.

The Existing Site

- 5.1.1. St George’s Barracks is situated in a rural location between the villages of Edith Weston and North Luffenham, close to the south shore of Rutland Water. Oakham is the closest town, located approximately 5 miles (8 km) from the barracks. A site location plan is included as **Figure 1**.
- 5.1.2. Stamford, which is approximately 9 miles (14.5 km) from the barracks, has high street stores, restaurants and Morrison’s, Sainsbury’s, Lidl, Waitrose supermarkets, plus a small Tesco. St George’s Barracks was established on the site of the former RAF North Luffenham airfield, in 1998. Originally built as a training airfield opening in 1940, it later became a heavy bomber base during WW2.
- 5.1.3. The existing site is an operational Barracks site, providing support to the wider defence overseas engagement and capacity building remit through the provision of short term training teams, mentors, specialist advisors and exchange programs. As mentioned within the introduction, this facility is due to close in 2021.
- 5.1.4. The primary vehicular access to the existing site is from Edith Weston Road, located on the western boundary of the site. To the norther, additional access is available from Pennine Drive across the existing Golf Course.

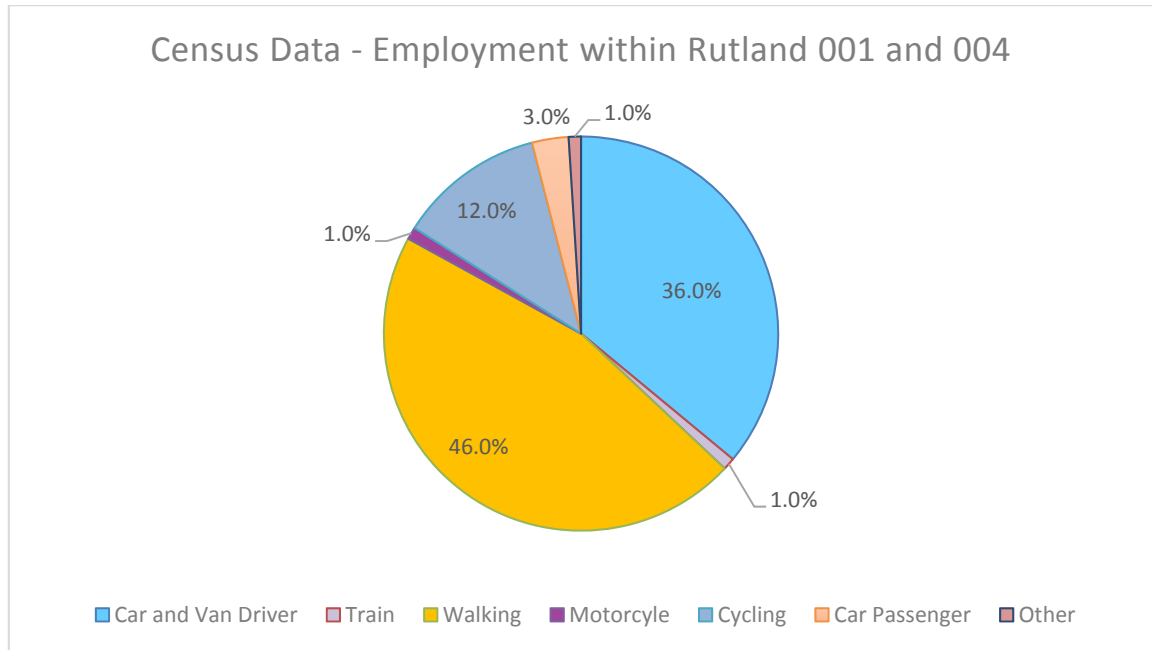
5.2. Existing travel patterns

- 5.2.1. Interrogation of the 2011 Census shows that the site falls within Super Output Area Mid Layers ‘Rutland 001’ and ‘Rutland 004’. The method of travel to work modal split for these areas is shown in Graph 5.1 below:



Graph 5.1 – Modal split of journeys to work for residents of ‘Rutland 001 and 004’

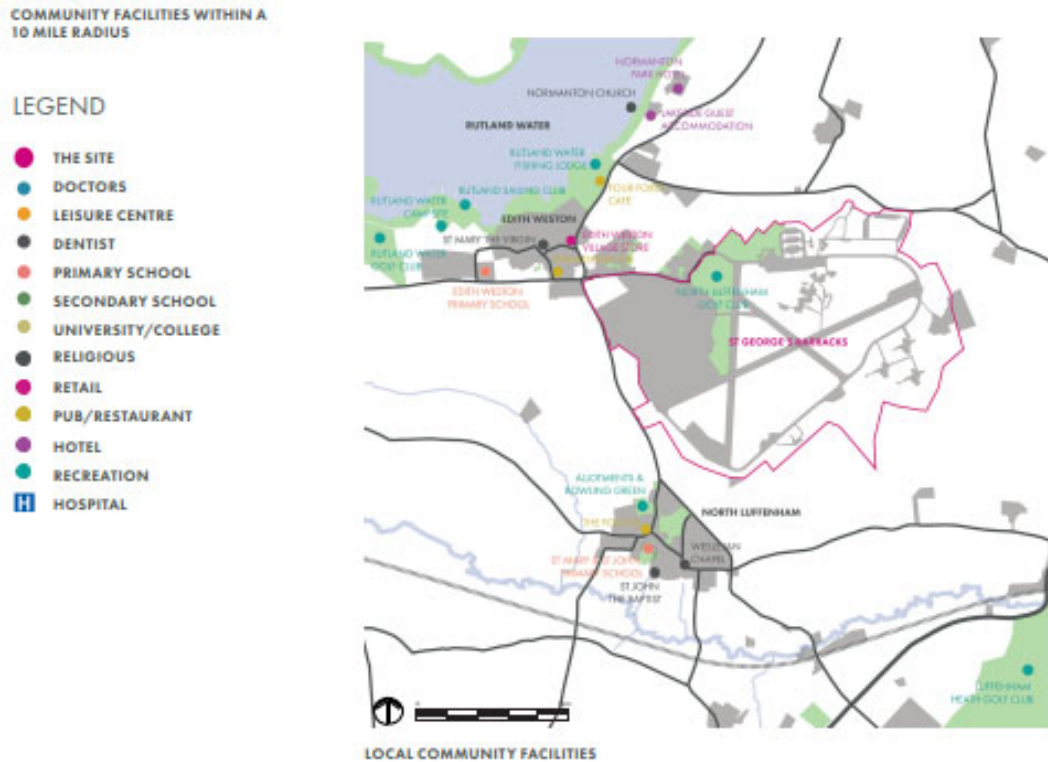
- 5.2.2. This demonstrates that approximately 37% of people, who live within Rutland 001 and 004, travel to work via car and that 62% of people travel via sustainable modes of transport which include walking, cycling and public transport.
- 5.2.3. A similar assessment was made with regard to the people who work within Rutland 001 and 004. The method of travel to work modal split for these areas is shown in Graph 5.2 below:



Graph 5.2 – Modal split of journeys for employment within ‘Rutland 001 and 004’

- 5.2.4. This demonstrates that approximately 40% of people, who live within Rutland 001 and 004, arrive at work via car, van or motorcycle and that 60% of people travel via sustainable modes of transport which include walking, cycling and public transport.
- 5.3. **The surrounding area**
 - 5.3.1. The Rutland landscape has an individual and distinctive character. It is a slightly hilly and rolling county, deeply cut by wide valleys whose features reflect the underlying Jurassic geology. The environmental quality of Rutland’s landscape is high and the character of the landscape is varied with five different landscape character types.
 - 5.3.2. Rutland has 21 Sites of Special Scientific Interest (SSSIs) including Rutland Water, which is an internationally designated wetland site with importance for wintering and passage wildfowl. There are 190 local wildlife sites and important areas of calcareous grassland and ancient and broadleaved woodland in the county.
 - 5.3.3. St George’s Barracks itself is not covered by any landscape designations, however is it located less than a kilometre from Rutland Water, which is covered by numerous designations and is a very popular tourist attraction.
 - 5.3.4. Rutland Water is Anglian Water’s drinking water reservoir. It was known as Empingham Reservoir during its construction and until its official opening in 1976. It provides a reserve supply of water in the driest and most densely populated quarter of the UK, and is one of the largest artificial lakes in Europe. Rutland Water benefits from a 23-mile (37 km) perimeter track for walking or cycling.

- 5.3.5. The site lies within the Parish of Edith Weston. The village is picturesquely situated on the north side of the main road from Manton to Ketton. Whilst separate from the village, the Barracks give the impression of the village extending to the south of Pennine Drive.
- 5.3.6. The image below, taken from the EHDC-RegenCo Evolving Masterplan – Phase 2 document (October 2018) demonstrates the existing site and its proximity to local services and facilities.



5.4. **Public transport**

- 5.4.1. The site currently has limited access to public transport links. The closet stops are located along Manton Road, approximately 400m west of the site. The Bus Stops, known locally as the Wheatsheaf Bus Stops, are served by the Number 12 Centrebus Service between Uppingham and Stamford.
- 5.4.2. The indicative route map is shown below, taken from Moovit, which demonstrates the potential linkage with both Stamford and Uppingham from the development site. At present, there is not a direct service to Oakham.



Table 3.2: Existing public transport services, destinations and frequencies

Service Number	Bus Stop Location	Route	Daytime frequency	Evening frequency
Bus Services				
12	Manton Road	Stamford - Uppingham	Every 2 hours	Every 2 hours*

*Service typically terminates at 18:30.

5.4.3. In terms of Rail, the nearest station to the development site lies within Oakham (approximately 11.5km northwest of the site). While Oakham benefits from a well-connected service, it is not considered that rail is currently a realistic method of travel for commuters unless travel distances were significantly greater (<50 miles).

5.4.4. Current services from Oakham provide direct connections with Leicester, Birmingham New Street, Stamford and Peterborough at hourly frequencies.

5.5. **Walking**

5.5.1. St Georges Barracks is bordered by a well-developed pedestrian network, with all streets providing appropriate footway facilities on one or both sides of the carriageway as well as desirable crossing point locations.

5.5.2. The existing pedestrian network provides access to all local facilities, schools, places of interest and leisure facilities and public transport nodes. **Figure 2** identifies the 5, 10 and 15 minute walking isochrones from the development site to provide a visual representation of reasonable walking distances to and from the site. A snapshot is included below:



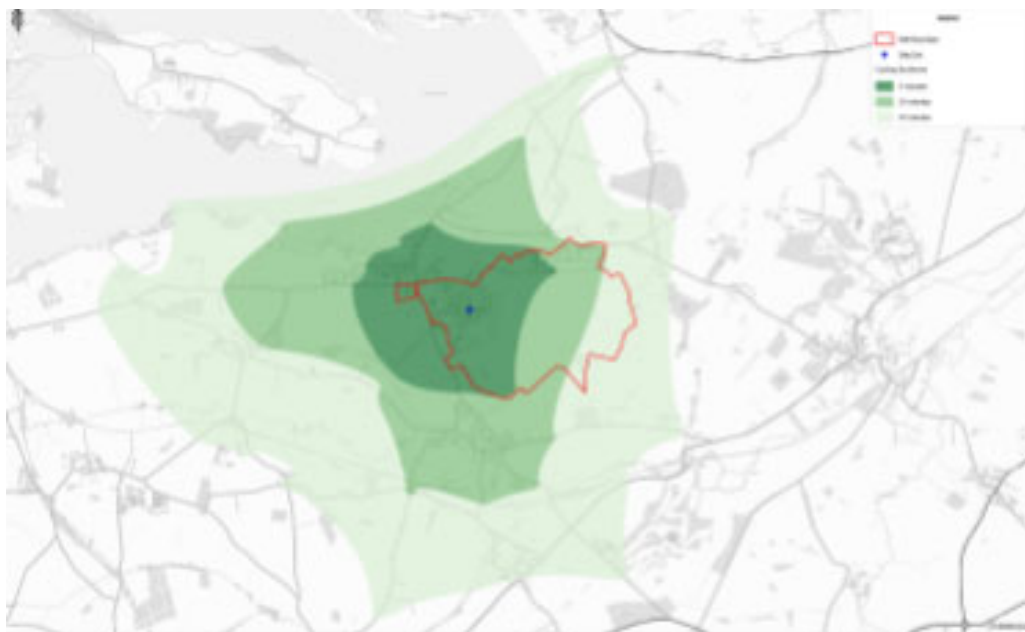
5.6. **Cycling**

5.6.1. There are no formal cycle lanes or cycle paths adjacent to the site; however due to the relatively rural nature of the existing road network, surrounding area is considered suitable for cyclists.

5.6.2. Sustrans National Cycle Network (NCN) in the vicinity of the site. The closest access to Route 63 is located approximately 10km northwest of the site, on the eastern edge of Oakham. The route travels for approximately 113 miles from Burton on Trent passing through the large cities of Leicester, Stamford and Peterborough before arriving at Wisbech.

The Local circular Route around Rutland Water Reservoir runs for approximately 23km. It starts in Oakham and joins the waterside path towards Whitwell.

5.6.3. **Figure 3** identifies the 5, 10 and 15 minute cycling isochrones from the development site to provide a visual representation of reasonable cycling distances to and from the site. A snapshot of this is included below:



5.7. The Local Road Network

5.7.1. The following roads around the St Georges Barracks site are considered relevant when assessing any potential impact that the development proposal may have on the operation of the existing local road network:

- Edith Weston Road;
- Lyndon Road / Manton Road;
- Normanton Road;
- Pennine Drive;
- Wytchley Road / Wytchley Warren Lane;
- Station Road, and
- Lyndon Road.

Edith Weston Road

5.8. Edith Weston Road is located along the western boundary of the site and provides an existing vehicular access into St Georges Barracks. The road connects Manton Road, to the north, with the A6121 and the A47, to the south. Edith Weston Road has an existing speed limit of 30mph from the junction with Manton Road for a distance of 20m past the existing Barracks access at which point the speed limit increases to the national speed limit running south.

5.9. In terms of existing footways, there is a 1.8m wide footway that links the existing St Georges Barracks with Edith Weston, located on the eastern side of the footway. The location of the existing footway switches to the western side for the remainder of Edith Weston Road although there are not currently any crossing facilities.

5.9.1. A photo of Edith Weston Road is included below, taken from south of the existing access where the speed limit changes.



- 5.9.2. Traffic count data was collected in October 2017 to understand the baseline conditions with regard to the volume of traffic on the existing road network. A location, just south of the existing main access, recorded 24 hour, weekday two-way traffic flows of 2,192. This equates to a total of 233 two-way AM Peak (07:45-08:45) movements and 233 two-way PM Peak (16:30-17:30) movements along this section of road.

Lyndon Road / Manton Road

- 5.9.3. From the A6003, Lyndon Road runs east towards the village of Manton where the speed limit is reduced from 40mph to 30mph. Footways are present either side of St Marys Road with existing Bus Stops located adjacent to the carriageway with adequate waiting facilities. A picture of the western section of Lyndon Road is included below:



- 5.9.4. Lyndon Road continues onto the Charter Close mini roundabout, shown below. Just east of the mini-roundabout, the speed limit increases to the national speed limit and a segregated cycleway is present until it reaches Rutland Water Nature Reserve (with the exception of a small section of on-carriageway cycle lanes between the Garden Nursery and the Nature Reserve).
- 5.9.5. Just east of the Nature Reserve, carriageway edging is introduced in the form of white lines and the national speed limit continues until it reaches the boundary of Edith Weston, where the speed limit is reduced to 30mph. An existing footway, immediately north of the carriageway is present and a typical section of this stretch of road is included below:
- 5.9.6. This section of Manton Road is a single carriageway located northwest of the site, via Edith Weston Road. Manton Road is considered the main route through Edith Weston and connects with the A6003 to the west and Normanton Road to the east.
- 5.9.7. Lyndon Road / Manton Road provide vehicular access to a number of significant destinations located south of Rutland Water including the Nature Reserve, Garden Nursery, Sailing Club, Edith Weston Academy, Rutland Water Golf Club and existing residential settlements.
- 5.9.8. Traffic count data was collected in October 2017 to understand the baseline conditions with regard to the volume of traffic on the existing road network. A location, just east of the Charter Close mini-roundabout (on Manton Road), recorded 24 hour, weekday two-way traffic flows of

3,010. This also recorded to a total of 274 two-way AM Peak (07:45-08:45) movements and 317 two-way PM Peak (16:30-17:30) movements along this section of road.

Normanton Park Road

- 5.9.9. Normanton Park Road is single carriageway road, subject to the national speed limit, which connects the A606 with Edith Weston. There are grass verges located either side of the carriageway but Normanton Park Road does not benefit from any adjacent footways until it reaches Edith Weston itself where the speed limit reduces to 30mph and an existing footway is present along the western side of the carriageway.



- 5.9.10. In terms of existing use, traffic counts located north of Wytchley Road, recorded 24 hour, weekday two-way traffic flows of 2,862. The traffic data also recorded to a total of 263 two-way AM Peak (07:45-08:45) movements and 265 two-way PM Peak (16:30-17:30) movements along this section of road.

Pennine Drive

- 5.9.11. Pennine Drive runs along the northern boundary of the site. It is considered a local access road providing vehicular access to an existing residential settlement as well as North Luffenham Golf Club. It is subject to a 30 mph speed limit and has a carriageway width of approximately 6.4 metres. An existing 2m footway is provided on the southern side of the carriageway. A typical section of Pennine Drive has been included in photo 7 below.



- 5.9.12. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that along Pennine Drive, a total of 86 two-way AM Peak (07:45-08:45) movements and 75 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

Wytchley Road / Wytchley Warren Lane

- 5.9.13. Wytchley Road is a local access road running east, towards Ketton, from Normanton Road. It has an approximate 4.2m-4.5m carriageway width which currently serves a number of residential and agricultural properties. There are no existing footways located adjacent to the carriageway but there is a wide verge either side. A typical section of the road is shown below in photo 4:



- 5.9.14. Due to its existing rural nature there is a lack of street lighting and footways. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that along Wytchley Road, a total of 21 two-way AM Peak (07:45-08:45) movements and 20 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

Station Road

- 5.9.15. Station Road is another single carriageway which connects Edith Weston Road with the A47, running through North Luffenham. Station Road is subject to a 40mph speed limit over the majority of its length with the speed limit reducing to 30mph at North and South Luffenham respectively. An existing automatic level crossing exists along Station Road, on the approach to the Station Road / A6121 mini roundabout, pictured below:



- 5.9.16. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that along Station Road (on the approach to the A6121 mini roundabout), a total of 177 two-way AM Peak (07:45-08:45) movements and 174 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

A6003

- 5.9.17. The A6003 provides the strategic link between Oakham and Corby, as well as access to the A47. It runs from north – south, located immediately west of Rutland Water. The A6003 is generally subject to the National Speed Limit although in the vicinity of the Lyndon Road junction, speed is reduced to 40mph through the junction itself, which sits on the brow of a hill.



- 5.9.18. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that at the A6003 / Lyndon Road junction, a total of 1,056 two-way AM Peak (07:45-08:45) movements and 919 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

A606

- 5.9.19. The A606 provides a direct connection between Oakham and the A1 and forms a strategic function for vehicles travelling within Rutland. It benefits from a wide carriageway with right turn filter lanes present at a number of points to accommodate right turns without interfering with the free-flow of traffic. Footways are not present along the A606 and a typical stretch of the road has been shown below:



5.9.20. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that immediately east of the Normanton Park / A606 junction, a total of 1,057 two-way AM Peak (07:45-08:45) movements and 927 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

5.9.21. Further Manual Classified Turning Counts were undertaken on 15 November 2018 at the A606 junction with Main Street Empingham which is an existing priority junction. The results indicated a total of 849 two-way movements during the AM Peak (07:45-08:45) and 807 two-way movements during the PM Peak (16:30-17:30).

A6121

5.9.22. The A6121 provides a local strategic link between the A47 and the A1. The A6121 is subject to a national speed limit for the majority of its length, reducing to 40mph on the approach to the Station Road mini roundabout. Street lighting is not generally evident along the length of the A6121, with the exception of South Luffenham and Stamford.

5.9.23. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results indicated that just west of the Station Road mini roundabout, a total of 372 two-way AM Peak (07:45-08:45) movements and 344 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

A47

5.9.24. The A47 is a strategic access road providing a direct route between Leicester and Peterborough. The A47 has an appropriately wide carriageway width to cater for strategic traffic. No footways exist along the A47 and a typical section has been demonstrated in the photo below, which also includes the existing junction with Station Road:



5.9.25. Manual Classified Turning Counts were undertaken during the peak periods on 5 October 2017 to understand the existing volume of traffic at key junctions in the Edith Weston area. The results

indicated that along the A47 (immediately east of the junction with Station Road), a total of 830 two-way AM Peak (07:45-08:45) movements and 736 two-way PM Peak (16:30-17:30) movements occurred along this section of road.

5.10. **Strategic Road Network**

5.10.1. In addition to the impact on the Local Network, Highways England have been consulted as part of the Transport Assessment process to understand the extent of the Strategic Road Network (SRN) that is to be considered.

A1

5.10.2. The A1 is a strategic route between London and Edinburgh and consists of a dual carriageway road and a central reserve including the appropriate vehicle restraint. This section of the A1 is subject to the National Speed Limit. A number of junctions are located along this section of the A1 and as part of the wider assessment, any trip assignment exercise will be extended to include the following junctions on the SRN:

- A1 / A606 Junction;
- A1 / Greetham Lane Junction;
- A1 / A47 Junction.

5.11. Traffic data is to be obtained from Highways England for this section of the SRN to enable the trip assignment exercise to be extended.

5.12. **Traffic Assignment**

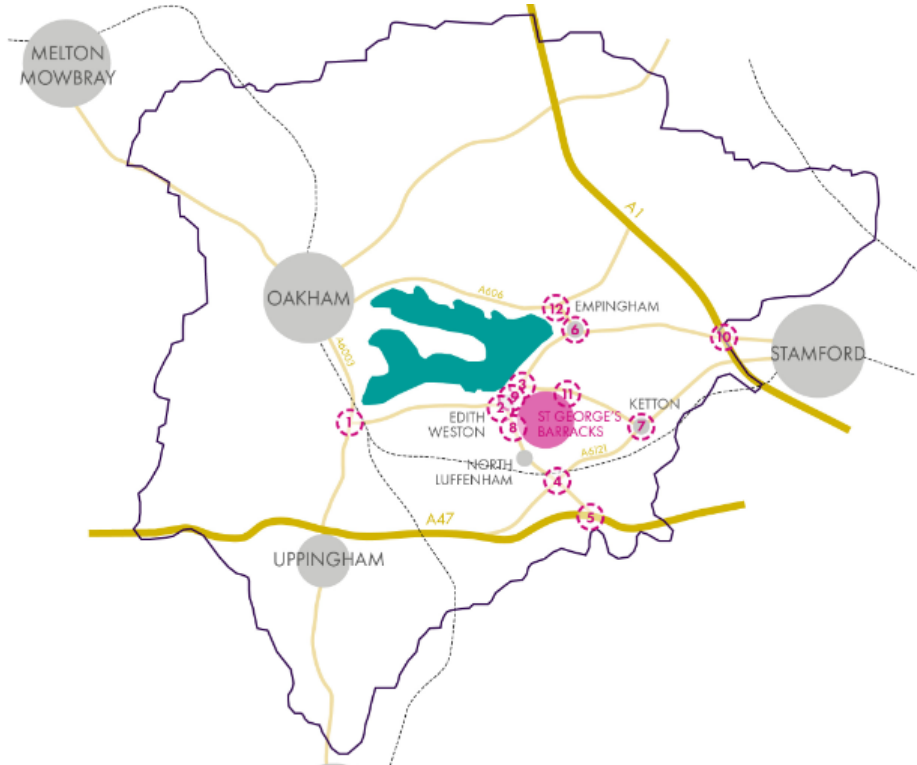
5.12.1. In order to determine the existing traffic patterns on the local road network, the data extracted from the turning count surveys and automatic surveys has been used to form a number of Trip Assignment traffic flow models through the key junctions associated with this study area.

5.12.2. These key junctions are specified below with each junction reference being retained for the remainder of this report:

- Junction 1: A6003 / Lyndon Road Junction;
- Junction 2: Manton Road / Edith Weston / Normanton Park Junction;
- Junction 3: Wytchley Road / Normanton Road Junction;
- Junction 4: A6121 / Station Road Junction;
- Junction 5: A47 / Station Road Junction;
- Junction 6: A606 / Normanton Park Road Junction;
- Junction 7: A6121 / Empingham Road / Church Road Junction;
- Junction 8A: Main Site Access from Edith Weston Road;
- Junction 8: Southern Access from Edith Weston Road;
- Junction 9: Pennine Drive / Normanton Road Junction;
- Junction 10: A1 / A606 Junction;
- Junction 11: New 'northern' access onto Wytchley Road (western);
- Junction 12: A606 (Whitwell Road) / Main Street Empingham junction.

5.12.3. These junctions were surveyed on 5 October 2017 between the hours of 0700-1000 and 1500-1800. The recorded peak hour turning movements at each junction are contained within **T1 and T2 of Appendix 1** of this Transport Assessment.

5.12.4. The location of these junctions are shown on the Figure below:



5.13. Junction Assessment

5.13.1. The operation of the above local road network and the associated junctions under existing conditions has been assessed using the following methods:

- Individual assessments of each priority junction using the Junction 8 assessment suite (PICADY and ARCADY); and
- Individual assessments of signalised junction using the LinSig assessment suite, where appropriate.

5.13.2. The modelling assessments have been carried out during the AM and PM peak periods to capture the busiest periods and provide a robust transport assessment.

5.13.3. The results of the Junctions Assessments for each of the existing junctions set out in paragraph 5.12.2 are summarised in the Tables below with a short narrative regarding their current capacity.

5.13.4. These junctions were assessed through the April 2018 Transport Assessment and therefore a check has been applied to these rather than re-running the relevant junction modelling process. The results below indicate the current Max Queue Lengths and Ratio to Flow Capacity (RFC) to understand the current operation of each junction.

5.13.5. In terms of the individual junction assessments, any RFC below 0.85 is considered to operate with some spare capacity, any junction with a RFC of between 0.85-0.99 suggest that the junction is at capacity and values above 1.0 indicate that queuing and delay is likely to start to occur and that appropriate forms of mitigation should be explored.

- 5.13.6. Each of the junctions have been assessed in the Base Year 2025, at which point it is anticipated that the first occupations of the development site may occur.

Junction 1: A6003 / Lyndon Road

- 5.13.7. Situated 3.6 miles directly west of the site, the existing junction consists of a large crossroads with waiting facilities located in a central refuge. The western access point leads into a local Field Access and is not considered likely to generate any significant levels of traffic.

Table 5.1: Summary of the results of Existing 2024 peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Lyndon Rd to A6003 South & Field Access (west)	0.16	0.14	0.19	0.16
Lyndon Rd to A6003 North & Lyndon Road Central Island	0.90	0.48	1.17	0.54
A6003 North to Central Island	0.00	0.00	0.00	0.00
Existing Field Access to All Movements	0.00	0.00	0.01	0.01
A6003 South to Lyndon Road	0.18	0.16	0.22	0.19

- 5.13.8. As can be seen from the above Table, the existing junction in its current form does not suffer from any significant queuing and is operating with spare capacity.

Junction 2: Manton Road / Edith Weston / Normanton Park Junction

Table 5.2: Summary of the results of Existing 2024 peak hour assessments for Junction 2.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Road	0.35	0.25	0.19	0.16
Edith Weston Road	0.17	0.15	0.28	0.21
Manton Road	0.19	0.16	0.20	0.17

- 5.13.9. As can be seen from **Table 5.2** the existing mini-roundabout is operating well, with spare capacity and minimal queuing.

Junction 3: Wytchley Road / Normanton Road Junction

Table 5.3: Summary of the results of Existing 2024 peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	0.03	0.03	0.05	0.05
Wytchley Road to Normanton Park Road North	0.01	0.01	0.01	0.01
Normanton Road South to Normanton Park Road North and Wytchley Road	0.07	0.05	0.06	0.04

- 5.13.10. As can be seen from **Table 5.3** the Wytchley Road / Normanton Road junction operates well within capacity during both the AM and PM peak hours, with significant spare capacity.

Junction 4: A6121 / Station Road Junction;

Table 5.4: Summary of the results of Existing 2024 peak hour assessments for Junction 4.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6121 (North East)	0.27	0.21	0.19	0.15
Station Road (South East)	0.08	0.06	0.25	0.20
A6121 (South West)	0.27	0.21	0.21	0.17
Station Road (North West)	0.11	0.09	0.09	0.09

5.13.11. As can be seen from **Table 5.4** the existing A6121 / Station Road mini-roundabout operates well within capacity during both the AM and PM peak hours, with the highest RFC being 0.21.

Junction 5: A47 / Station Road Junction

5.13.12. Located three miles south of the development site, Junction 5 takes the form of an existing priority junction.

Table 5.5: Summary of the results of Existing 2024 peak hour assessments for Junction 5.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Station Road to A47 West and East	0.26	0.20	0.18	0.16
A47 East to A47 West and Station Road	0.52	0.25	0.51	0.22

5.13.13. As can be seen from **Table 5.5** the existing junction operates well within capacity during both the AM and PM peak hours with minimal queuing occurring.

Junction 6: A606 / Normanton Park Road Junction

5.13.14. Located just under three miles north east of the development site, Junction 6 takes the form of an existing priority junction. The exits from the A606 have dedicated filter lanes to ensure that the free flow of traffic is not affected during turning movements.

Table 5.6: Summary of the results of Existing 2025 peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Park Road to A606 (West)	0.05	0.04	0.06	0.04
Normanton Park Road to A606 (East)	0.33	0.25	0.38	0.28
A606 West to A606 East and Normanton Park Road	0.25	0.20	0.32	0.24

5.13.15. As can be seen from **Table 5.6** the existing junction operates well within capacity during both the AM and PM peak hours.

Junction 7: A6121 / Empingham Road / Church Road Junction;

5.13.16. This junction is located just under four miles from the site, to the south east. The existing junctions takes the form of crossroads which are slightly staggered.

Table 5.7: Summary of the results of Existing 2024 peak hour assessments for Junction 7.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Church Road to A6121 (South West) and Empingham Road	0.10	0.09	0.10	0.09
Church Road to A6121 (North East) and Empingham Road	0.31	0.24	0.25	0.20
A6121 North East to All Arms	0.22	0.12	0.27	0.14
Empingham Road to All Arms	0.27	0.22	0.24	0.19
A6121 South West to All Arms	0.11	0.06	0.16	0.09

5.13.17. As can be seen from **Table 5.7** the junction operates well within capacity during both the AM and PM peak hours, with the highest RFC being 0.24.

Junction 8A: Main Site Access from Edith Weston Road

5.13.18. The existing site access is located on the western boundary of the site and takes the form of a priority junction.

Table 5.8: Summary of the results of Existing 2024 peak hour assessments for Junction 8A.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Site Access to Edith Weston Road South	0	0.19	0	0.16
Site Access to Edith Weston Road North	1	0.25	1	0.20
Edith Weston Road South to Edith Weston Road North and Site Access	0	0.14	0	0.15

5.13.19. As can be seen from **Table 5.8** the existing junction operates well within capacity during both the AM and PM peak hours.

Junction 9: Pennine Drive / Normanton Road Junction

5.13.20. This junction is located 250m north of the development site and takes the form of a priority junction and currently serves a number of residential properties.

Table 5.9: Summary of the results of Existing 2024 peak hour assessments for Junction 9.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Pennine Drive to Normanton Road South	0.18	0.15	0.04	0.04
Pennine Drive to Normanton Road North	0.04	0.04	0.05	0.05
Normanton Road South to Normanton Road North and Pennine Drive	0.09	0.06	0.16	0.11

5.13.21. As can be seen from **Table 5.9** the existing junction operates well within capacity during both the AM and PM peak hours.

Junction 10: A1 / A606 Junction

5.13.22. Due to the strategic nature of this junction this will be assessed following the completion of the traffic generation and likely distribution to understand any likely impact on the existing junction compared with background traffic growth and other significant developments in the area.

5.13.23. On 18 September 2018, Highways England issued a formal response to Rutland County Council regarding the potential for development at St Georges Barracks as a direct result of the focused changes to the Rutland Local Plan consultation. Within their response they stated:

In our previous response to the Draft Rutland Local Plan, and the Joint Infrastructure Delivery Plan for Rutland and South Kesteven, we raised concerns about the potential impacts of development at St Georges Barracks on the operation of the A1, particularly at the A1 / A606 junction.

Given the greater extent of development now planned to come forward, we would expect the site to be subject to a Transport Assessment in order to better understand potential impacts on the SRN. At the same time, we would also expect cumulative impacts of development growth to be considered as part of the development management process.

5.13.24. It is intended that following the submission of this Transport Assessment, discussions with Highways England be undertaken to discuss the potential impact on the Strategic Road Network.

Junction 12: A606 (Whitwell Road) / Main Street Empingham Junction

5.13.25. This junction is located approximately 3.5 miles north of the development site, takes the form of a priority junction and currently serves a number of residential properties. This junction provides a direct connection between the A1 and the A606.

Table 5.10: Summary of the results of Existing 2024 peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.03	0.03	0.04	0.04
Main Street to Whitwell Road North	0.30	0.22	0.29	0.22
Whitwell Road South to Whitwell Road North and Main Street	0.13	0.07	0.06	0.04

5.13.26. As can be seen from **Table 5.10** the existing junction operates well within capacity during both the AM and PM peak hours.

5.14. **Collision Data**

5.14.1. The Aecom Transport Assessment, dated April 2018 highlighted the number of collisions that had occurred on the network between 2012 and 2016. The results identified that there were a total of 142 collisions of which 105 were rated slight, 32 serious and 5 fatal.

5.14.2. This collision data has been assessed for the 2017 period which has indicated that a further 12 collision have occurred, of which 10 were rated as slight, 2 serious and 0 fatal. The locations of these collisions have been highlighted below:

- ◆ A6003 (3 slight collisions), located south of the A6003 / Lyndon Road junction);
- ◆ A606 (3 slight collisions), located between the A606 / Normanton Park Road junction and the A606 / A1 junction);
- ◆ A6121 (2 slight collisions and 1 serious collision). Both slight collisions occurred at the A6121 / Station Road mini-roundabout while the serious collision occurred between South Luffenham and Ketton;
- ◆ A47 (2 slight collisions and 1 serious collision). The two slight collisions occurred between the A6121 junction and the Luffenham Road junction while the serious collision occurred west of the A6121 junction.

6.0 DEVELOPMENT PROPOSALS

6.1 The Development Proposals

- 6.1.1. The proposed development seeks to comprehensively redevelop the existing St Georges Barracks site to include the following:
- Up to 2,215 residential dwellings (C3), which are to come forward as part of the main site, comprising of a mix of private, affordable, apartments and retirement homes;
 - Up to 62,200 sqm of commercial floorspace (office / general industry / light industrial / storage and distribution – use classes B1a/b/c, B2 and B8) as well as community facilities and associated retail spaces; and
 - Replacement three form entry primary school.
- 6.1.2. The evolving masterplan has indicated that the appropriate number of dwellings to be included in any future Local Plan allocation is circa 2,215 dwellings. However, to ensure a robust assessment in transport terms this has been increased to 2,400 units.
- 6.1.3. A further 100 units have been considered on top of this to take into account future developments at the Officers Mess (70 units) and the existing Primary School Site (30 units) should a new primary school at St Georges be provided. For the avoidance of doubt, **a total of 2,500 new dwellings has been tested as part of this Transport Assessment.**
- 6.1.4. Vehicular access across the site has been considered holistically to ensure that vehicles associated with the different land uses utilise the appropriate routes. With this in mind, the existing access from Edith Weston Road will be amended to form a 'gateway' into the residential and community elements of the scheme. A secondary access from Edith Weston Road is to be provided to the south to help distribute the traffic generated from the development and avoid all traffic from having to travel through the Local Centre.
- 6.1.5. Two new 'northern' access points have been included onto Wytchley Road / Wytchley Warren Lane to provide separate, direct access to/from the north for both residential and commercial traffic. This will prevent the need for vehicles associated with the employment area to travel through Edith Weston which will also be the case for Construction Traffic. As part of the creation of the northern access points, improvements to Wytchley Road / Wytchley Warren Lane, including the junction with Normanton Road will be provided to cater for the safe, two-way passing of vehicles.
- 6.1.6. The development will also benefit from a vehicular access point along Pennine Drive which will provide access to the main spine road through the site towards the Local Centre. It is envisaged that this will provide appropriate means of access to the north western portion of the site. A further, secondary access along Pennine Drive is to be located further east which is anticipated to be cycle / pedestrian friendly. As part of the development, traffic calming features are to be introduced along Pennine Drive with the aim of encouraging increased levels of cycling and walking between the site and Edith Weston.
- 6.1.7. A park and ride facility is to be explored to the east of the development site, adjacent to the employment zone, which will provide a tourist service to Rutland Water. It is envisaged that parking could occur for up to 150 vehicles, taking pressure of the existing car parks during peak periods, with regular shuttle Buses providing direct connections with Rutland Water.

6.1.8. The evolving masterplan is shown below:



6.2. Parking

- 6.2.1. Vehicular and cycle parking will be provided in accordance with the Rutland County Council parking standards.
- 6.2.2. It should be considered, through and future pre-planning consultation process, whether this scheme could be appropriate for site-specific residential parking standards, given the opportunity to promote sustainable travel and use the restriction of on-site parking as a tool to discourage the use of the private car.
- 6.2.3. Electric vehicle charging facilities are to be provided at convenient locations across the site to encourage the take up of electric vehicles. Given recent progression, it will be important to future proof the proposed development site in terms of electric vehicles and other emerging technology.
- 6.2.4. Safe, covered and secure cycle parking will need to be provided for each unit to encourage cycling trips, particularly round trips within the development (i.e. to the Local Centre). Links with existing settlements should also be explored.

6.3. Public Transport

- 6.3.1. Another key element of the transport strategy for the site is the introduction of a regular, connected public transport service. The development has been designed to provide a dedicated bus route through the site with a number of bus stops located within the recommended walking

distance. High quality waiting facilities with Real Time Bus Information will be provided to keep passengers informed of upcoming services.

6.3.2. It is envisaged that the proposed development will provide an opportunity for existing Bus Services within the area to be diverted through the site at a much-improved frequency compared with the existing. In particular, direct services with Oakham and Stamford and Uppingham will be discussed with the relevant operator and promoted to offer new and existing commuters a realistic sustainable travel option.

6.3.3. Taster Bus travel tickets will be introduced as part of the residential travel plan to try and influence individual travel patterns from the outset. It is considered that the improved Bus Services through the site will include the potential to capture existing settlements providing a benefit to the wider community.

6.4. **Walking and Cycling**

6.4.1. The movement and access strategy is been designed to encourage walking and cycling throughout the site with Secondary Streets and Green Streets prioritising their use to provide a well-connected footway / cycleway network. This is evident from the Transport Framework plan:



6.4.2. It is generally accepted that walking and cycling provide realistic and important alternatives to the private car, while promoting obvious health benefits to the user. Both are also actively encouraged to form part of longer journeys that involve public transport.

- 6.4.3. The Institute of Highways and Transportation (IHT) have provided several guidance documents to help quantify acceptable walking and cycling distances with respect to the provision of sustainable travel which have been considered and applied to the wider masterplan.
- 6.4.4. The distances people are prepared to walk, or cycle, depend on their fitness and physical ability, journey purpose, settlement size, and walking/cycling conditions. With that in mind, St Georges Barracks has been designed from the outset with walking and cycling a key consideration of the movement and access strategy. A high-quality network for pedestrians and cyclists will be promoted linking with existing settlements and potential leisure trails.
- 6.4.5. The Transport Framework demonstrates the extensive network that could be provided within the site while off-site improvements will be investigated and promoted to provide improved sustainable links with Rutland Water to benefit existing settlements as well as the new community.

7.0 DEVELOPMENT SCENARIOS

7.1. Assessment Scenarios

7.1.1. As part of the Transport Assessment process, three development scenarios have been assessed to understand the likely impact of the proposed development on the existing network and help inform the relevant trigger points for physical highway improvements.

7.1.2. The associated build out rates and likely phasing has been considered as part of the assessment and are shown in **Table 7.1** below:

	2021	2022	2023	2024	2025	2026	2027	2028
Cumulative Employment Build Out (m ²):	4,148	8,296	12,444	16,592	20,740	24,888	29,036	33,184
Cumulative Residential Build Out (per unit):			76	206	363	563	763	1,007

	2029	2030	2031	2032	2033	2034	2035	2036
Cumulative Employment Build Out (m ²):	37,332	41,480	45,628	49,776	53,924	58,072	62,220	-
Cumulative Residential Build Out (per unit):	1,229	1,408	1,592	1,776	1,960	2,144	2,312	2,474

7.1.3. In terms of suitable Assessment Scenarios, the following are to be considered based on estimated completions and corresponding future year:

Scenario 1: Do Nothing (2024)

- 350 dwellings;
- No commercial development;
- No new School;
- No Northern access connection;
- Minimal upgrades to road network.

Scenario 2: Partial Site Build Out (Future Year 2031)

- Up to 1,500 dwellings (of which 30% to be affordable);
- New school 2FE;
- 9Ha of commercial (approx. 40,000m²);
- Northern access provided from Wytchley Road.

Scenario 3: Full Site Build Out (Future Year 2036)

- 2,500 dwellings (of which 30% to be affordable);
- New School 3FE;
- 14Ha of commercial (approx. 62,000m²);
- 2 x Northern access required from Wytchley Road.

7.2. Growth factors

- 7.2.1. The proposed development is expected to commence in 2023 with first completions programmed for 2024. Therefore for assessment purposes, 2024 has been adopted as the baseline with 2036 adopted as the future year for the 'Do Nothing' and 'Do Something' scenarios.
- 7.2.2. An interim assessment year of 2031 has been added to enable a greater understanding of the impact of background traffic on the local network. The TEMPRO 7.2 Local growth factors, for the wider Rutland area) have been utilised for the baseline and future year assessments. **Table 7.2** provides the corresponding growth factors.

Table 7.2: Summary of the growth factor

Source	Period	AM	PM	Daily
TEMPRO	2017 – 2024	1.0958	1.097	1.1035
TEMPRO	2017 - 2031	1.1473	1.1504	1.163
TEMPRO	2017 - 2036	1.1752	1.1783	1.2002

- 7.2.3. The resultant traffic flows for each assessment year have been shown within the relevant Traffic Assignment Figures within **Appendix 1** of this Transport Assessment.

7.3. Build Out Assumptions

- 7.3.1. To give an accurate estimation of the development build-out rate for the wider development the following assumptions have been taken into account. This will allow a greater understanding of the operation of the network with regards to the cumulative impact of development and background traffic growth and whether a trigger point for any improvements are necessary.
- 7.3.2. Table 7.3 identifies estimated build out rates for both the residential and commercial elements of the emerging masterplan and highlights the likely transport impact, based on the associated trip rates. This allows the cumulative impact to be assessed on a year by year basis.

Total Cumulative Impact (by year):	2021	2022	2023	2024	2025	2026	2027	2028
Residential and Commercial Trip Rate (AM Arr)	26	52	86	127	172	220	272	323
Residential and Commercial Trip Rate (AM Dep)	5	10	40	88	145	210	284	352
Residential and Commercial Trip Rate (PM Arr)	3	7	34	78	131	189	256	316

Total Cumulative Impact (by year):	2021	2022	2023	2024	2025	2026	2027	2028
Residential and Commercial Trip Rate (PM Dep)	21	44	80	124	174	227	284	339

Total Cumulative Impact (by year):	2029	2030	2031	2032	2033	2034	2035	2036
Residential and Commercial Trip Rate (AM Arr)	372	417	463	509	558	608	655	676
Residential and Commercial Trip Rate (AM Dep)	415	465	519	573	634	698	757	809
Residential and Commercial Trip Rate (PM Arr)	373	418	467	516	571	628	682	730
Residential and Commercial Trip Rate (PM Dep)	392	438	486	535	586	638	688	714

Table 7.3: Cumulative Trip Rates based on the Build Out Assumptions

7.3.3. The full background information with regards to build out rates and the associated trip rates is included as **Appendix 2** of this Transport Assessment.

7.4. Phasing

7.4.1. An important element of the physical construction of the proposed development relates to phasing. As part of the emerging masterplan, consideration has been given to how the development can be realised while minimising any potential impact on existing settlements, including Edith Weston. An indicate Phasing Layout has been shown below, taken from the Masterplan document:



7.4.2. In order to achieve the suggested phasing sequence, the following improvements have been identified in order to facilitate construction. It is acknowledged that these will need to be introduced prior to any commencement of the Business Zone and that the existing on-site infrastructure (including service roads and existing runways) will be utilised as far as practically possible.

- New 'northern' access onto Wytchley Road / Wytchley Warren Lane;
- Widening of Wytchley Road / Wytchley Warren Lane to 7.3m wide carriageway to facilitate the safe two-way passing of vehicles for an approximate distance of 1km;
- Upgraded access from Pennine Drive; and
- Creation of suitable 'gateway' access from Edith Weston Road.

7.5. **Linked Trips**

7.5.1. The above data does not take into account any linked trips that may occur through the creation of a sustainable community, (for example between new residents that will also work within the site). Therefore, a reduction in the total number of trips would, and should, be expected. This has the potential to reduce the new trip generation between 10% and 15%.

7.5.2. However, in the interest of a robust junction capacity assessment, the predicted traffic generation will not take into account the linked trips therefore creating a worst-case scenario.

8.0 TRIP GENERATION AND DISTRIBUTION

8.1. Trip generation

- 8.1.1. In order to understand the likely impact on the existing road network, the TRICS database has been interrogated to obtain relevant trip rates for each of the proposed land uses based on the site specific characteristics. **Tables 8.1 and 8.2** demonstrates the residential trip rates for the residential element of the development with the full Outputs included in **Appendix 3**:

Table 8.1: Private Residential trip rates per dwelling.

Mode	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	0.110	0.353	0.463	0.332	0.180	0.512

Table 8.2: Affordable Residential trip rates per dwelling.

Mode	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	0.155	0.269	0.424	0.231	0.129	0.360

- 8.1.2. A retirement village forms part of the residential development and therefore the associated trip rates have been obtained from the TRICS database. Given the generally lower traffic generation during peak periods it is important to differentiate between the retirement village and the other residential uses. The trip rates per unit are set out in **Table 5.3**.

Table 8.3: Retirement Village trip rates per dwelling.

Mode	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	0.050	0.055	0.105	0.047	0.045	0.092

- 8.1.3. In a similar manner, there are a number of flats and apartments included as part of the emerging masterplan, focussed around the Local Centre. It is therefore considered appropriate to use separate trip rates for the flats and apartments which have been obtained from the TRICS database. The trip rates per unit are set out in **Table 5.4**.

Table 8.4: Residential Flats / Apartments, trip rates per dwelling.

Mode	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	0.051	0.186	0.237	0.156	0.091	0.247

- 8.1.4. In relation to the commercial element of the development proposal the TRICS database has again been used to differentiate between the different employment uses. The trip rates, per 100m, for Offices, Light Industrial, General Industry as well as Storage and Distribution have been used for included in **Table 8.5** below and full Outputs included as **Appendix 3**.

Table 8.5: TRICS trip rates for employment uses (B1abc, B2 and B8) per 100 m²

Land Use	Mode	AM Peak			PM Peak		
		Arrive	Depart	Total	Arrive	Depart	Total
B1a Office	Vehicles	1.675	0.189	1.864	0.241	1.389	1.630
B1bc/B2 Light Industrial / General	Vehicles	0.458	0.084	0.542	0.047	0.388	0.435
B8 Storage and Distribution	Vehicles	0.265	0.080	0.345	0.088	0.240	0.328

8.1.5. Table 7.3 has combined these trip rates to provide an estimation of the likely impact of development as the build out progresses.

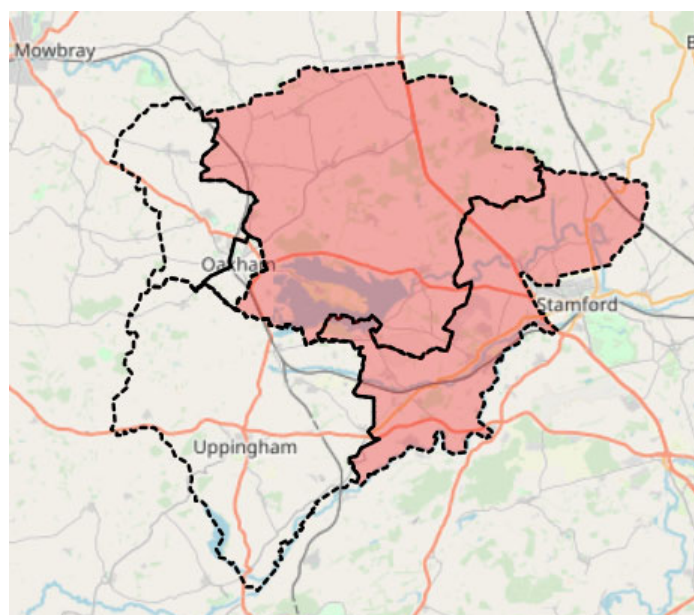
8.2. Trip distribution

8.2.1. In order to understand the likely origin and destination of the additional traffic generated by this development, junction turning movements were observed and collected on 5 October 2017 between the hours of 07:00-10:00 and 15:00-18:00, which is considered a neutral day in a neutral week for traffic movements, therefore considered a representative sample.

8.2.2. The recorded peak hour turning movements will help inform the likely local travel patterns to indicate how the additional traffic is dispersed onto the existing road network. This was validated by using the data contained within the 2011 Census statistics.

8.2.3. The Nomis database was consulted to obtain the Journey to Work data for origin/destination data. A data set "WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)" was used to obtain the origin-destination data relevant to the proposed development site.

8.2.4. For the residential element of the proposal origin data (place of usual residence) was set as **Rutland 001 and 004** (based on 2011 super output areas – mid layer), those two areas were chosen, as the site is split between them and they are of very similar characteristics and represent a rural areas surrounding larger settlements with a reasonably good access to the local and distributor road network – as shown below:



Super Output Area (Mid Layer): E02002863 - Rutland 001 and E02002866 - Rutland 004

- 8.2.5. The place of work was set at the 2011 super output areas – mid layer level for rest of Rutland District, district level for remaining districts within East Midlands and region level on everything thereafter. The obtained data showed a number of people travelling from Rutland 001 and 004 to the place of their employment with UK by all modes of travel.
- 8.2.6. The data was further filtered to limit the modal choice to car drivers only, as this is considered the main contributor impacting the local highway network. Further to assign the origin-destination data onto road network a Google Maps TM route palming tool was used. As this tool uses user data collected over large period of time and number of users it is considered a reasonably robust tool for informing of main route choices of the local residents/employees.
- 8.2.7. A route option of route starting at 8.00 AM on an average Wednesday (the 26th of September 2018 as a day in the past for which the traffic data was available) was chosen as a good average date for the route finding. The routing tool usually returns three route options, which are ranked by average journey time and distance. Two top options were chosen for assigning the vehicle route on the local highway network a 60/40 split of route preference between two options was assumed (with favour to the first route choice).
- 8.2.8. The trips undertaken with Rutland 001 and 004 areas were distributed accordingly to the largest settlements in areas, as it was assumed that the larger settlement the larger work opportunity it could present. **Figures T9 and T10** shows the predicted traffic distribution related to arrivals and departures of the residential trips.
- 8.2.9. With regard to the commercial element of the proposal a similar process was undertaken bit with the origin data (place of work) set as Rutland 001 and 004 (based on 2011 super output areas – mid layer), while the usual residence was set at the 2011 super output areas – mid layer level for rest of Rutland District, district level for remaining districts within East Midlands and region level on everything thereafter.
- 8.2.10. The obtained data showed a number of people travelling from their usual place of residence within UK to Rutland 001 and 004 by all modes of travel. The data was further filtered to limit the modal choice to car drivers only, as this is considered the main contributor impacting the local highway network.
- 8.2.11. The further assignment of the trips to the local highway network was undertaken using same methodology as for residential element of the development. The only difference with the commercial traffic is that the commercial development areas will be located around the development site and will be accessed from 4 different accesses.
- 8.2.12. Therefore an assumption was made, based on the proposed quantum of the development and its location on which access the traffic will use. The assumption was based on 65% of traffic using the Wytchley Road Access, 10% Pennine Drive Access, 15% using the Edith Weston Road Northern Access (which would be the main development access) and 10% using the Edith Weston Road Southern Access.
- 8.2.13. **Figures T11 to T18** shows the predicted traffic distribution related to arrivals and departures of the commercial trips across all proposed access points.

9.0 FUTURE YEAR ASSESSMENTS

9.1. Assessment Scenario 2031

9.1.1. As with the existing situation, the 2031 baseline assessment has been undertaken using individual assessments of each junction using the Junction 8 assessment suite (PICADY and ARCADY modules) for priority junctions and LinSig for the signalised junction. The assessments were carried out during the AM and PM peak periods.

9.1.2. The impact of the proposed development, as set out in the development scenario 2031, and taking into account the predicted background growth has been assessed and the results are shown in **Tables 9.1 to 9.19 below**.

Junction 1: A6003 / Lyndon Road

9.1.3. **Tables 9.1 and 9.2** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development

Table 9.1: 2031 base peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Lyndon Rd to A6003 South & Field Access (west)	0.20	0.17	0.24	0.19
Lyndon Rd to A6003 North & Lyndon Road Central Island	1.25	0.57	1.54	0.62
A6003 North to Central Island	0.00	0.00	0.00	0.00
Existing Field Access to All Movements	0.00	0.00	0.01	0.01
A6003 South to Lyndon Road	0.22	0.18	0.28	0.22

Table 9.2: 2031 base plus development peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Lyndon Rd to A6003 South & Field Access (west)	1.18	0.58	1.10	0.54
Lyndon Rd to A6003 North & Lyndon Road Central Island	4.01	0.85	4.21	0.85
A6003 North to Central Island	0.00	0.00	0.00	0.00
Existing Field Access to All Movements	0.00	0.00	0.02	0.02
A6003 South to Lyndon Road	0.32	0.25	0.42	0.30

9.1.4. As can be seen from the above Tables, the increased development traffic is having an impact on the operation of the existing junction in its current with the RFC increasing to 0.85 and maximum queues of four vehicles for right turn movements existing Lyndon Road.

Junction 2: Manton Road / Edith Weston / Normanton Park Junction

9.1.5. **Tables 9.3 and 9.4** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development.

Table 9.3: 2031 base peak hour assessments for Junction 2.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Road	0.80	0.44	0.38	0.28
Edith Weston Road	0.36	0.28	0.62	0.38
Manton Road	0.45	0.31	0.50	0.34

Table 9.4: 2031 base year plus development peak hour assessments for Junction 2.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Road	1.59	0.62	0.98	0.50
Edith Weston Road	0.97	0.51	1.22	0.55
Manton Road	0.78	0.44	0.88	0.47

- 9.1.6. As can be seen from the Tables above, both the increase in background traffic and the proposed development have an impact on the junction. However, the existing junction appears to operate well, with some spare capacity in 2031 with maximum queue lengths of 1 car predicted.

Junction 3: Wytchley Road / Normanton Road Junction

- 9.1.7. **Tables 9.5 and 9.6** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 3. It is considered that the new 'northern' access will have been constructed onto Wytchley Road which is expected to have an impact on the operation of the existing junction.

Table 9.5: 2031 base peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	0.04	0.03	0.05	0.05
Wytchley Road to Normanton Park Road North	0.01	0.01	0.01	0.01
Normanton Road South to Normanton Park Road North and Wytchley Road	0.08	0.05	0.06	0.04

Table 9.6: 2031 base year plus development peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	0.10	0.08	0.28	0.22
Wytchley Road to Normanton Park Road North	1.10	0.53	1.02	0.51
Normanton Road South to Normanton Park Road North and Wytchley Road	0.47	0.26	0.24	0.13

- 9.1.8. As can be seen from the Tables above, the Wytchley Road / Normanton Road continues to operate within capacity during both the 2031 AM and PM peak hours, with spare capacity and maximum queue lengths of 1 vehicle.

Junction 4: A6121 / Station Road Junction;

- 9.1.9. **Tables 9.7 and 9.8** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 4.

Table 9.7: 2031 base peak hour assessments for Junction 4.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6121 (North East)	0.60	0.37	0.37	0.27
Station Road (South East)	0.16	0.11	0.56	0.36
A6121 (South West)	0.73	0.42	0.53	0.35
Station Road (North West)	0.24	0.18	0.20	0.17

Table 9.8: 2031 base plus development peak hour assessments for Junction 4.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6121 (North East)	0.71	0.41	0.42	0.29
Station Road (South East)	0.29	0.21	0.92	0.49
A6121 (South West)	1.11	0.53	0.91	0.48
Station Road (North West)	0.78	0.44	0.61	0.38

- 9.1.10. As can be seen the above tables the existing A6121 / Station Road mini-roundabout operates well within capacity during both the AM and PM peak hours, with the highest RFC being 0.48 in the Pm Peak. The results suggest that the proposed development will not have any adverse impact on the operation of this junction.

Junction 5: A47 / Station Road Junction

- 9.1.11. **Tables 9.9 and 9.10** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 5.

Table 9.9: 2031 base peak hour assessments for Junction 5.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Station Road to A47 East	0.23	0.19	0.16	0.15
Station Road to A47 West	0.01	0.01	0.00	0.00
A47 East to A47 West and Station Road	0.67	0.29	0.66	0.26

Table 9.10: 2031 base plus development peak hour assessments for Junction 5.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Station Road to A47 East	0.48	0.33	0.33	0.25
Station Road to A47 West	0.02	0.02	0.00	0.00
A47 East to A47 West and Station Road	1.19	0.44	1.33	0.44

9.1.12. As can be seen from the tables above, the existing junction operates well within capacity during both the AM and PM peak hours with maximum queues of 1.33 vehicles during the PM Peak.

Junction 6: A606 / Normanton Park Road Junction

9.1.13. **Tables 9.11 and 9.12** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 6. It is considered that the new 'northern' access will have been constructed onto Wytchley Road which is expected to have an impact on the operation of the existing junction.

Table 9.11: 2031 base peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Park Road to A606 (West)	0.05	0.04	0.07	0.04
Normanton Park Road to A606 (East)	0.37	0.27	0.43	0.30
A606 West to A606 East and Normanton Park Road	1.31	0.39	1.42	0.45

Table 9.12: 2031 base plus development peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Park Road to A606 (West)	44	1.19	2.53	0.73
Normanton Park Road to A606 (East)	31	1.20	3.65	0.83
A606 West to A606 East and Normanton Park Road	1.30	0.57	1.37	0.59

9.1.14. As can be seen from the above tables, the introduction of the likely development traffic has a detrimental impact on the operation of the existing junction, especially during the AM Peak.

9.1.15. It is therefore considered necessary to provide the appropriate form of mitigation in order to create a more efficient junction form and generate additional capacity.

Junction 7: A6121 / Empingham Road / Church Road Junction;

9.1.16. **Tables 9.13 and 9.14** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 7.

Table 9.13: 2031 base peak hour assessments for Junction 7.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Church Road to A6121 (South West) and Empingham Road	0.11	0.10	0.11	0.10
Church Road to A6121 (North East) and Empingham Road	0.33	0.25	0.27	0.22
A6121 North East to All Arms	0.24	0.13	0.29	0.15
Empingham Road to All Arms	0.29	0.23	0.26	0.21
A6121 South West to All Arms	0.12	0.07	0.17	0.09

Table 9.14: 2031 base plus development peak hour assessments for Junction 7.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Church Road to A6121 (South West) and Empingham Road	0.11	0.10	0.12	0.11
Church Road to A6121 (North East) and Empingham Road	0.35	0.26	0.29	0.23
A6121 North East to All Arms	0.26	0.14	0.34	0.17
Empingham Road to All Arms	0.36	0.28	0.30	0.23
A6121 South West to All Arms	0.12	0.07	0.17	0.10

- 9.1.17. As can be seen from the above tables that the existing junction operates well within capacity during both the AM and PM peak hours, with the highest RFC being 0.28. It is anticipated that the majority of the traffic will leave the site via the new northern access, which will have a minimal impact on the operation of this existing junction.

Junction 8A: Main Site Access from Edith Weston Road

- 9.1.18. The existing site access is located on the western boundary of the site and takes the form of a priority junction. Given the number of residential dwellings being proposed in the 2031 scenario, it is considered necessary in masterplanning terms to provide a number of access points onto the existing road network.
- 9.1.19. It is therefore proposed to introduce a new priority junction, to the south of the existing access from Edith Weston Road, to serve the wider development. This will ease the burden on the main primary access from Edith Weston Road and increase permeability through the site.

The capacity of these junctions have not been tested in the 2031 scenario as the proposed development is unlikely to have any significant impact in operation terms. The detailed layouts will need to be justified through any future planning application.

Junction 9: Pennine Drive / Normanton Road Junction

- 9.1.20. **Tables 9.15 and 9.16** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 9.

Table 9.15: Summary of the results of 2031 base peak hour assessments for Junction 9.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Pennine Drive to Normanton Road South	0.19	0.16	0.04	0.04
Pennine Drive to Normanton Road North	0.04	0.04	0.06	0.05
Normanton Road South to Normanton Road North and Pennine Drive	0.10	0.06	0.17	0.12

Table 9.16: Summary of the results of 2031 base peak hour assessments for Junction 9.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Pennine Drive to Normanton Road South	0.31	0.23	0.09	0.09
Pennine Drive to Normanton Road North	0.19	0.17	0.19	0.16
Normanton Road South to Normanton Road North and Pennine Drive	0.17	0.09	0.34	0.19

- 9.1.21. As can be seen from tables above, the existing junction operates well within capacity during both the 2031 AM and PM peak hours with minimal queuing and a predicted maximum RFC of 0.23.

Junction 10: A1 / A606 Junction

- 9.1.22. Due to the strategic nature of this junction this will be assessed following the completion of the traffic generation and likely distribution to understand any likely impact on the existing junction compared with background traffic growth and other significant developments in the area.
- 9.1.23. Discussions with Highways England regarding the anticipated impact on the wider Strategic Road Network are on-going.

Junction 11: Proposed Northern Access

- 9.1.24. It is anticipated that as a direct result of any significant development, that the introduction of a new 'northern' access is required to facilitate the development. It has been assumed, for the purposes of the modelling that Junction 11 is the new primary access to and from Wytchley Road from the development site and that the majority of traffic coming from / going to the north will utilise this route.
- 9.1.25. **Table 9.17** below indicate the 2031 peak hour assessment with traffic generated by the proposed development for Junction 11. Without the proposed development, the new access would not be justified and therefore the '2031 base year' assessment has been removed.

Table 9.17: 2031 base plus development peak hour assessments for Junction 8A.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Site Northern Access to Wytchley Road East and West	0.08	0.07	0.04	0.03
Wytchley Road West to Wytchley Road East and Site Northern Access	0.03	0.03	0.08	0.06

9.1.26. As can be seen from tables above, the proposed junction will operate well within capacity during both the 2031 AM and PM peak hours with minimal queuing.

Junction 12: A606 (Whitwell Road) / Main Street Empingham Junction

9.1.27. **Tables 9.18 and 9.19** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 12.

Table 9.18: Summary of the results of 2031 base peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.04	0.03	0.05	0.05
Main Street to Whitwell Road North	0.35	0.25	0.33	0.25
Whitwell Road South to Whitwell Road North and Main Street	0.16	0.08	0.07	0.05

Table 9.19: Summary of the results of 2031 base peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.48	0.31	0.79	0.43
Main Street to Whitwell Road North	0.54	0.34	0.57	0.37
Whitwell Road South to Whitwell Road North and Main Street	1.66	0.47	1.93	0.50

9.1.28. As can be seen from tables above, the existing junction operates well within capacity during both the 2031 AM and PM peak hours with minimal queuing and a predicted maximum RFC of 0.50.

9.2. Summary of Highway Impacts (2031)

9.2.1. To summarise, the proposed development scenario coupled with the background traffic growth is expected to have a cumulative impact on the existing road network. In particular, the predicted distribution results in a significant increase in traffic travelling to and from the north as a result of the location of the Business Zone.

9.2.2. This has had a significant impact on the junctions between the development site and the A606. There is also a noticeable increase in vehicles travelling from the west, via the A6003 / Lyndon Road junction (Junction 1).

9.2.3. Therefore in order to facilitate the proposed development scenario for 2031, the following junctions would need to be mitigated:

- ♦ Creation of new northern access (prior to occupation);
- ♦ Widening of Wytchley Road / Wytchley Warren Lane (prior to occupation);
- ♦ Improvements to the A606 / Normanton Road junction;
- ♦ Improvements to the A6003 / Lyndon Road junction;
- ♦ New 'secondary' access from Edith Weston Road (prior to Phase 2 occupation).

9.2.4. All other junctions and roads that were analysed as part of this assessment, are expected to operate well within their design capacity with the proposed development having minimal or nil impact on their capacity.

9.2.5. It is considered that a number of sustainable travel measures would be provided in conjunction with the physical road network improvements highlighted above.

9.3. Assessment Scenario 2036

9.3.1. The 2036 future year assessment has been undertaken using individual assessments of each junction using the Junction 8 assessment suite (PICADY and ARCADY modules) for priority junctions and LinSig for the signalised junction. The assessments were carried out during the AM and PM peak periods.

9.3.2. The impact of the proposed development, as set out in the development scenario 2036, and taking into account the predicted background growth has been assessed and the results are shown in **Tables 9.20 to 9.38 below:**

Junction 1: A6003 / Lyndon Road

9.3.3. **Tables 9.20 and 9.21** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development

Table 9.20: 2036 base peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Lyndon Rd to A6003 South & Field Access (west)	0.21	0.18	0.26	0.20
Lyndon Rd to A6003 North & Lyndon Road Central Island	1.39	0.60	1.69	0.64
A6003 North to Central Island	0.00	0.00	0.00	0.00
Existing Field Access to All Movements	0.00	0.00	0.02	0.02
A6003 South to Lyndon Road	0.23	0.19	0.29	0.23

Table 9.21: 2036 base plus development peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Lyndon Rd to A6003 South & Field Access (west)	8.15	1.11	7.12	1.04
Lyndon Rd to A6003 North & Lyndon Road Central Island	15.06	1.10	12.90	1.04
A6003 North to Central Island	0.00	0.00	0.00	0.00
Existing Field Access to All Movements	0.00	0.00	0.02	0.02
A6003 South to Lyndon Road	0.39	0.29	0.53	0.35

- 9.3.4. As can be seen from the above Tables, the increased development traffic is having a detrimental impact on the operation of the existing junction in its current form with the RFC's exceeding 1. These results indicate that mitigation measures will be required to facilitate the full development of the St Georges Barracks site.

Junction 2: Manton Road / Edith Weston / Normanton Park Junction

- 9.3.5. **Tables 9.22 and 9.23** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development.

Table 9.22: 2036 base peak hour assessments for Junction 2.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Road	0.84	0.46	0.39	0.28
Edith Weston Road	0.37	0.28	0.65	0.39
Manton Road	0.47	0.32	0.52	0.34

Table 9.23: 2036 base year plus development peak hour assessments for Junction 2.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Road	2.39	0.72	1.54	0.62
Edith Weston Road	1.62	0.63	1.75	0.65
Manton Road	1.04	0.51	1.24	0.56

- 9.3.6. As can be seen from the tables above, there is a limited impact on this junction as a result of background traffic growth up to 2036. The likely increase development traffic have an impact on the junction with Maximum RFC's increasing to 0.72 in the AM Peak. However, the existing junction appears to operate well, with limited spare capacity in 2036 with maximum queue lengths of 2 cars predicted during peak periods.

Junction 3: Wytchley Road / Normanton Road Junction

- 9.3.7. **Tables 9.24 and 9.25** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development.

Table 9.24: 2036 base peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	0.04	0.03	0.05	0.05
Wytchley Road to Normanton Park Road North	0.01	0.01	0.01	0.01
Normanton Road South to Normanton Park Road North and Wytchley Road	0.08	0.05	0.06	0.04

Table 9.25: 2036 base year plus development peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	2.52	0.95	1.50	0.63
Wytchley Road to Normanton Park Road North	7.87	0.93	4.80	0.86
Normanton Road South to Normanton Park Road North and Wytchley Road	0.82	0.37	0.39	0.20

9.3.8. As can be seen from the Tables above, the background traffic growth has a limited impact on the existing junction and its operation. However, once the development traffic is added to the background growth the ratio to flow capacity reaches 0.93 during the AM Peak which indicates that the Wytchley Road / Normanton Road junction is close to capacity.

9.3.9. As this is a direct result of the development traffic exiting the site via the new 'northern' access and west along Wytchley Road, it is considered appropriate to explore potential mitigation measures improve the operation of this junction. These measures are discussed in Section 11 of this report.

Junction 4: A6121 / Station Road Junction;

9.3.10. **Tables 9.26 and 9.27** below indicate the 2031 peak hour assessment with and without the traffic generated by the proposed development for Junction 4.

Table 9.26: 2036 base peak hour assessments for Junction 4.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6121 (North East)	0.62	0.38	0.39	0.28
Station Road (South East)	0.16	0.11	0.58	0.37
A6121 (South West)	0.77	0.44	0.55	0.36
Station Road (North West)	0.25	0.19	0.21	0.18

Table 9.27: 2036 base plus development peak hour assessments for Junction 4.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6121 (North East)	0.82	0.45	0.46	0.31
Station Road (South East)	0.39	0.26	1.28	0.57
A6121 (South West)	1.44	0.60	1.30	0.57
Station Road (North West)	1.39	0.59	0.95	0.49

9.3.11. As can be seen the above tables the existing A6121 / Station Road mini-roundabout continues to operate within capacity during both the AM and PM peak hours, with the highest RFC being 0.60 during the AM Peak. The results suggest that the proposed development will not have any adverse impact on the operation of this junction and that no further mitigation is required.

Junction 5: A47 / Station Road Junction

9.3.12. **Tables 9.28 and 9.29** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development for Junction 5.

Table 9.28: 2036 base peak hour assessments for Junction 5.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Station Road to A47 East	0.24	0.19	0.17	0.15
Station Road to A47 West	0.01	0.01	0.00	0.00
A47 East to A47 West and Station Road	0.71	0.30	0.70	0.27

Table 9.29: 2036 base plus development peak hour assessments for Junction 5.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Station Road to A47 East	0.69	0.41	0.43	0.31
Station Road to A47 West	0.03	0.03	0.01	0.01
A47 East to A47 West and Station Road	1.62	0.52	2.05	0.56

9.3.13. As can be seen from the tables above, the existing junction operates well within capacity during both the AM and PM peak hours with maximum queues increasing to 2 vehicles during the PM Peak. The results suggest that the proposed development will not have any adverse impact on the operation of this junction and that no further mitigation is required.

Junction 6: A606 / Normanton Park Road Junction

9.3.14. **Tables 9.30 and 9.31** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development for Junction 6. Given the results from the 2031 scenario it is considered necessary to implement suitable mitigation measures as the junction is significantly over capacity.

Table 9.30 2036 base peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Park Road to A606 (West)	0.05	0.05	0.07	0.05
Normanton Park Road to A606 (East)	0.40	0.29	0.45	0.32
A606 West to A606 East and Normanton Park Road	1.42	0.41	1.55	0.47

Table 9.31: 2036 base plus development peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Normanton Park Road to A606 (West)	197	1.87	74	1.31

Normanton Park Road to A606 (East)	121	1.92	49	1.34
A606 West to A606 East and Normanton Park Road	3.04	0.79	3.70	0.83

- 9.4. As can be seen from the 2031 scenario and the above tables, the introduction of the likely development traffic has a detrimental impact on the operation of the existing junction. It is considered that improvements to this junction would need to be implemented relatively early in the Local Plan period.

Junction 7: A6121 / Empingham Road / Church Road Junction;

- 9.4.1. **Tables 9.32 and 9.33** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development for Junction 7.

Table 9.32: 2036 base peak hour assessments for Junction 7.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Church Road to A6121 (South West) and Empingham Road	0.11	0.10	0.11	0.10
Church Road to A6121 (North East) and Empingham Road	0.35	0.26	0.28	0.22
A6121 North East to All Arms	0.25	0.13	0.30	0.16
Empingham Road to All Arms	0.30	0.24	0.27	0.21
A6121 South West to All Arms	0.12	0.07	0.18	0.10

Table 9.33: 2036 base plus development peak hour assessments for Junction 7.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Church Road to A6121 (South West) and Empingham Road	0.12	0.11	0.14	0.12
Church Road to A6121 (North East) and Empingham Road	0.37	0.27	0.32	0.24
A6121 North East to All Arms	0.28	0.15	0.39	0.19
Empingham Road to All Arms	0.42	0.31	0.33	0.25
A6121 South West to All Arms	0.12	0.07	0.18	0.10

- 9.4.2. As can be seen from the above tables, the existing junction operates well within capacity during both the AM and PM peak hours, with the highest RFC being 0.31. It is anticipated that the majority of the traffic will leave the site via the new northern access, which will have a minimal impact on the operation of this existing junction. It is considered that no further mitigation is required.

Junction 8A: Main Site Access from Edith Weston Road

- 9.4.3. The existing site access is located on the western boundary of the site and takes the form of a priority junction. Given the number of residential dwellings being proposed in the 2036 scenario, it is considered necessary in master-planning terms to provide a number of access points onto the existing road network.

Junction 8: Secondary Site Access from Edith Weston Road

- 9.4.4. It is therefore proposed to introduce a new priority junction, to the south of the existing access from Edith Weston Road, to serve the wider development. This will ease the burden on the main primary access from Edith Weston Road and increase permeability through the site.

The capacity of these junctions have not been tested in the 2036 scenario as the proposed development is unlikely to have any significant impact in operation terms. The detailed layouts will need to be justified through any future planning application.

Junction 9: Pennine Drive / Normanton Road Junction

- 9.4.5. **Tables 9.34 and 9.35** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development for Junction 9.

Table 9.34: 2036 base peak hour assessments for Junction 9.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Pennine Drive to Normanton Road South	0.20	0.16	0.05	0.04
Pennine Drive to Normanton Road North	0.04	0.04	0.06	0.05
Normanton Road South to Normanton Road North and Pennine Drive	0.10	0.06	0.18	0.12

Table 9.35: 2036 base plus development peak hour assessments for Junction 9.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Pennine Drive to Normanton Road South	0.40	0.29	0.13	0.11
Pennine Drive to Normanton Road North	0.34	0.26	0.30	0.23
Normanton Road South to Normanton Road North and Pennine Drive	0.23	0.11	0.48	0.24

- 9.4.6. As can be seen from tables above, the existing junction operates well within capacity during both the 2036 AM and PM peak hours with minimal queuing and a predicted maximum RFC of 0.29. It is therefore considered that the proposed development has a minimal impact on the operation of the existing junction.

Junction 10: A1 / A606 Junction

- 9.4.7. Due to the strategic nature of this junction this will be assessed following the completion of the traffic generation and likely distribution to understand any likely impact on the existing junction compared with background traffic growth and other significant developments in the area.

- 9.4.8. Discussions with Highways England regarding the anticipated impact on the Strategic Road Network are on-going.

Junction 11: Proposed Northern Access

- 9.4.9. It is anticipated that as a direct result of any significant development, that the introduction of a new 'northern' access is required to facilitate the development. It has been assumed, for the

purposes of the modelling that Junction 11 is the new primary access to and from Wytchley Road from the development site and that the majority of traffic coming from / going to the north will utilise this route.

- 9.4.10. **Table 9.36** below indicates the 2036 peak hour assessment with development traffic generated by the proposed development for Junction 11.

Table 9.36: 2036 base plus development peak hour assessments for Junction 11.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Site Northern Access to Wytchley Road East and West	0.13	0.11	0.06	0.05
Wytchley Road West to Wytchley Road East and Site Northern Access	0.06	0.04	0.13	0.10

- 9.4.11. As can be seen from table above, the proposed priority junction will operate well within capacity during both the 2031 AM and PM peak hours with minimal queuing.

9.5. *Junction 12: A606 (Whitwell Road) / Main Street Empingham Junction*

- 9.5.1. **Tables 9.37 and 9.38** below indicate the 2036 peak hour assessment with and without the traffic generated by the proposed development for Junction 9.

Table 9.37: Summary of the results of 2036 base peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.04	0.04	0.05	0.05
Main Street to Whitwell Road North	0.37	0.26	0.35	0.26
Whitwell Road South to Whitwell Road North and Main Street	0.17	0.08	0.08	0.05

Table 9.38: Summary of the results of 2036 base peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.90	0.46	1.87	0.65
Main Street to Whitwell Road North	0.78	0.43	0.91	0.49
Whitwell Road South to Whitwell Road North and Main Street	5.12	0.75	5.23	0.76

- 9.5.2. As can be seen from tables above, the impact of the proposed development is having an impact on the existing junction with queuing increasing to 5.23 during the PM Peak and a predicted maximum RFC of 0.76. It is therefore considered that the proposed development has a noticeable impact on the operation of the existing junction.

9.6. **Summary of Highway Impacts (2036)**

- 9.6.1. To summarise, the proposed development scenario coupled with the background traffic growth is expected to have a cumulative impact on the existing road network. In particular, the predicted distribution results in a significant increase in traffic travelling to and from the north as a result of the location of the Business Zone.

- 9.6.2. This has had a significant impact on the junctions between the development site and the A606. There is also a noticeable increase in vehicles travelling from the west, via the A6003 / Lyndon Road junction (Junction 1).
- 9.6.3. Therefore in order to facilitate the proposed development scenario for 2036, the following junctions would need to be mitigated:
- Creation of new northern access points (prior to occupation);
 - Widening of Wytchley Road / Wytchley Warren Lane (prior to occupation);
 - Improvements to Wytchley Road / Normanton Park junction;
 - Improvements to the A606 / Normanton Road junction;
 - Improvements to the A6003 / Lyndon Road junction;
 - Improvements to the A606 (Whitwell Road) / Main Street, Empingham junction; and
 - New 'secondary' access from Edith Weston Road (prior to Phase 2 occupation).
- 9.6.4. All other junctions and roads that were analysed as part of this assessment, are expected to operate well within their design capacity with the proposed development having minimal or nil impact on their capacity.

It is considered that a number of sustainable travel measures would be provided in conjunction with the physical road network improvements highlighted above.

10.0 SUSTAINABLE DEVELOPMENT OPPORTUNITIES

10.1. Integrated Bus Links

- 10.1.1. As part of the wider scheme the proposed development is to be served by a connected Bus Service to offer a realistic alternative for travel. St Georges Barracks will provide a unique opportunity within Rutland to influence travel patterns for a significant residential community.
- 10.1.2. It is therefore important to recognise that any new or diverted Bus Service has to be provided from an early stage of the development and offer direct, reliable routes to key destinations.
- 10.1.3. The development site should not be ignored as a key destination in its own right. With a significant Employment Zone and Local Centre (including key community facilities), there will be a number of trips made from outside of the development site which should be encouraged.
- 10.1.4. A number of stops are to be provided within the site to capture new residential settlements. It is considered that any new services and increased frequencies will be of a benefit to existing residents who at present do not have a realistic travel option by Bus. These Bus Stops need to be well designed to accommodate covered seating facilities and real time bus information displayed. On-board Wifi and Smart ticketing capability should be explored to further encourage Bus Travel.
- 10.1.5. Taster Bus travel tickets will be introduced as part of the residential and workplace travel plans to help to influence individual travel patterns from the outset, before they become habitual. It is considered that the improved Bus Services through the site will include the potential to capture existing settlements, providing a benefit to the wider community.

10.2. Park and Ride Site

- 10.2.1. Located to the north of the development, a proposed park and ride site has been included as part of the wider masterplan. It is considered that this site could provide a convenient facility for residents and visitors who wish to spend time at Rutland Water.
- 10.2.2. Car parking for approximately 150 spaces would be provided within the site which will alleviate some of the pressure that currently occurs on the existing network.

10.3. Car Club

- 10.3.1. The development of the site represents an opportunity to introduce a number of dedicated car club spaces strategically located within the site at key hubs. With the additional quantum of homes in the immediate area, new and existing residents who require vehicles on an ad-hoc basis will be offered the opportunity to sign up to a Car Club.
- 10.3.2. While spaces will be provided within the development site, likely to be focussed around the Local Centre and the Employment Zone, discussions with Rutland County Council will be undertaken to ascertain whether two parking bays could be provided on-street, located conveniently for existing residents at Edith Weston.
- 10.3.3. While it is recognised that the Car Club initiative will not prevent car ownership, it does provide residents with convenient ad-hoc access to vehicles which may help to prevent the need for multiple cars per dwelling.

10.4. **Walking and Cycling**

- 10.4.1. There is a significant opportunity to improve localised walking and cycle facilities for trips both to and from the site. As part of the development, it is considered that safe, direct and well-designed streets will be provided to encourage walking and cycling through design, by creating a sense of place within the secondary and green street network.
- 10.4.2. Internal links to the Country Park and Heritage Trail will be provided to encourage walking and cycling in terms of leisure activities, which helps to create a vibrant environment as well as health benefits.
- 10.4.3. Sustainable travel links with any new primary school will need to be considered from the outset. Safe walking routes and dedicated crossing facilities should be provided at primary roads. Walking Buses are likely to form part of any future School Travel Plan and therefore it is important that the infrastructure is put in place to accommodate the likely, future need.
- 10.4.4. Externally, links to the Rutland Water Trail should be explored, ideally routed through Edith Weston itself to provide existing residents with convenient routes into the new development. With that in mind, there is an opportunity to narrow the existing width of Pennine Drive to create a dedicated cycle lane. Safe crossing facilities can then be provided along Manton Road and Normanton Road as part of any future application.

10.5. **Electric Vehicles**

- 10.5.1. Electric vehicle (EV) charging facilities are to be provided at convenient locations across the site to encourage the take up of electric vehicles. Given recent progression, it will be important to future proof the proposed development site in terms of electric vehicles and other emerging technology.
- 10.5.2. In line with previous discussions and as outlined within the IDMP, there is an initial assumption that 20% of the residential properties and 5% of the commercial parking allocation will require EV charging points – including the need for fast charge (8kW).
- 10.5.3. However, the proposed development at St Georges needs to anticipate the Electric Vehicle requirements now and ensure that the design of the infrastructure is future-proofed to enable greater EV charging above the initial 20%.

11.0 RESIDUAL IMPACTS AND MITIGATION

This section of the Transport Assessment describes any residual impacts of the proposed development within the development site and surrounding road network.

11.1. Walking

11.1.1. The proposal will have a positive impact on the footway network within the site area, as the proposal aims to provide a number of connections through the site, as well as provide new connections to the Country Park. Those improvements will provide more pedestrian permeability for existing and future residents of the site and its surroundings.

11.1.2. As the residential element of the proposal is predicted to generate new pedestrian trips, an increase in walking is expected. As a result, it is considered necessary to seek to provide new linkages with Edith Weston in the form of widened footways (where possible) and conveniently located pedestrian crossings.

11.2. Cycling

11.2.1. The proposed development has been designed to encourage new residents and future employees with adequate infrastructure to cycle to/from the site. It is considered that cycling will offer a realistic, suitable alternative to the car particularly for trips that occur within a 5km radius.

11.2.2. Edith Weston and specifically Rutland Water already experience a number of cyclists, especially at peak times. New cyclists are not considered to have any impact on the surrounding roads capacity and more people using this sustainable mode of travel is to be encouraged. Dedicated cycle lanes and appropriately designed crossing facilities should be provided between Rutland Water and the development site.

11.3. Public Transport

11.3.1. The proposed development has the potential to have a positive impact on the existing, limited bus services. Given the existing frequency it is unlikely that travel by Bus is considered as a realistic alternative to car travel. Therefore, this development should be seen as the catalyst for increased Bus Travel by providing an increased level of service (through financial support and additional Buses), as well as high quality on-site infrastructure.

11.3.2. The development quantum of both the residential and commercial element of the scheme should provide any future operator with the necessary patronage to provide a commercial service to and from the site to key destinations such as Oakham and Stamford. However, this needs to be operational early in the construction phases to capture new residents and employees while offering a benefit to existing residential settlements.

11.4. Parking

11.4.1. Vehicular and cycle parking will be provided in accordance with the Rutland County Council parking standards. It should be considered, through and future pre-planning consultation process, whether this scheme could be appropriate for site-specific residential parking standards, given the opportunity to promote sustainable travel and use the restriction of on-site parking as a tool to discourage the use of the private car.

11.4.2. A park and ride facility is to be explored to the east of the development site, adjacent to the employment zone, which will provide a tourist service to Rutland Water. It is envisaged that

parking could occur for up to 150 vehicles, taking pressure of the existing car parks during peak periods, with regular shuttle Buses providing direct connections with Rutland Water.

11.4.3. The Travel Plan implementation will also aim at reducing the need to travel by car and is likely to reduce the parking needs of the proposal. Similarly, the introduction of Car Club parking spaces will provide a suitable alternative to owning multiple private vehicles.

11.5. Road Network & Junction operation

11.5.1. As shown in Chapter 9 of this report, there are a number of existing junctions that require physical modifications in order to provide additional capacity and justify the proposed development in transport terms. These junctions include:

- ◆ Junction 1: A6003 / Lyndon Road Junction;
- ◆ Junction 3: Wytchley Road / Normanton Road Junction;
- ◆ Junction 6: A606 / Normanton Park Road Junction;
- ◆ Junction 8: New Secondary Access Prior to Phase 2;
- ◆ Junction 11: New 'northern' access point(s). One to be in operation prior to Phase 1 and the second to be in operation prior to Phase 5.
- ◆ Junction 12: A606 (Whitwell Road) / Main Street Empingham Junction.

Junction 1: A6003 / Lyndon Road Junction

11.5.2. The existing junction is positioned on the brow of a hill which suggests that the approaches will need to be modified in terms of gradient and suitable deflection for a 40mph section of road.

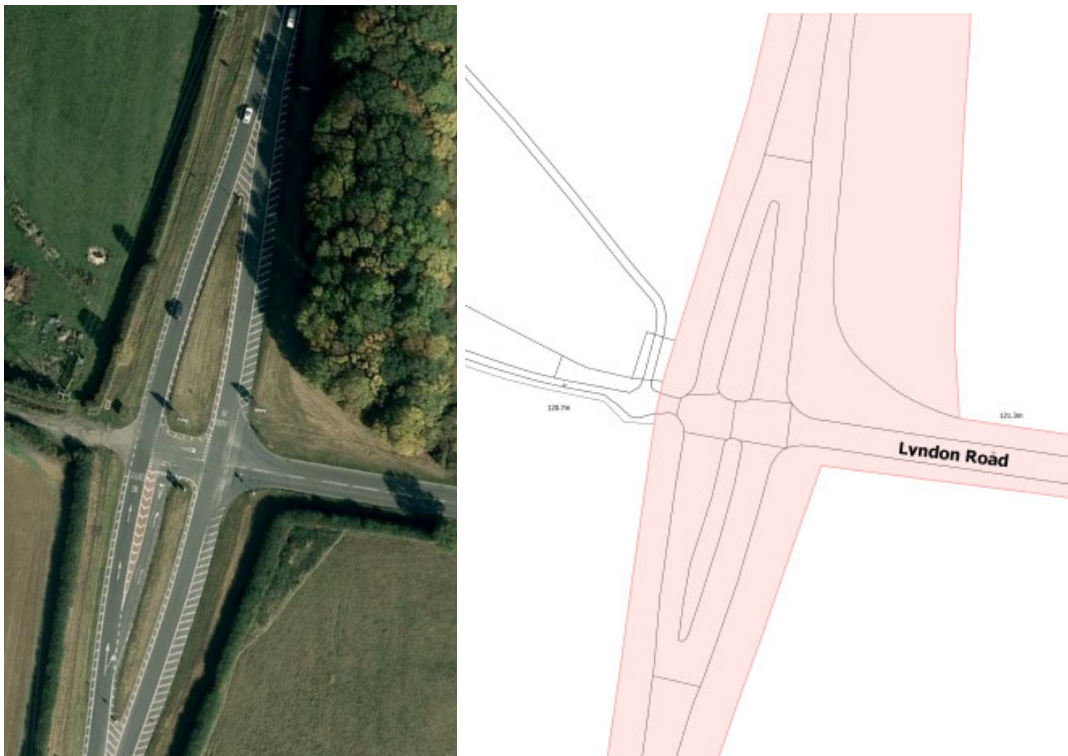
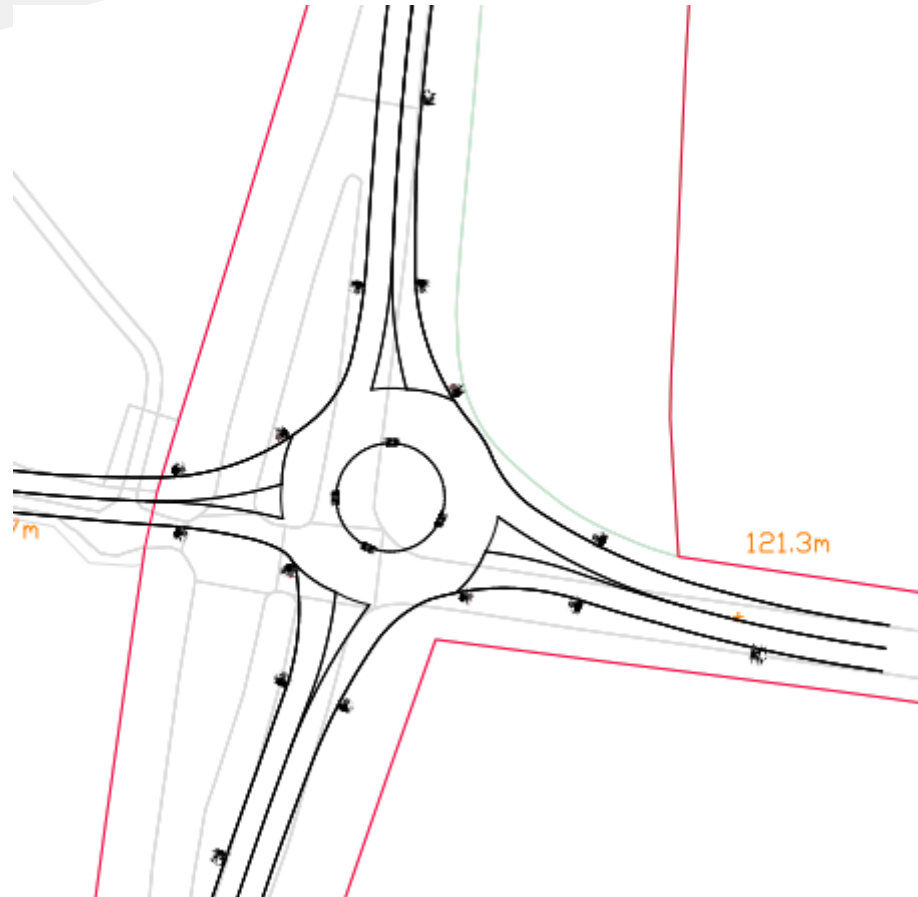


Image provided courtesy of Google 2018 via Google Earth Professional. ©Google

11.5.3. Tables **9.18** and **9.19** contained within Section 9 indicated that the existing junction reaches capacity in 2031 and over capacity in 2036 due to the increased development traffic. As a result,

a new consolidated roundabout has been introduced and modelled, taking into account the existing highway land information and existing topography.



- 11.5.4. In terms of the associated modelling results, the 2036 scenario was re-run to ensure that an additional capacity created as a result of the introduction of a roundabout would be sufficient to accommodate the proposed future development as well as the background traffic growth for the emerging Local Plan period and beyond.
- 11.5.5. The results in **Table 11.1** below indicate the predicted operation of the new roundabout in 2036, taking into account the traffic generated by the proposed development:

Table 11.1: Mitigated 2036 base plus development peak hour assessments for Junction 1.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A6003 North	1.55	0.61	1.54	0.61
Lyndon Road	0.36	0.27	0.40	0.28
A6003 South	1.85	0.65	1.12	0.53
Existing Field Access	0.00	0.00	0.01	0.01

- 11.5.6. The results demonstrate that the proposed roundabout will provide adequate capacity to serve the proposed development. Given the likely flows from the Existing Field Access it would be prudent to modify the western arm to make the access less formal, unless future development is identified. The junction layout has been included with **Appendix 4**.

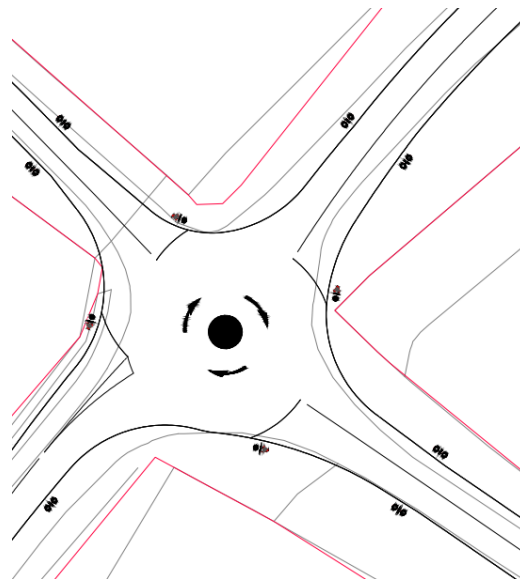
Junction 3: Wytchley Road / Normanton Road Junction

- 11.5.7. The introduction of the new 'northern' access has resulted in a significant amount of development traffic travelling along Wytchley Road / Wytchley Warren Lane and up towards the A606 via Junction 3. While there are obvious benefits with regard to development traffic (and construction traffic) avoiding Edith Weston itself, there is a detrimental impact on the operation of this junction.
- 11.5.8. Section 9 demonstrates that the flow to ratio capacity reaches 0.93 during the AM Peak which suggesting that the Wytchley Road / Normanton Road junction is close to capacity, as a direct result of the development traffic.
- 11.5.9. It is therefore been necessary to reconfigure the existing junction and initial thoughts indicate that a mini-roundabout would be an appropriate form of mitigation. An initial design has been included below, which takes into account the existing, restricted visibility from the north and the existing highway extent – indicated below.



Image provided courtesy of Google 2018 via Google Earth Professional. ©Google

- 11.5.10. The proposed new mini-roundabout layout has been included in Drawing 12825-CRH-Z1-00-DR-D-6052 and has been included as **Appendix 4**. A snapshot of the drawing is included below:



- 11.5.11. As part of the physical works, the existing tree line (located immediately east of the Normanton Park Road North arm) will need to be removed to provide adequate forward visibility.
- 11.5.12. The results of the proposed introduction of a mini-roundabout in transport modelling terms have been included in Table 11.2 below. The 2036 all development scenario has been tested to ensure that there is adequate capacity.

Table 11.2: Mitigated 2036 base year plus development peak hour assessments for Junction 3.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Wytchley Road to Normanton Road South	2.21	0.70	1.64	0.63
Wytchley Road to Normanton Park Road North	1.06	0.52	1.45	0.60
Normanton Road South to Normanton Park Road North and Wytchley Road	1.38	0.59	1.05	0.52

- 11.5.13. As can be seen from the Table above, the introduction of a mini-roundabout has reduced the likely queuing and the maximum ratio to flow capacity has also been reduced to an acceptable level with some spare capacity for future development.

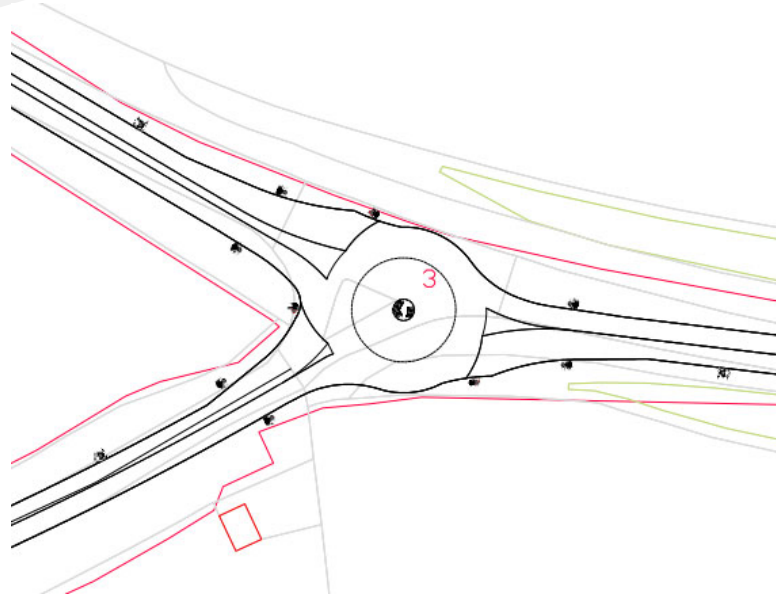
Junction 6: A606 / Normanton Park Road Junction

- 11.5.14. In a similar manner to Junction 3, the introduction of the new 'northern' access has resulted in a significant amount of development traffic travelling along Wytchley Road / Wytchley Warren Lane and up towards the A606 via Junction 6.
- 11.5.15. Section 9 demonstrates that the existing junction becomes significantly over capacity in the 2031 scenario as a direct result of the likely development traffic. It is therefore been necessary to reconfigure the existing junction and initial thoughts indicate that new consolidated would be an appropriate form of mitigation. An initial design has been included below, which takes into account the existing, restricted visibility from the north and the existing highway extent – indicated below.



Image provided courtesy of Google 2018 via Google Earth Professional. ©Google

11.5.16. The proposed new mini-roundabout layout has been included in Drawing 12825-CRH-Z1-00-DR-D-6051 and has been included as **Appendix 4**. A snapshot of the drawing is included below:



11.5.17. The proposed roundabout sits completely within the existing highway land. The results of the proposed introduction of a mini-roundabout in transport modelling terms have been included in Table 11.3 below. The 2036 all development scenario has been tested to ensure that there is adequate capacity.

Table 11.3: Mitigated 2036 base year plus development peak hour assessments for Junction 6.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
A606 East	0.87	0.46	0.76	0.43
Normanton Park Road	0.72	0.42	0.46	0.32
A606 West	1.48	0.60	1.11	0.53

11.5.18. As can be seen from the Table above, the introduction of a large consolidated roundabout has reduced the likely queuing and the maximum ratio to flow capacity has also been reduced to an acceptable level with some spare capacity for future development.

Junction 8: Southern Access from Edith Weston Road

11.5.19. In accordance with the emerging masterplan and in order to improve permeability and distribution from the development site, an additional access is required from Edith Weston Road to ease the burden from the primary access.

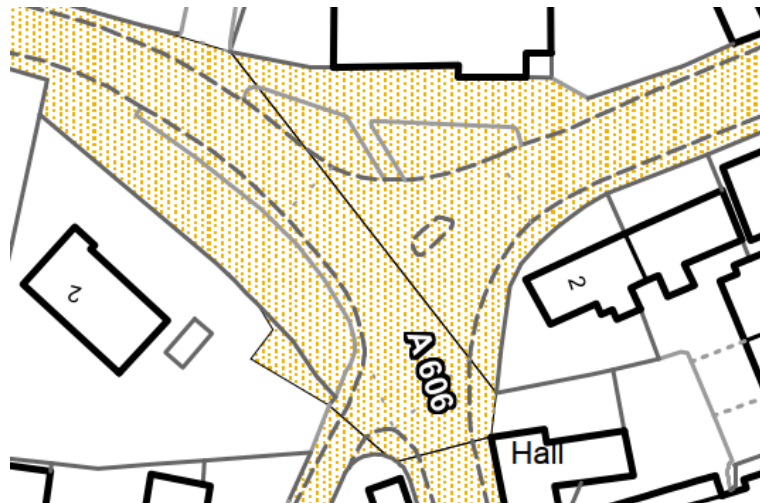
11.5.20. It is considered that this access will take the form of a priority junction and facilitate residential access into Phase 2 and beyond. The approximate location has been included within the emerging masterplan and there are not any known land ownership constraints.

Junction 11: New Northern Access from Wytchley Road

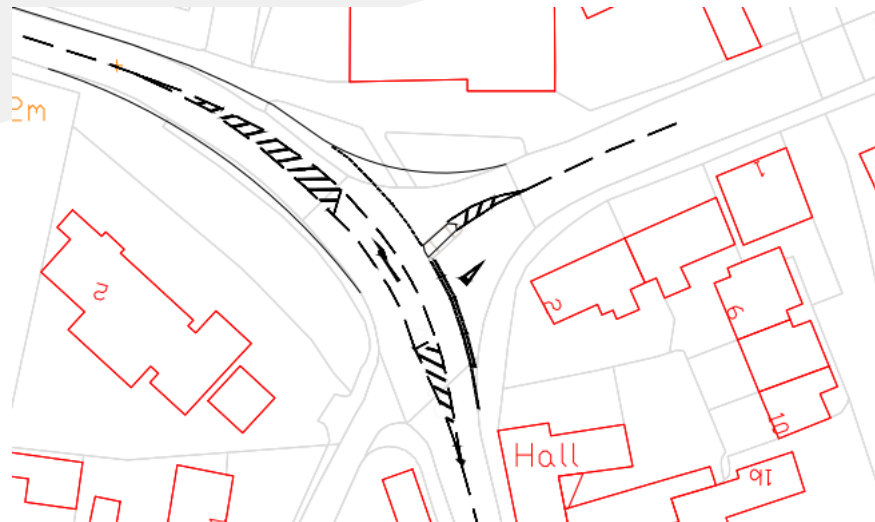
- 11.5.21. In order to facilitate the development it is considered necessary to introduce a northern access from Wytchley Road / Wytchley Warren Lane. It is considered that this access will take the form of a priority junction and facilitate the majority of the commercial access as well as residential access for the latter phases.
- 11.5.22. The approximate location has been included within the emerging masterplan and the associated modelling results have been included in **Table 9.34**. There are land ownership issues that will need to be overcome in order to construct any new access which will need to be understood and overcome by the developer, in cooperation with Rutland County Council and the Ministry of Defence.

Junction 12: A606 (Whitwell Road) / Main Street Empingham Junction

- 11.5.23. In a similar manner to Junctions 3 and 6, the introduction of the new 'northern' access has resulted in a significant amount of development traffic travelling to and from the north, towards the A1 via Junction 12.
- 11.5.24. Section 9 indicated that the development traffic has an impact on the operation of the junction in 2036 with the vehicles looking to turn right from Whitwell Road onto Main Street causing moderate queuing. It is therefore necessary to reconfigure the existing junction and initial thoughts indicate that the introduction of a right turn filter lane would be an appropriate form of mitigation. An initial design has been included below, which takes into account the existing, vertical geometry and the existing highway extent – indicated below.



- 11.5.25. The proposed mitigated junction layout has been included in Drawing 12825-CRH-Z1-00-DR-D-6053 and has been included as **Appendix 4**. A snapshot of the drawing is included below:



11.5.26. The proposed junction amendments sit completely within the existing highway land. The results of the proposed introduction of a right turn filter lane in transport modelling terms have been included in Table 11.3 below. The 2036 all development scenario has been tested to ensure that there is adequate capacity.

Table 11.4: Mitigated 2036 base year plus development peak hour assessments for Junction 12.

Arm /Movement	AM Peak		PM Peak	
	Max Queue	Max RFC	Max Queue	Max RFC
Main Street to Whitwell Road South	0.79	0.42	1.59	0.60
Main Street to Whitwell Road North	0.63	0.37	0.69	0.42
Whitwell Road South to Whitwell Road North and Main Street	1.03	0.48	0.98	0.47

11.5.27. As can be seen from the Table above, the introduction of the right turn filter lane has reduced the likely queuing and the maximum ratio to flow capacity has also been reduced to an acceptable level with some spare capacity for future development.

11.6. Summary of Mitigation Measures

11.6.1. In order to facilitate the proposed redevelopment of St Georges Barracks the following mitigation measures are considered relevant to support any future Local Plan allocation:

- Creation of new northern access points onto Wytchley Road;
- Widening of Wytchley Road / Wytchley Warren Lane;
- Improvements to Wytchley Road / Normanton Park junction;
- Improvements to the A606 / Normanton Road junction;
- Improvements to the A6003 / Lyndon Road junction;
- A 'gateway' access point from Edith Weston Road and a new 'secondary' access from Edith Weston Road;
- Improved Bus Services to and from the site to connect with Oakham, Uppingham and Stamford;

- New Bus Infrastructure throughout the site including well positioned bus stops with appropriate facilities, including real time travel information;
- Modifications to Pennine Drive to include traffic calming measures, improved sustainable links with the potential for a dedicated bus and cycle lane;
- New, well defined footway connections through the site connecting with the Country Park and Heritage Zone;
- New cycle facilities including safe and secure parking located adjacent to the Local Centre and Business Zone;
- Active Car Parking Management;
- Electric Charging Points for residents and communal charging points at the Local Centre and within the Business Zone;
- Introduction of a number of Car Club parking bays for existing and new residents; and
- Residential and Workplace Travel Plans.

12.0 SUMMARY AND CONCLUSIONS

- 12.1. Campbell Reith Hill LLP (CampbellReith) has been appointed by Rutland County Council (RCC) and the Defence Infrastructure Organisation (DIO) to provide highway and transportation planning advice and to undertake a Transport Assessment to support a potential Local Plan Allocation for the redevelopment of St Georges Barracks located in Edith Weston, Rutland.
- 12.2. The proposed development seeks to comprehensively redevelop the existing St Georges Army Barracks and associated land to provide, refurbish and modernise a Shopping Centre that is currently in administration and in a poor state of repair. The uses proposed are appropriate to the context of the local area and comprise the provision of:
- Up to 2,315 residential dwellings (C3), of which 2,215 are to come forward as part of the main site, 70 units at the Officers Mess and 30 units at the existing primary school;
 - Up to 62,200 sqm of commercial floorspace (office / general industry / light industrial / storage and distribution – use classes B1a/b/c, B2 and B8) as well as community facilities and associated retail spaces; and
 - Replacement three form entry primary school.
- 12.3. An assessment of the existing site conditions and surrounding road network was undertaken highlighting a number of existing constraints as well as opportunities. This included a review of the existing sustainable travel options and linkages with existing settlements including Rutland Water.
- 12.4. The emerging masterplan has evolved to address a number of concerns highlighted through the Community Engagement process and a new 'northern' access is being promoted to minimise the amount of traffic through Edith Weston.
- 12.5. The potential impact of the proposed development on the existing network has been assessed in transport terms. Two future assessment years were previously identified and the associated total trips are included below in **Table 12.1**:

Assessment Year	AM Peak			PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
2031 (Partial Build Out)	463	519	982	467	486	953
2036 (Full Build Out)	676	809	1,485	730	714	1,444

Table 12.1: Summary of peak hour trip rates for future assessment years.

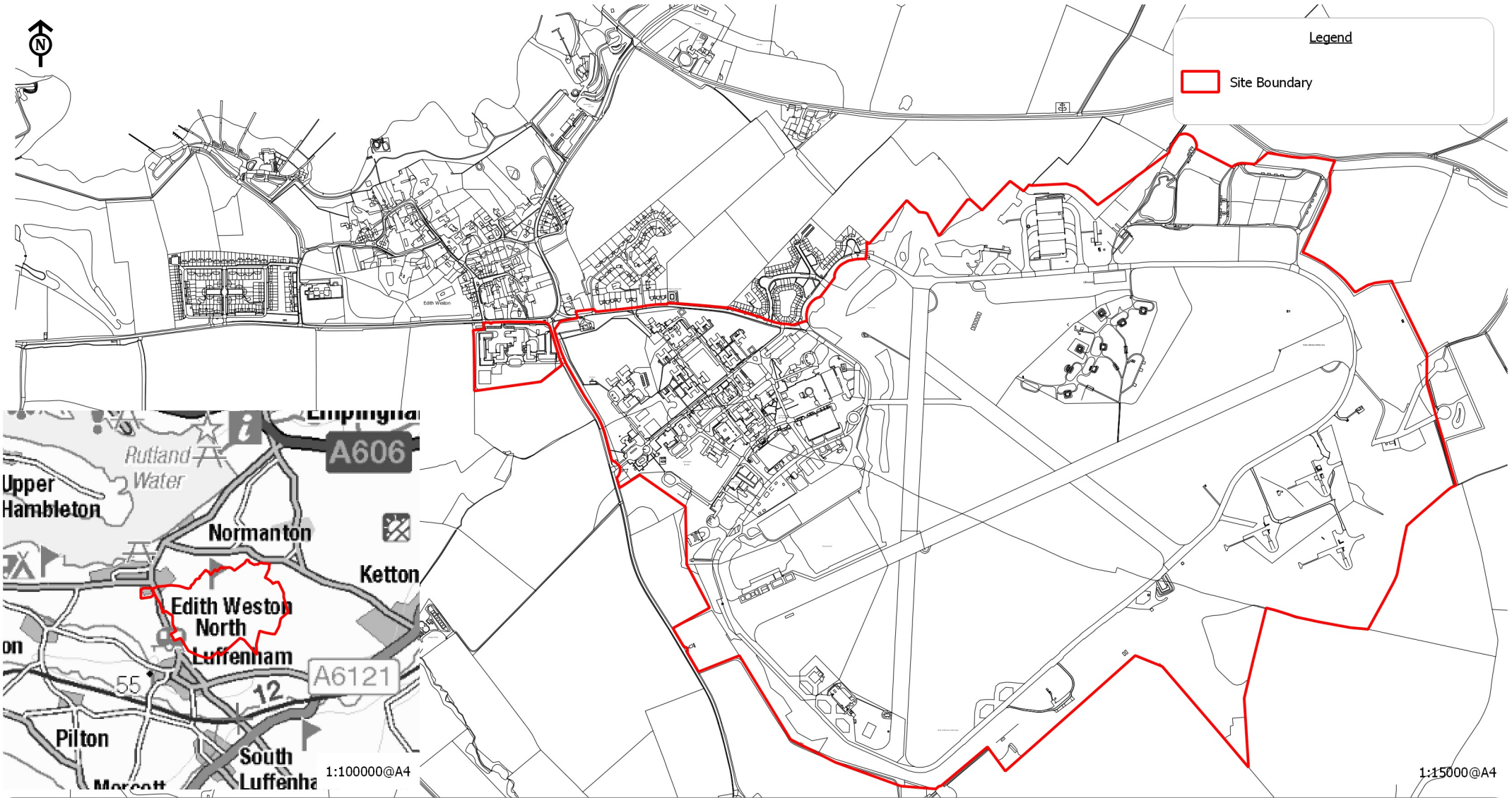
- 12.5.1. In order to understand the likely origin and destination of the additional traffic generated by this development, junction turning movements were observed and collected on 5 October 2017 between the hours of 07:00-10:00 and 15:00-18:00, which is considered a neutral day in a neutral week for traffic movements, therefore considered a representative sample.
- 12.6. The recorded peak hour turning movements will help inform the likely local travel patterns to indicate how the additional traffic is dispersed onto the existing road network. This was validated by using the data contained within the 2011 Census statistics.
- 12.7. The traffic impact of the proposed development was assessed using Junction 8 software packages. The results demonstrated that a number of the existing junctions were operating at or over capacity during the future year assessment. These junctions are shown in **Table 12.2** below:

Junction	2024 Base	2031 Base	2031 with Development	2036 Base	2036 with Development
Junction 1	Green	Green	Yellow	Green	Red
Junction 3	Green	Green	Green	Green	Red
Junction 6	Green	Green	Red	Green	Red
Junction 12	Green	Green	Light Green	Green	Yellow
Widening of Wytchley Road	Green	Green	Red	Green	Red
Creation of Northern Access	Green	Green	Red	Green	Red
Secondary Access from Edith Weston Road	Green	Green	Yellow	Green	Red

Table 12.2: Summary of junction performance with and without development traffic.

- 12.8. As a result a number of mitigation measures have been considered to increase capacity and appropriately facilitate the proposed development. The full list of mitigation measures are included in **Section 11.6**.
- 12.9. The proposed development at St Georges Barracks represents a significant opportunity to introduce measures that could have a positive impact on sustainable travel. A new or improved Bus Service should be at the core of any new development, connecting the site with key destinations via a frequent, reliable service.
- 12.10. Walking and cycling infrastructure has been considered as a key part of the emerging masterplan with convenient links to the Business Zone and Local Centre for both new and existing residents. External links with Rutland Water and amenities within Edith Weston, along with safe crossing facilities should be implemented.
- 12.11. A series of sustainable travel initiatives and measures, as outlined in Section 11.6, should be secured as part of any future development of the site.
- Next Steps:**
- 12.12. The traffic assignment is to be extended to the Strategic Road Network to define the likely impact on the A1 / A606 and A1 / Grantham Lane junction. This Transport Assessment is to be sent to Highways England for review and detailed technical discussions are to be held to determine the likely impact on the SRN and appropriate form of mitigation.
- 12.13. It is recommended that the relevant searches are carried to understand the current ownership and risks associated with the land immediately north of the site to ensure that the new 'northern' access points can physically be provided.
- 12.14. As part of any future formal pre-application process, discussions with the local Bus Operator and Car / Van Clubs are to be undertaken to obtain support for sustainable travel initiatives.

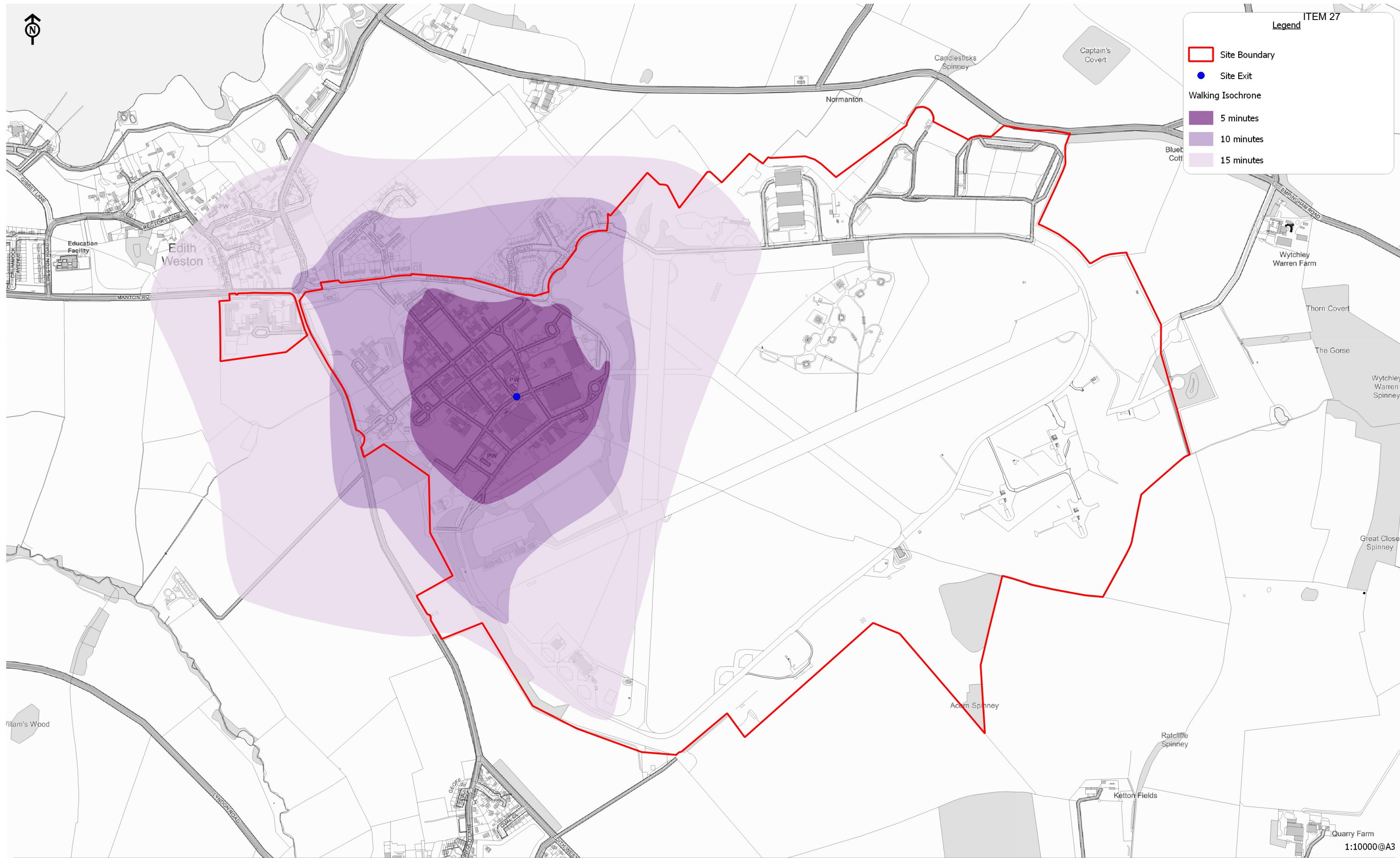
FIGURES



St George's Barracks, LE15 8JE

Figure 1:
Site Location

Scale: 1:15000@A4; Inset 1:100000@A4
 CampbellReith OS Copyright: © Crown copyright. All rights reserved. Licence number 100020027
 Contains Ordnance Survey data © Crown copyright and database right 2017.
 Job Number: 12825
 Drawn by - Checked by: RP - MP
 Drg No - Status/Revision: GIS001 - A
 File location: N:\12750 - 12999\12825 R - St Georges Barracks/Project_Workspaces (pdf in Outputs)
 Date (Revision History): 26/01/2018 (A, First Issue, 26/01/18, RP)



St George's Barracks, LE15 8JE

Client: RegenCo

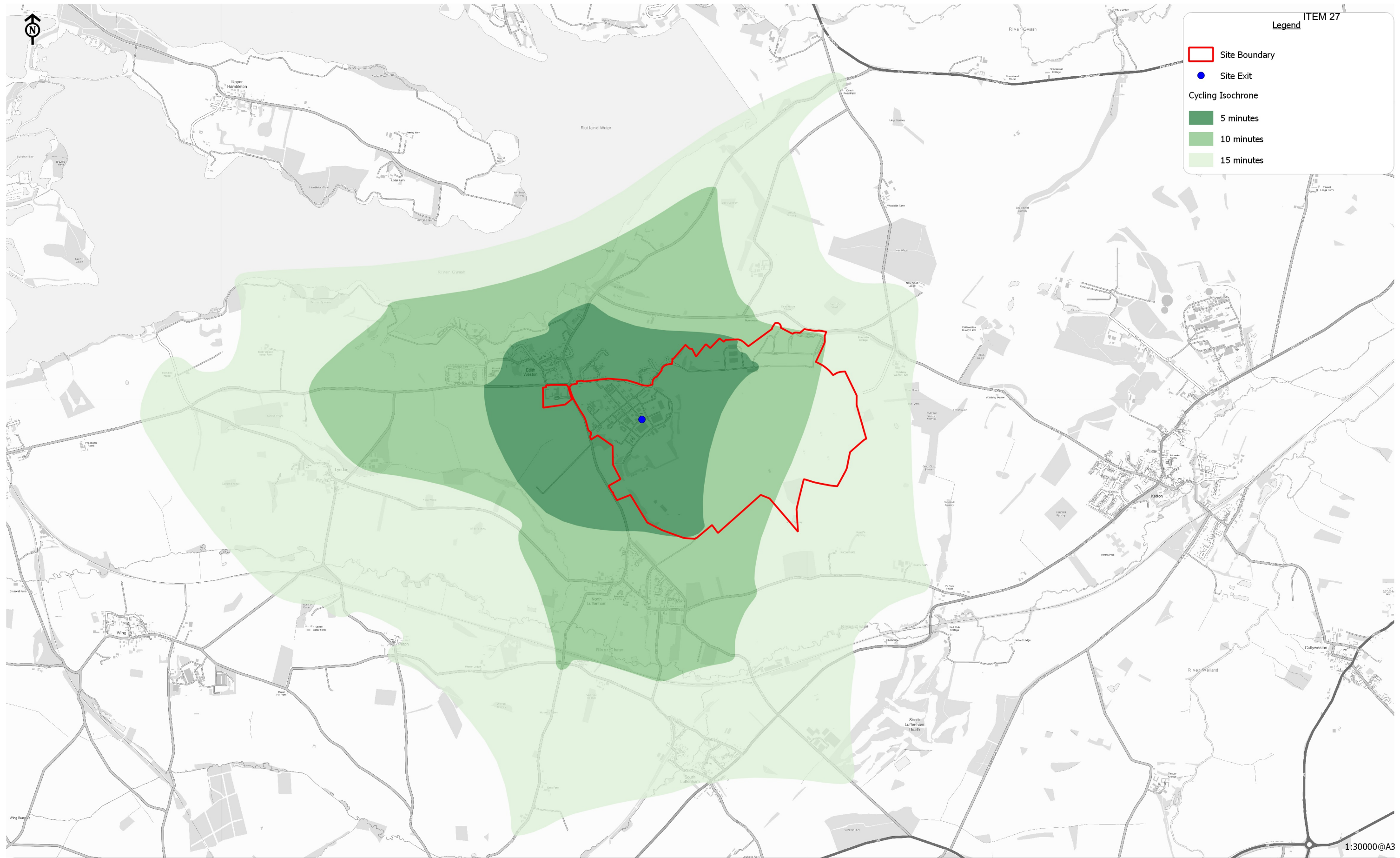
Figure 2:
Walking Isochrone

Scale: 1:10000@A3
 Copyright: © Crown copyright. All rights reserved. Licence number 100020027
 Contains Ordnance Survey data © Crown copyright and database right 2018.
 Job Number: 12825
 Drawn by - Checked by: RP - CS
 Drg No - Status/Revision: GIS018 - A
 File location: N:/12750 - 12999/12825 R - St Georges Barracks/Project_Workspaces/Transport (pdf in Outputs)
 Date (Revision History): 08/10/2018 (A, First Issue, 08/10/18, RP)

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 REDHILL 01737 784 500 □ BIRMINGHAM 01675 467 484
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ITEM 27
Legend

- Site Boundary
- Site Exit
- Cycling Isochrone
- 5 minutes
- 10 minutes
- 15 minutes

St George's Barracks, LE15 8JE
Client: RegenCo

Figure 3:
Cycling Isochrone

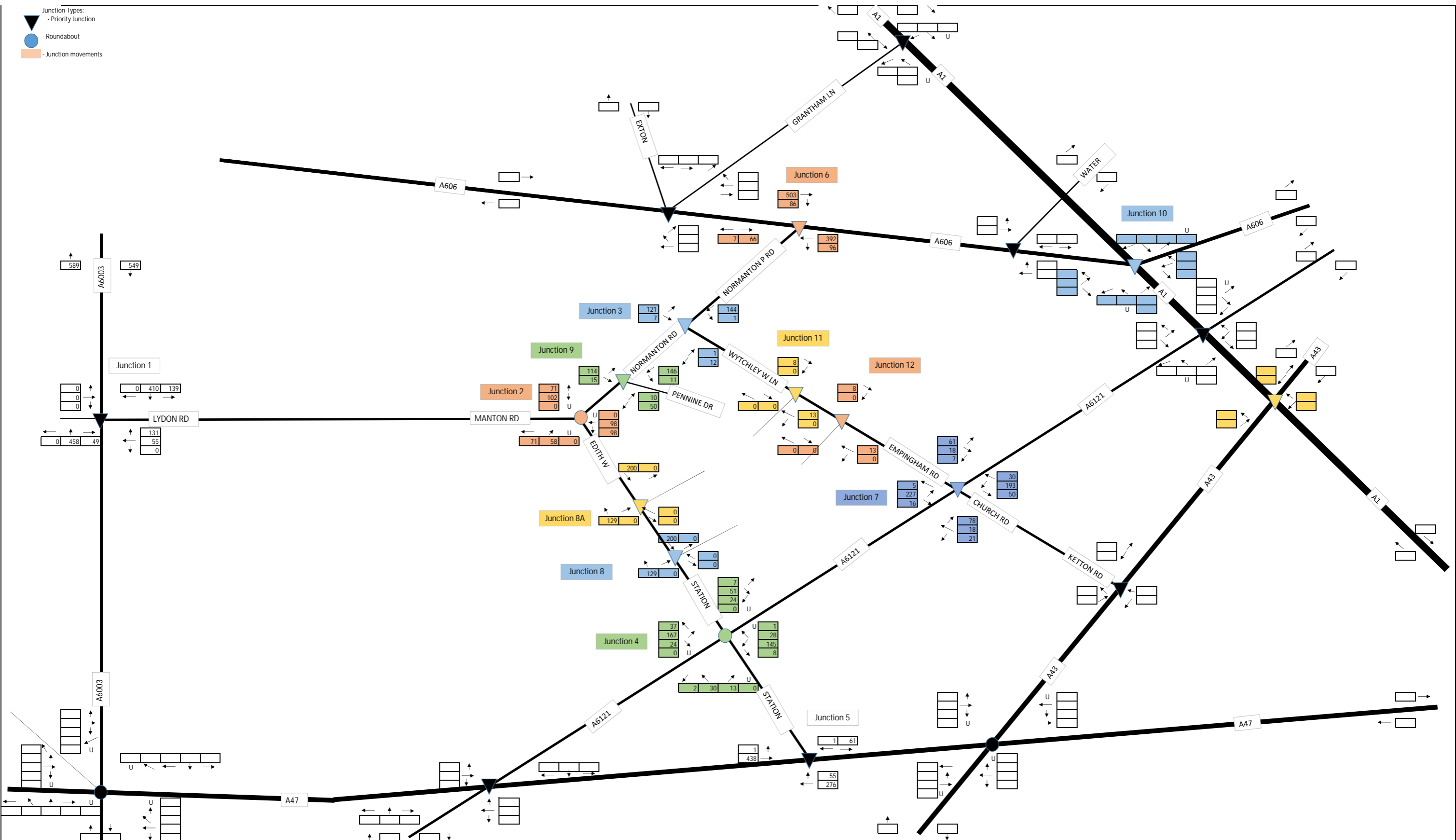
Scale: 1:30000@A3
 Contains Ordnance Survey data © Crown copyright and database right 2018.
 Job Number: 12825
 Drawn by - Checked by: RP - CS
 Drg No - Status/Revision: GIS019 - A
 File location: N:/12750 - 12999/12825 R - St Georges Barracks/Project_Workspaces/Transport (pdf in Outputs)
 Date (Revision History): 08/10/2018 (A, First Issue, 08/10/18, RP)

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Appendix 1: Traffic Assignment Figures

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

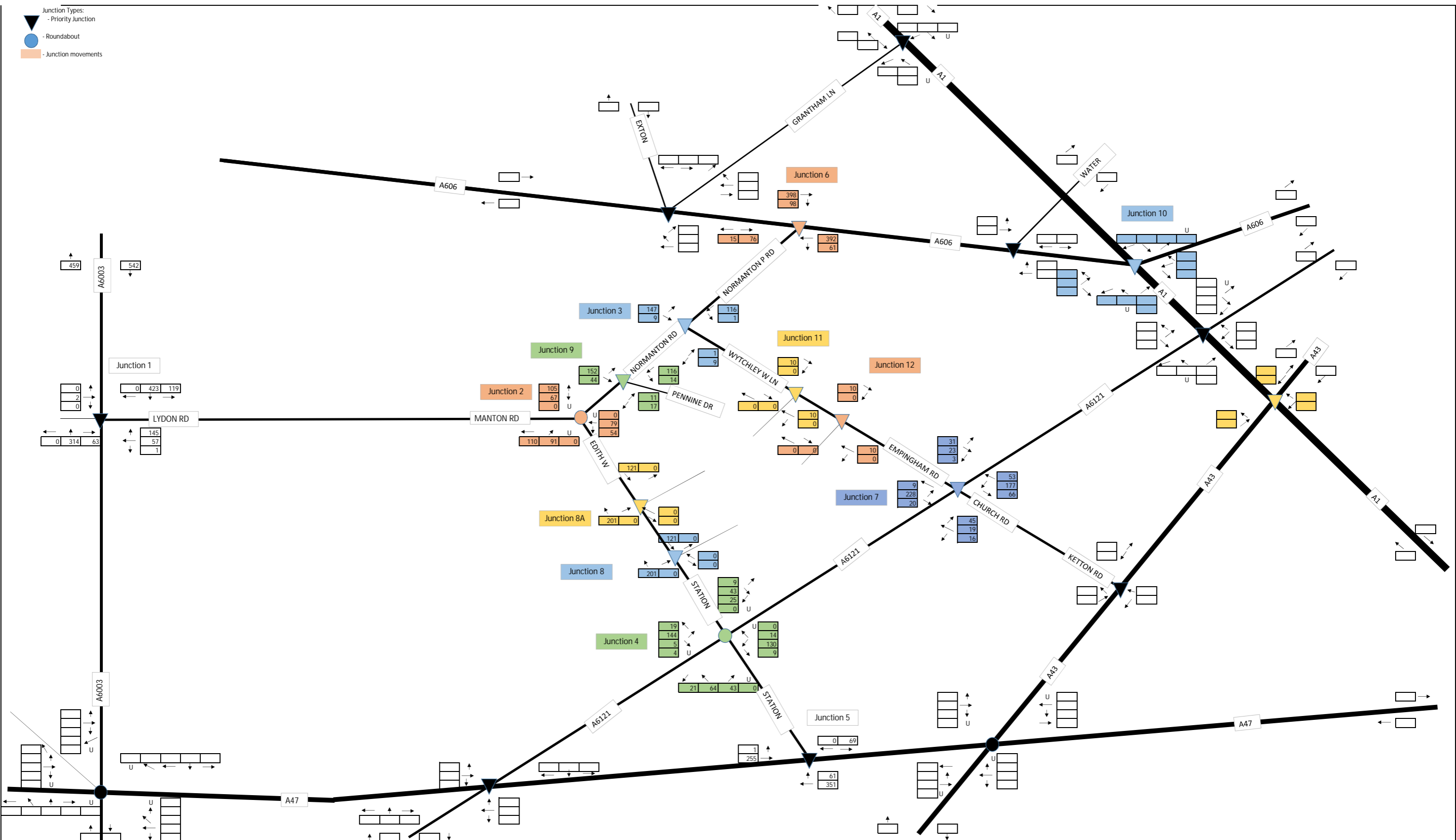


ST. Georges Barracks, Edith Weston:

2017 - Morning Peak (7:45 - 8:45) - Survey Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T1

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

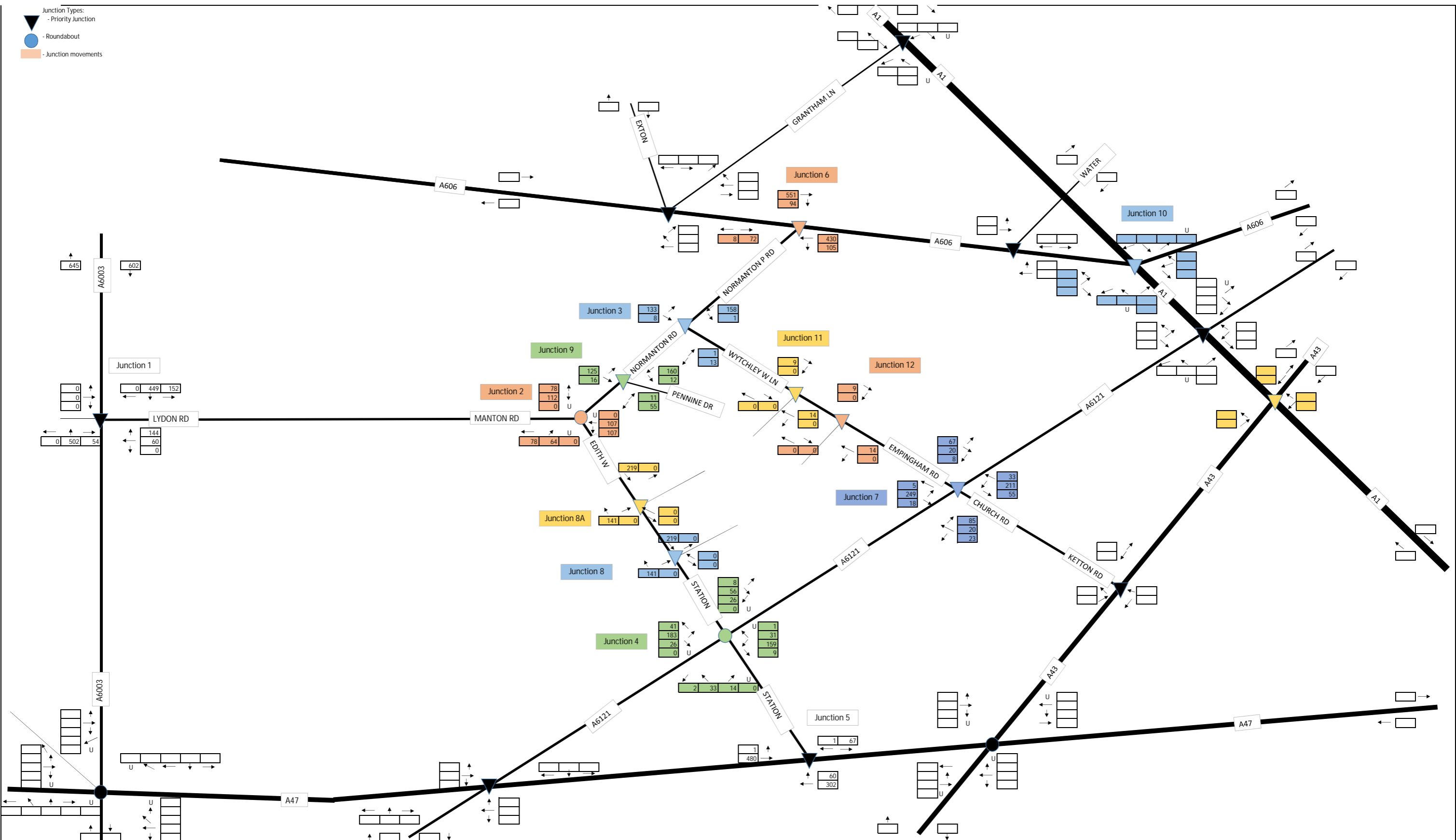


ST. Georges Barracks, Edith Weston:

2017 - Afternoon Peak (16:30 - 17:30) - Survey Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T2

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

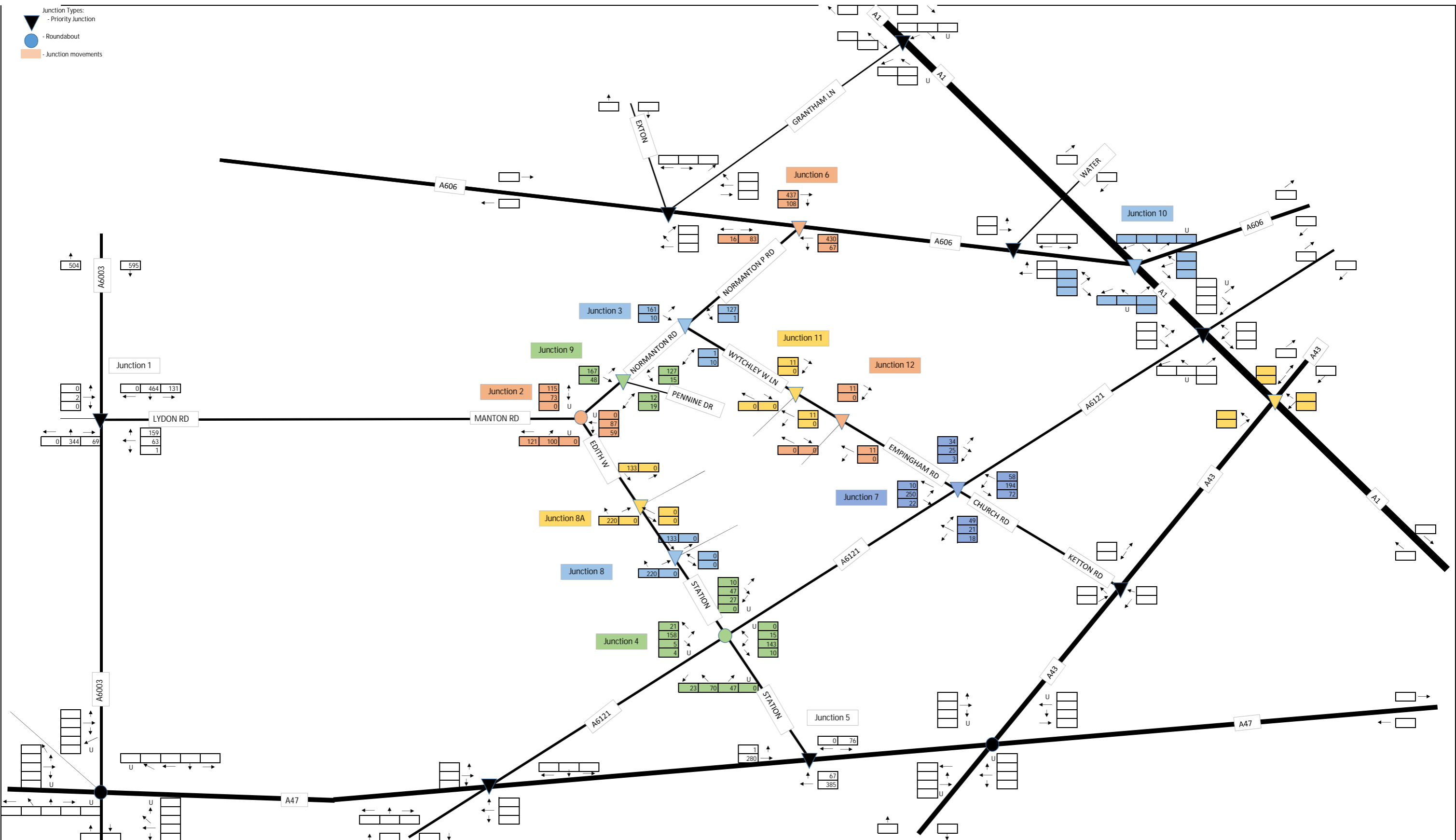


ST. Georges Barracks, Edith Weston:

2024 - Morning Peak (7:45 - 8:45) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T3

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

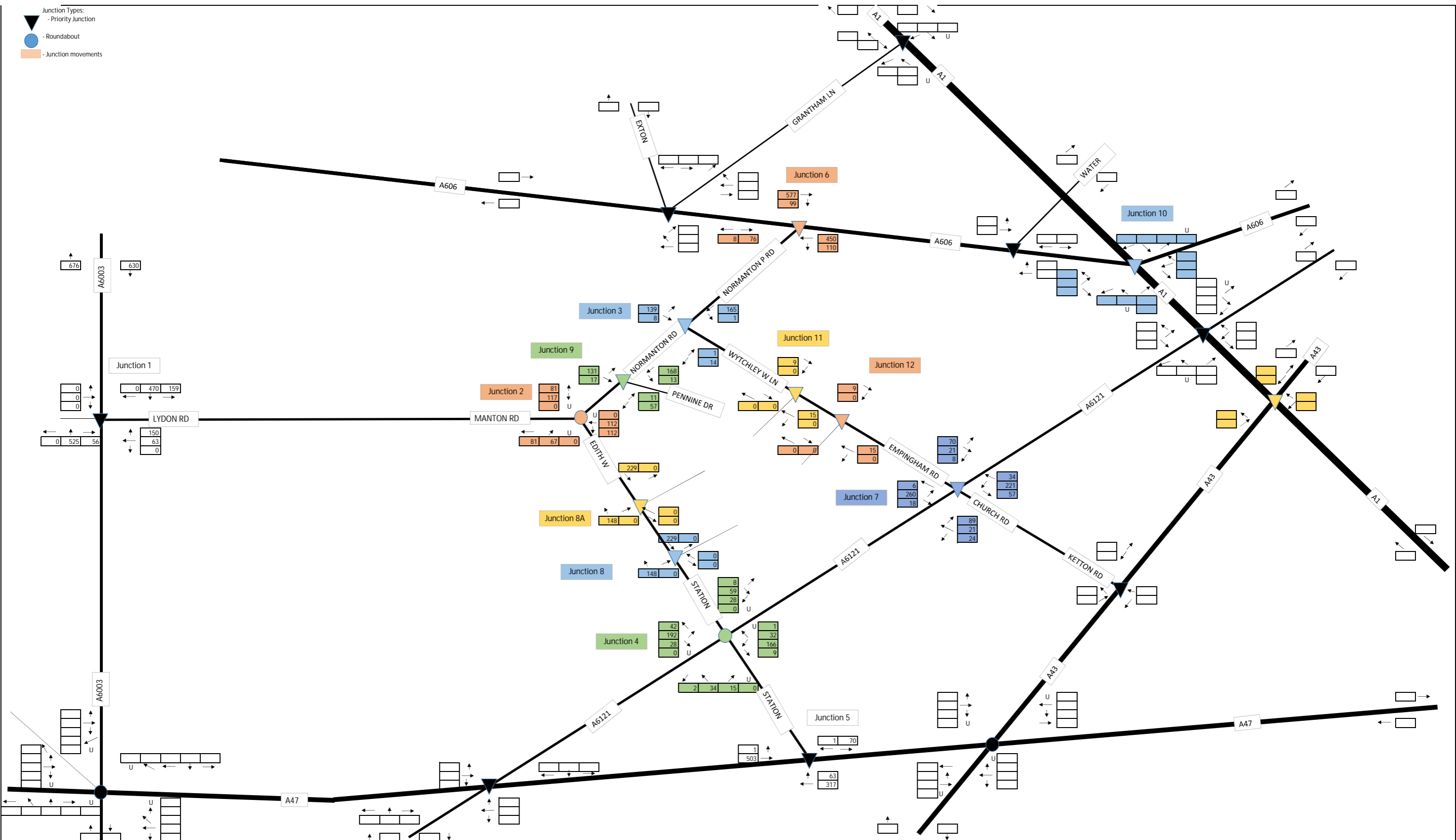


ST. Georges Barracks, Edith Weston:

2024- Afternoon Peak (16:30 - 17:30) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T4

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

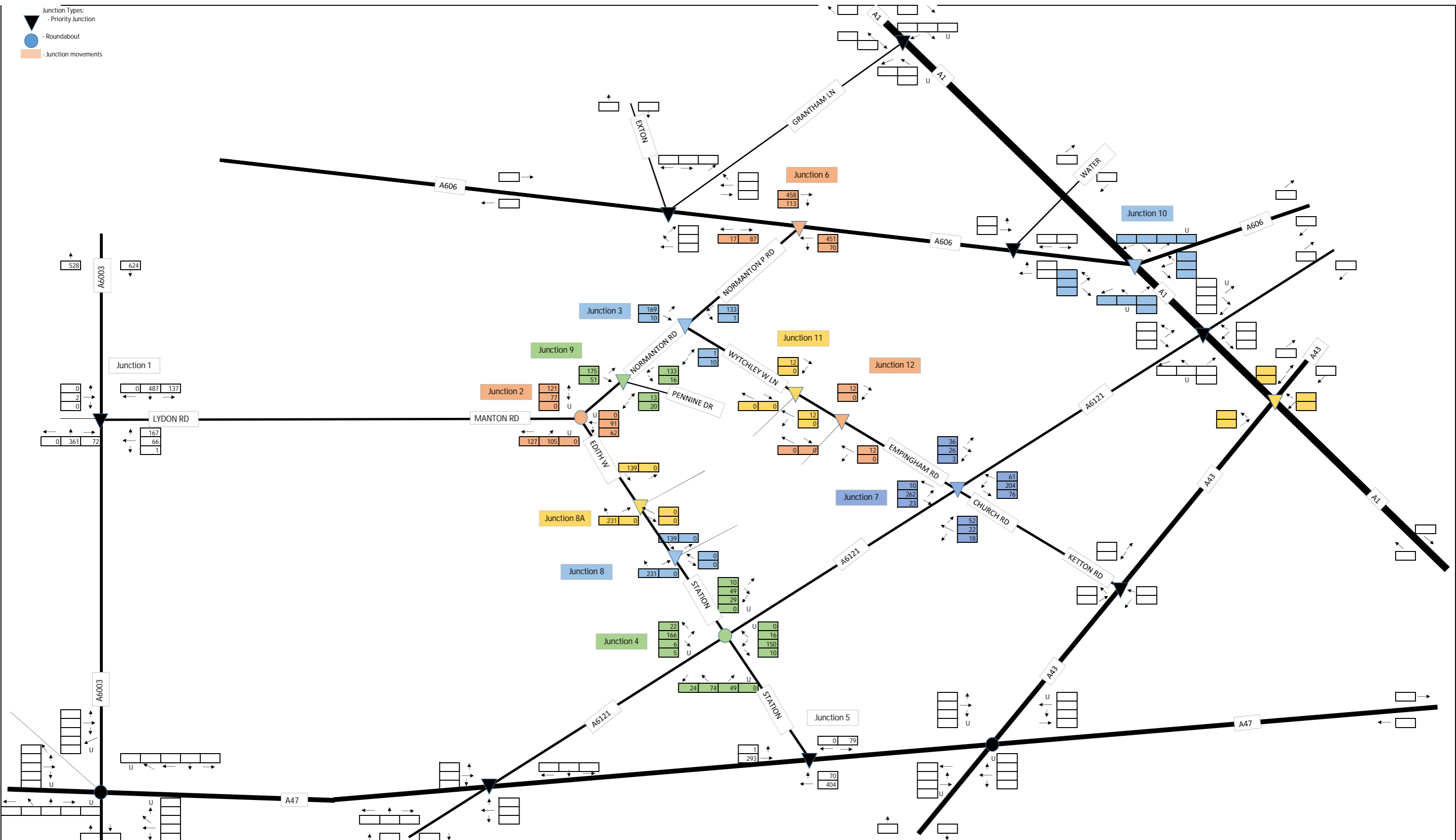


ST. Georges Barracks, Edith Weston:

2031 - Morning Peak (7:45 - 8:45) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T5

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

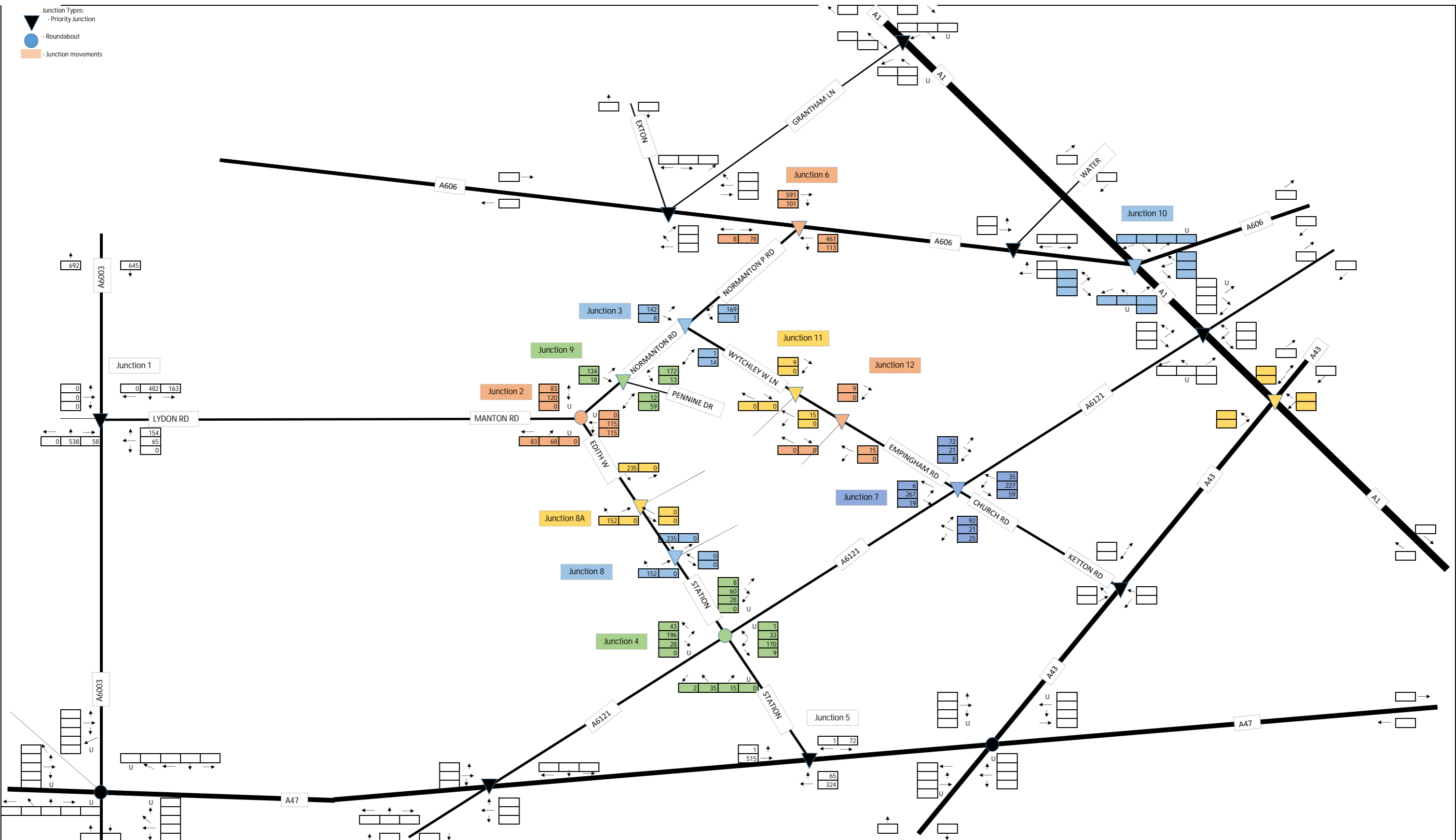


ST. Georges Barracks, Edith Weston:

2031 - Afternoon Peak (16:30 - 17:30) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T6

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

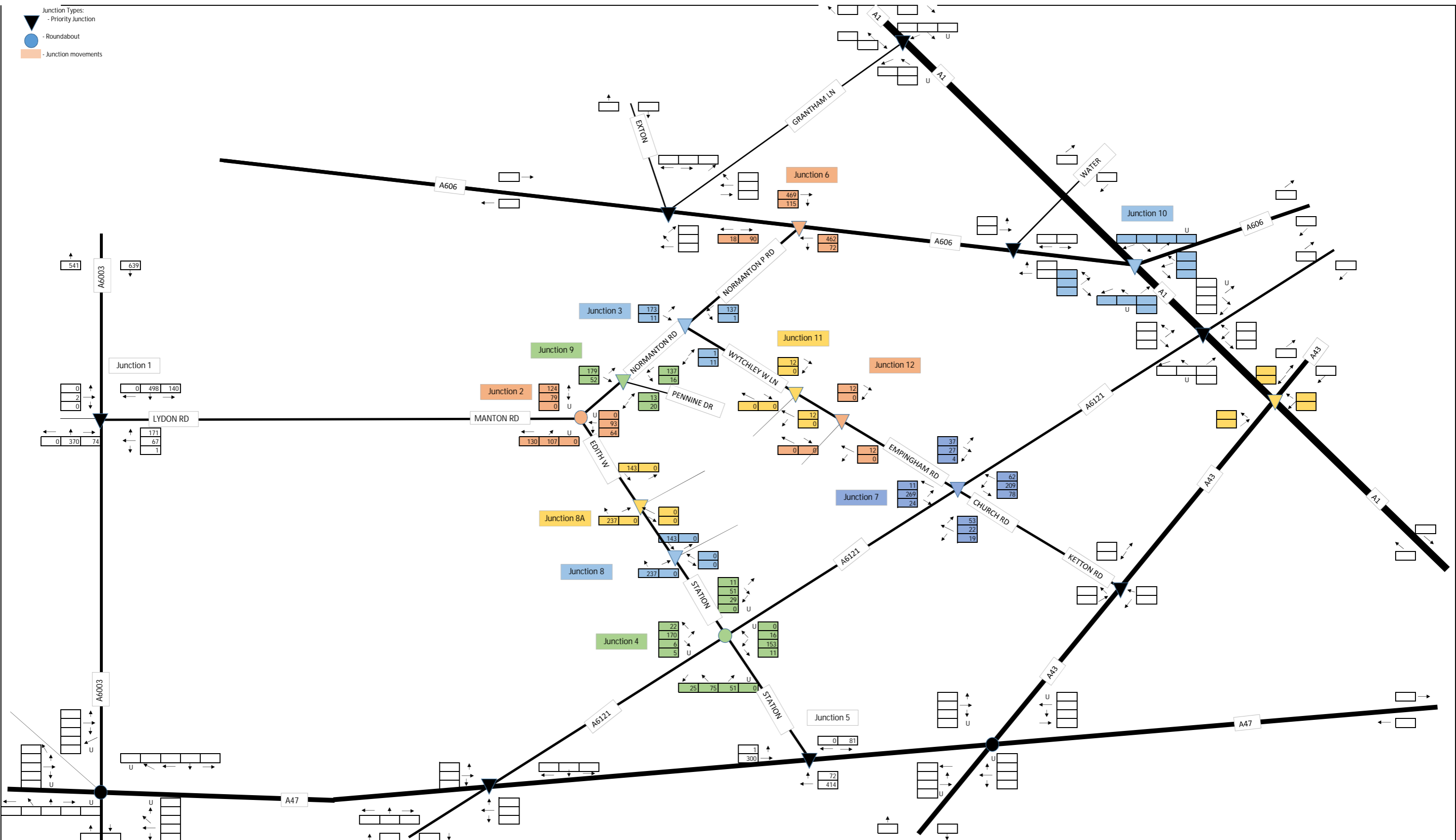


ST. Georges Barracks, Edith Weston:

2036 - Morning Peak (7:45 - 8:45) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T7

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

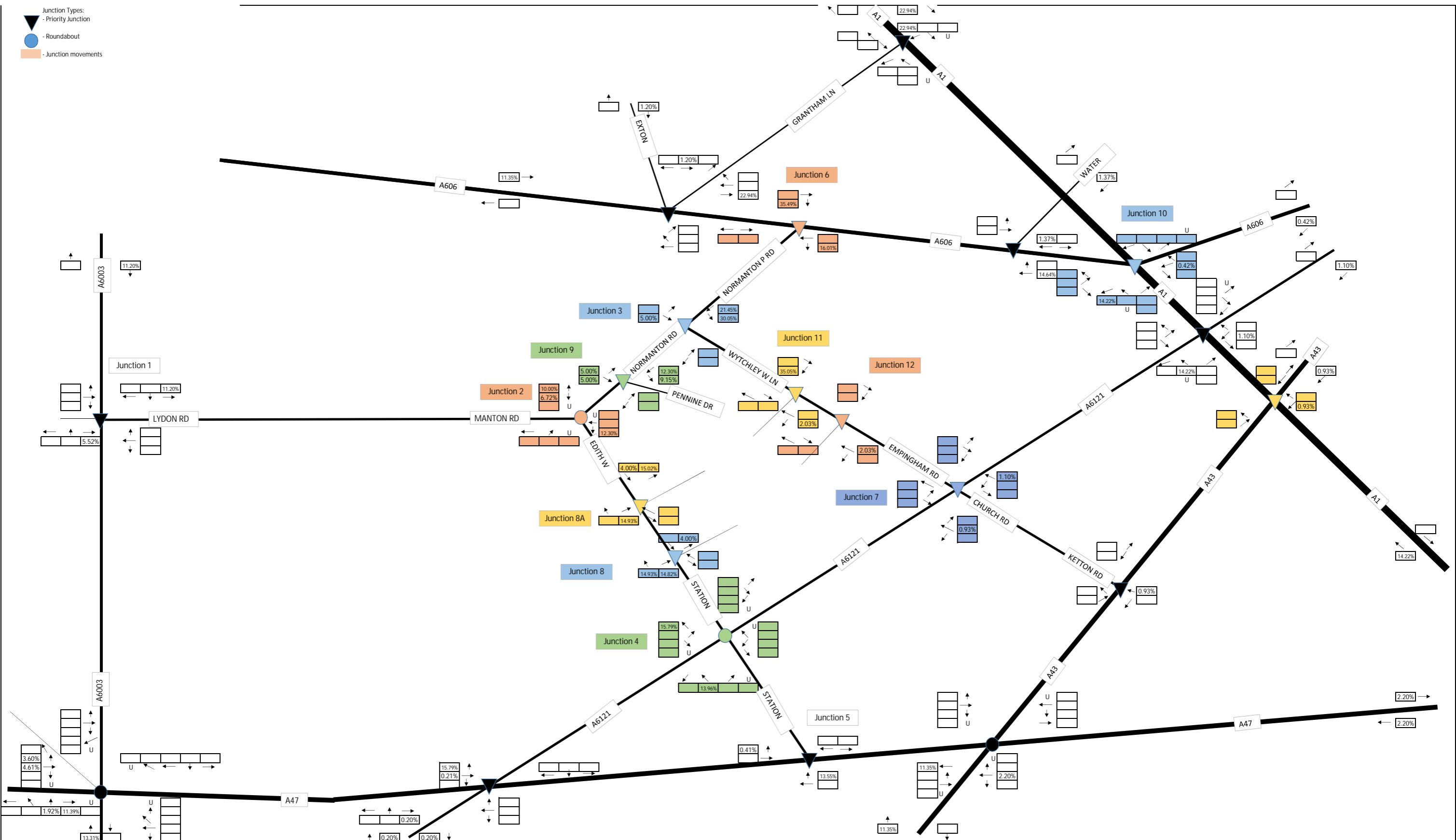


ST. Georges Barracks, Edith Weston:

2036 - Afternoon Peak (16:30 - 17:30) - Baseline Data

Drawn	MPJ
Date	31/10/2018
Reference	Figure T8

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

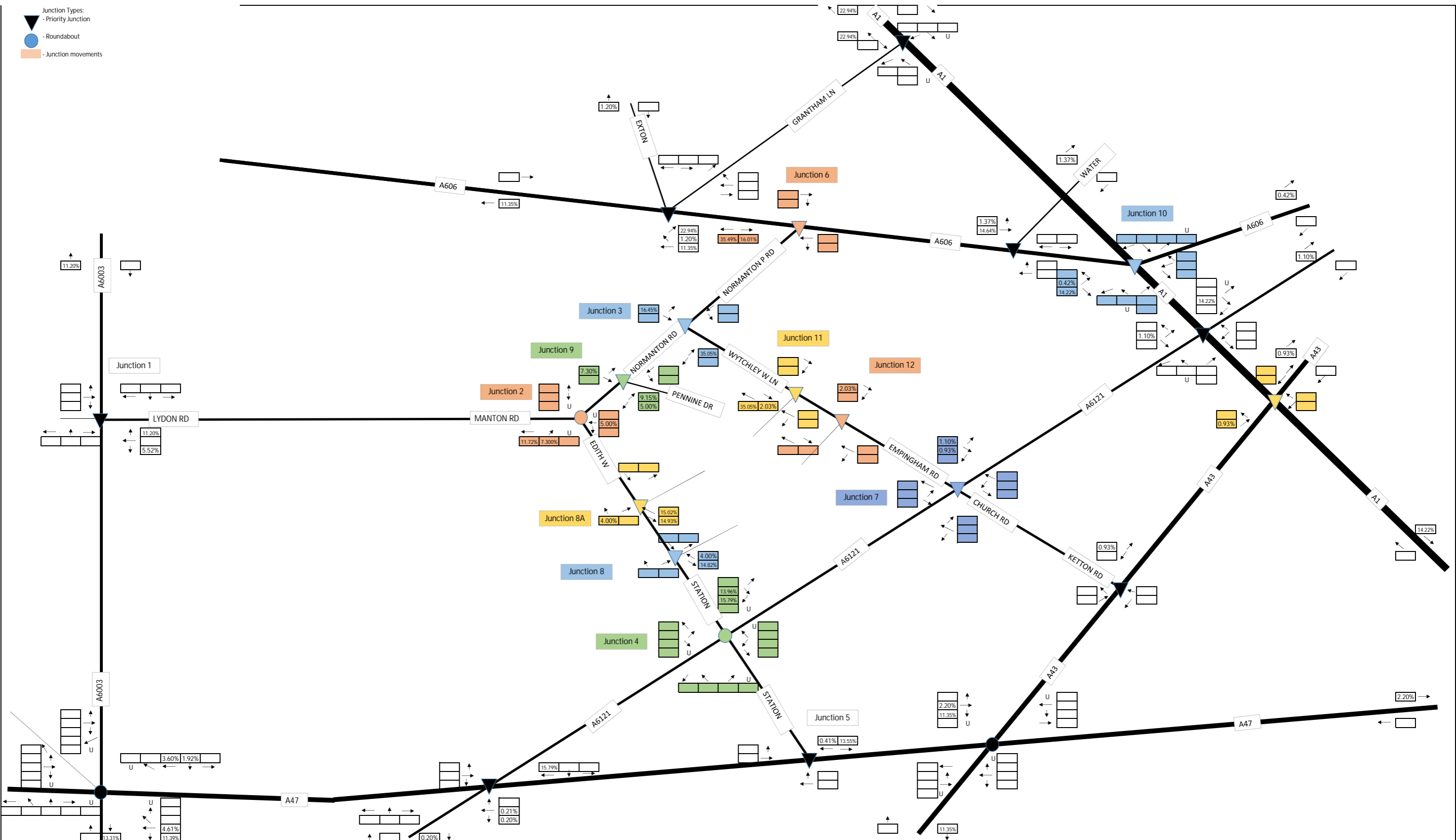


ST. Georges Barracks, Edith Weston:

Proposed Development - Residential Element - Arrivals Distribution

Drawn	MPJ
Date	31/10/2018
Reference	Figure T9

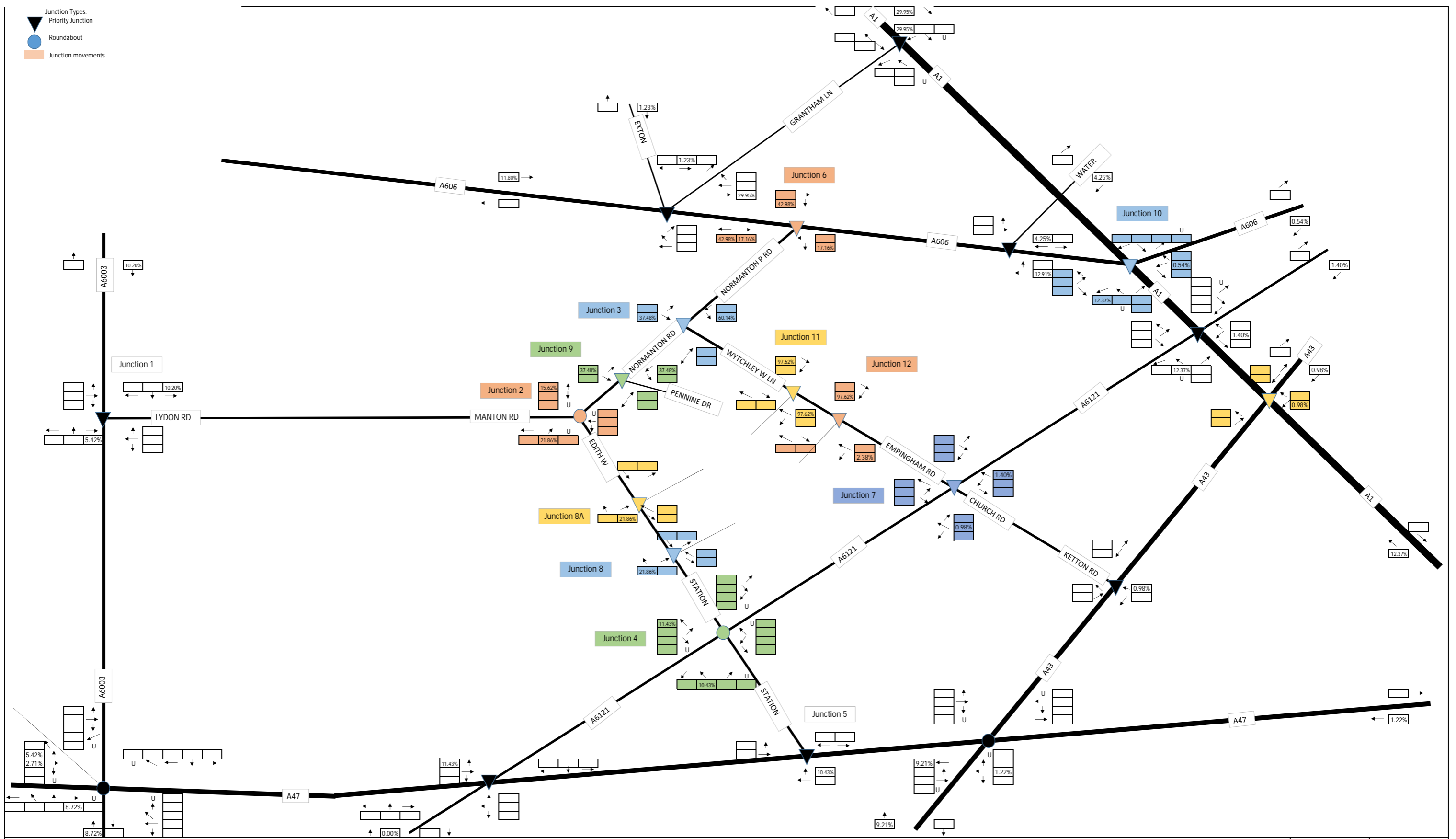
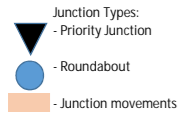
Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ■ - Junction movements



ST. Georges Barracks, Edith Weston:

Proposed Development - Residential Element - Departures Distribution

Drawn	MPJ
Date	31/10/2018
Reference	Figure T10

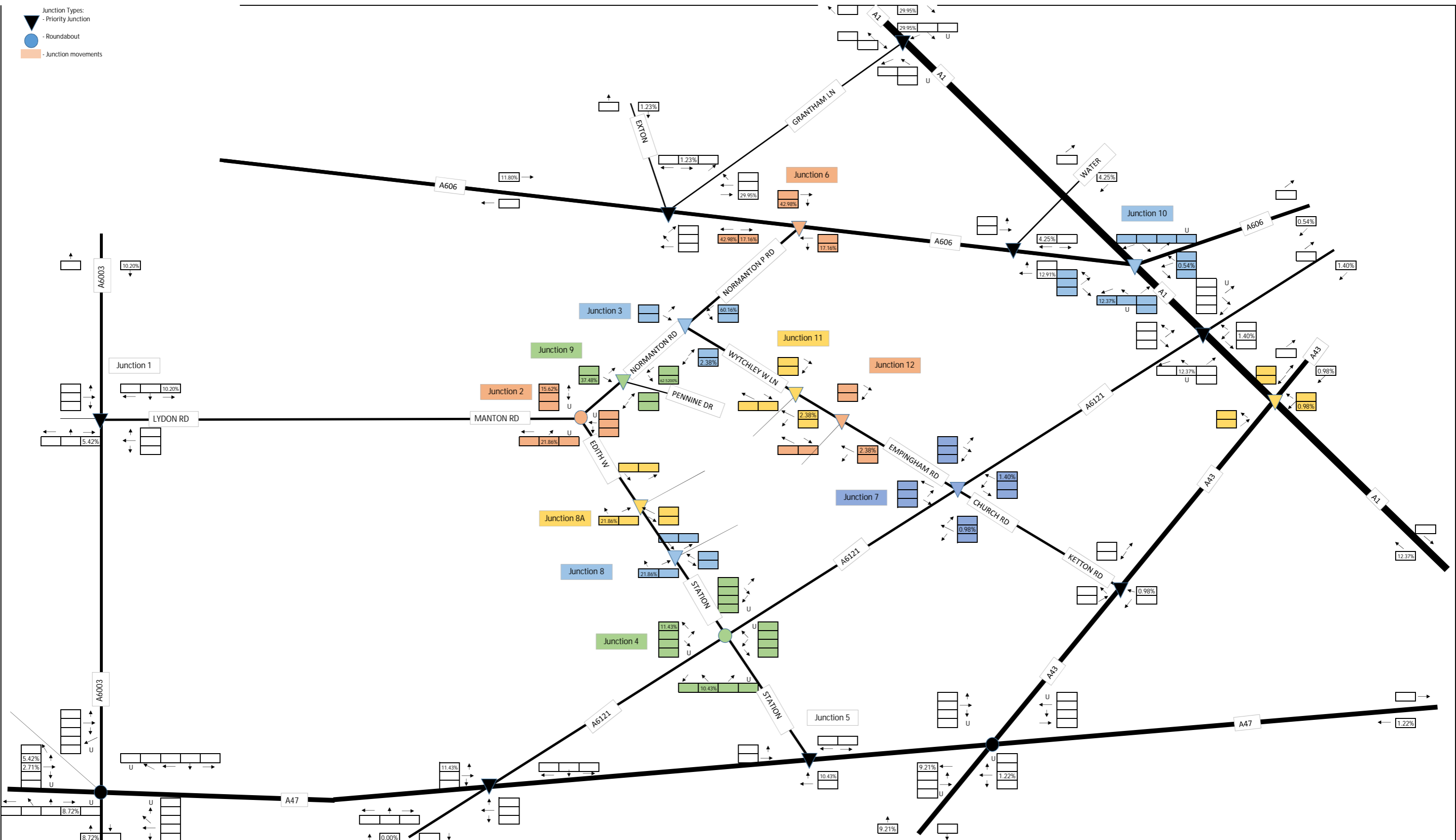


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Arrivals Distribution - Wychley Warren Lane Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T11

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

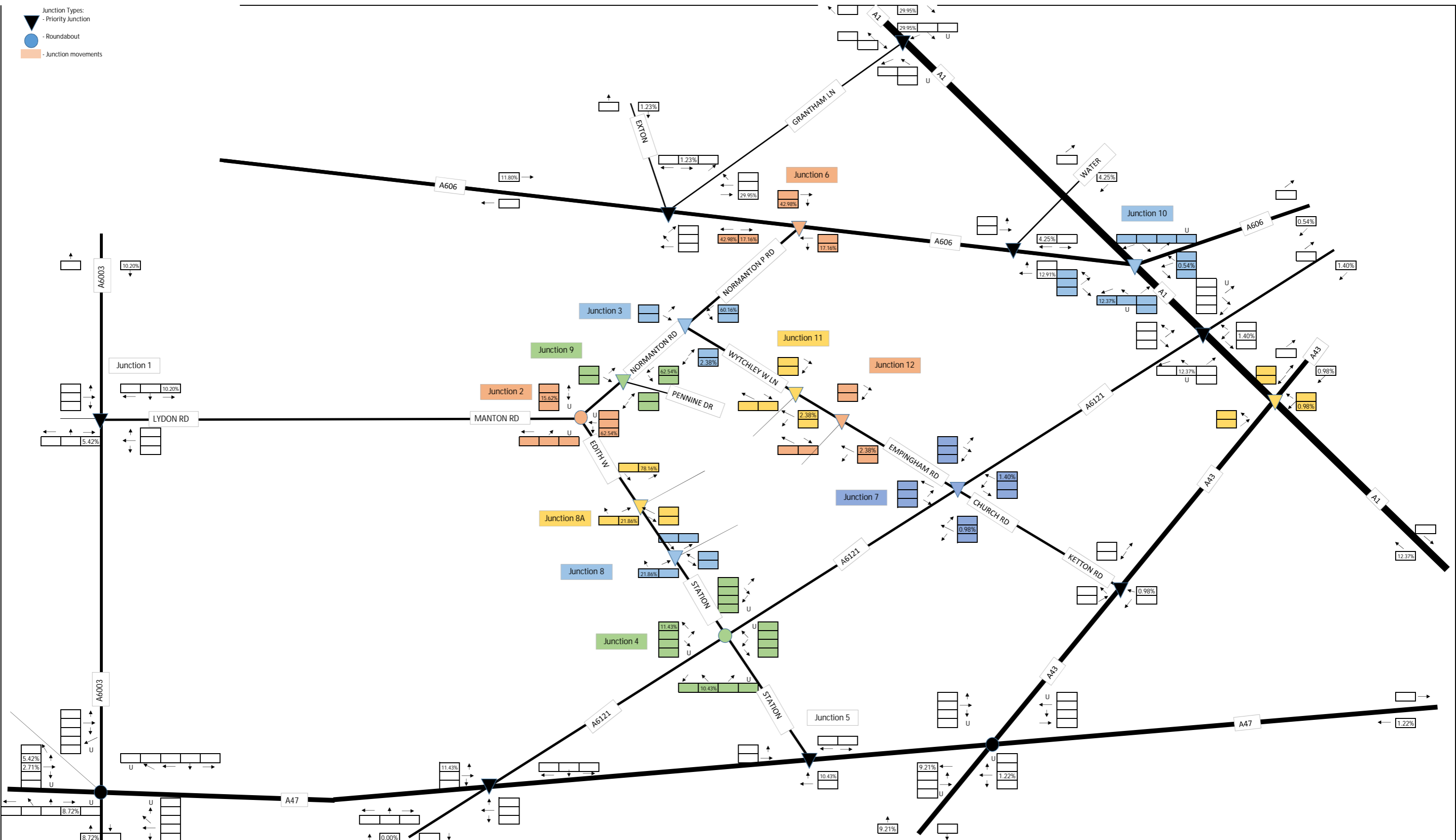


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Arrivals Distribution - Pennine Drive Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T12

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

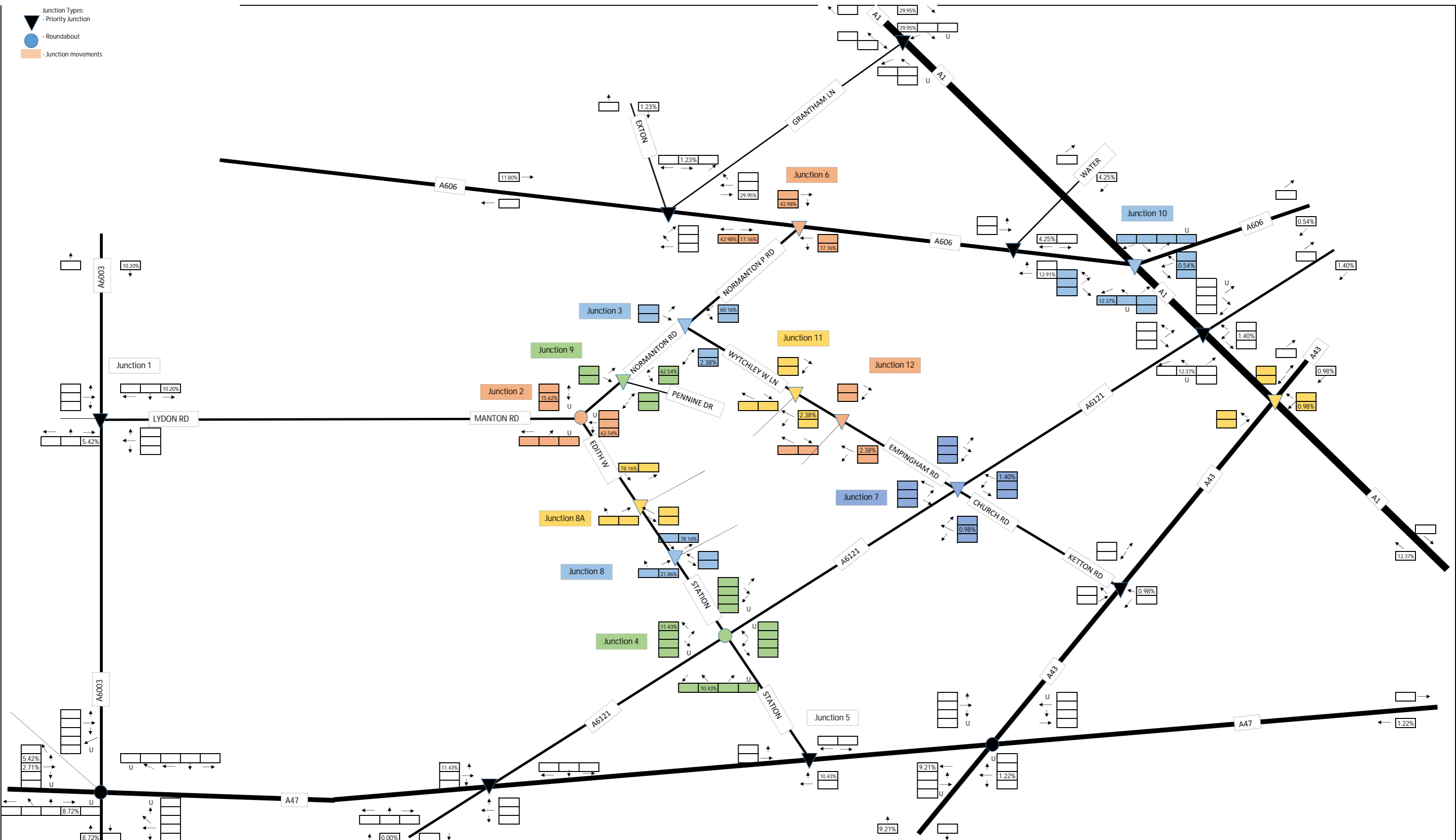


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Arrivals Distribution - Edith Weston Road Northern Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T13

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

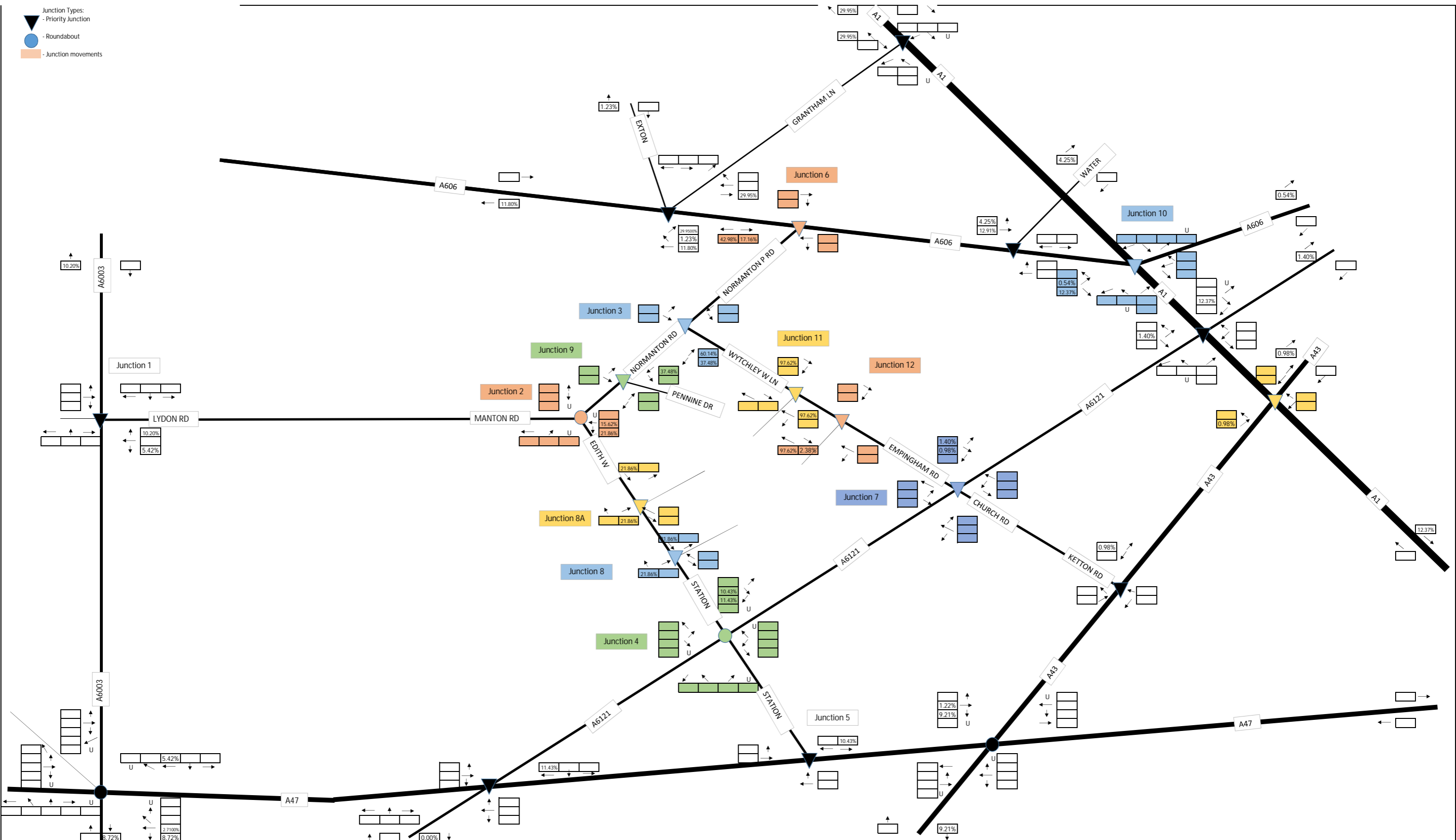


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Arrivals Distribution - Edith Weston Road Southern Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T14

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ■ - Junction movements

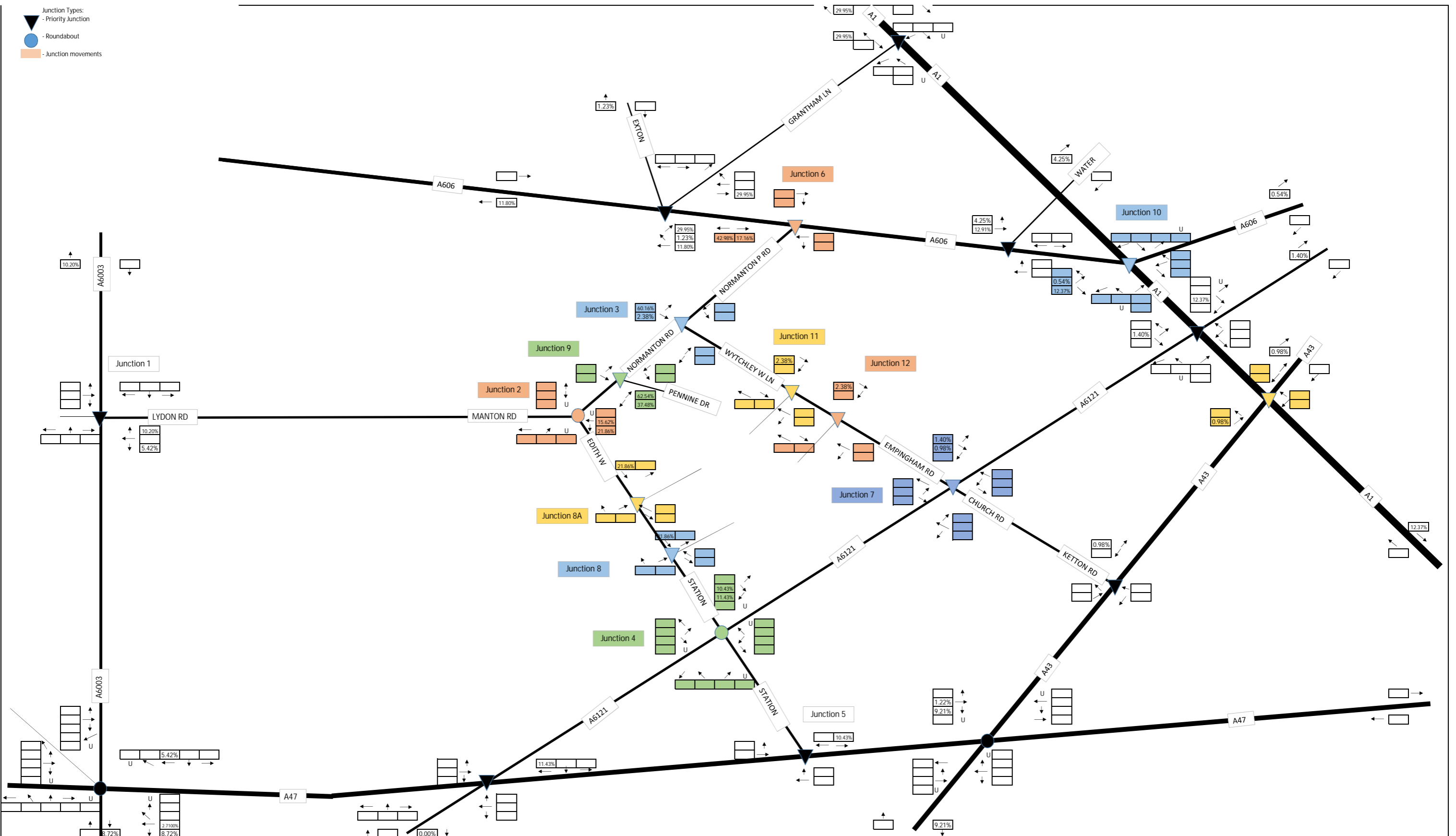


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Departures Distribution - Wytchley Warren Lane Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T15

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ◻ - Junction movements

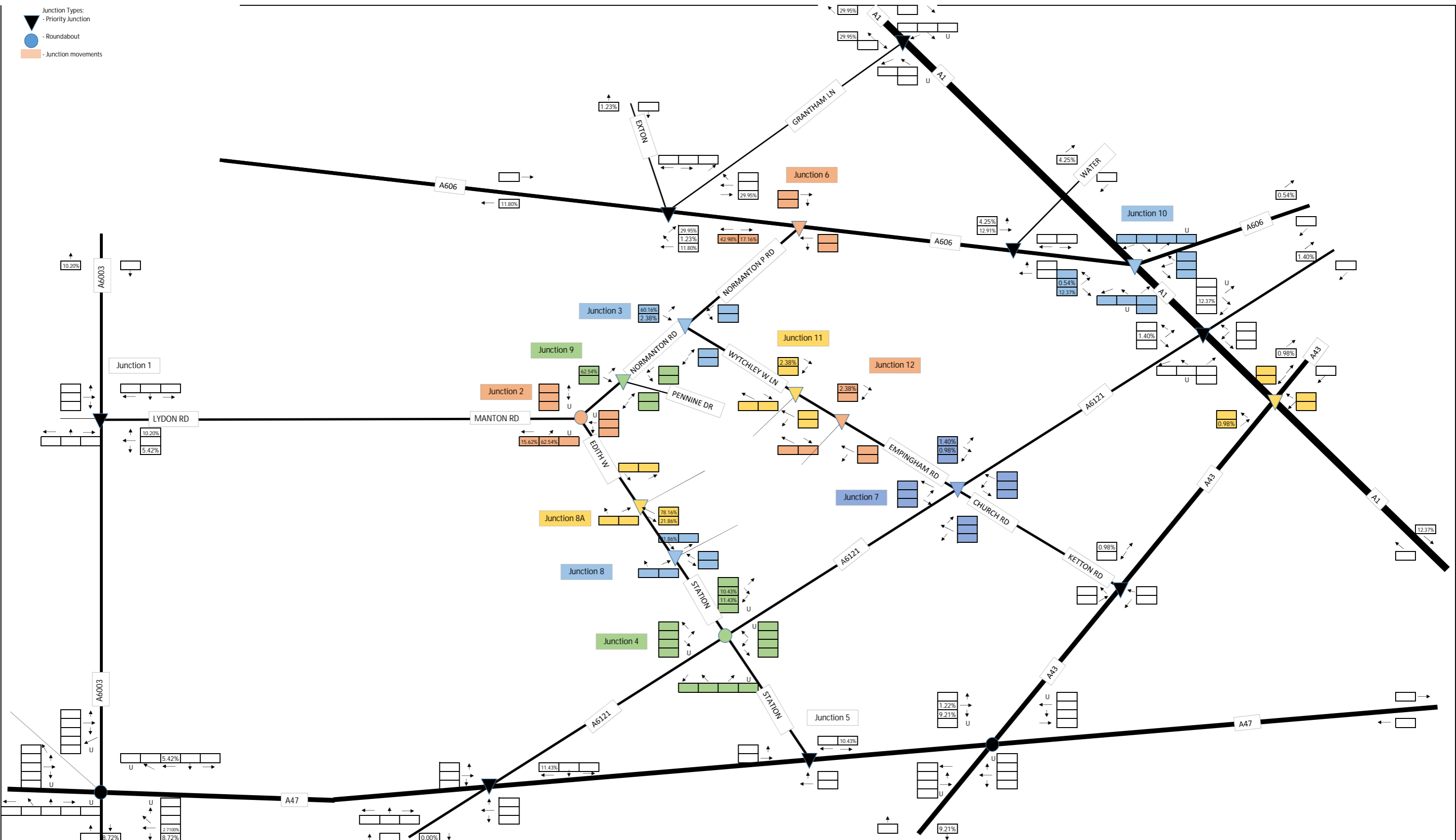


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Departures Distribution - Pennine Drive Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T16

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

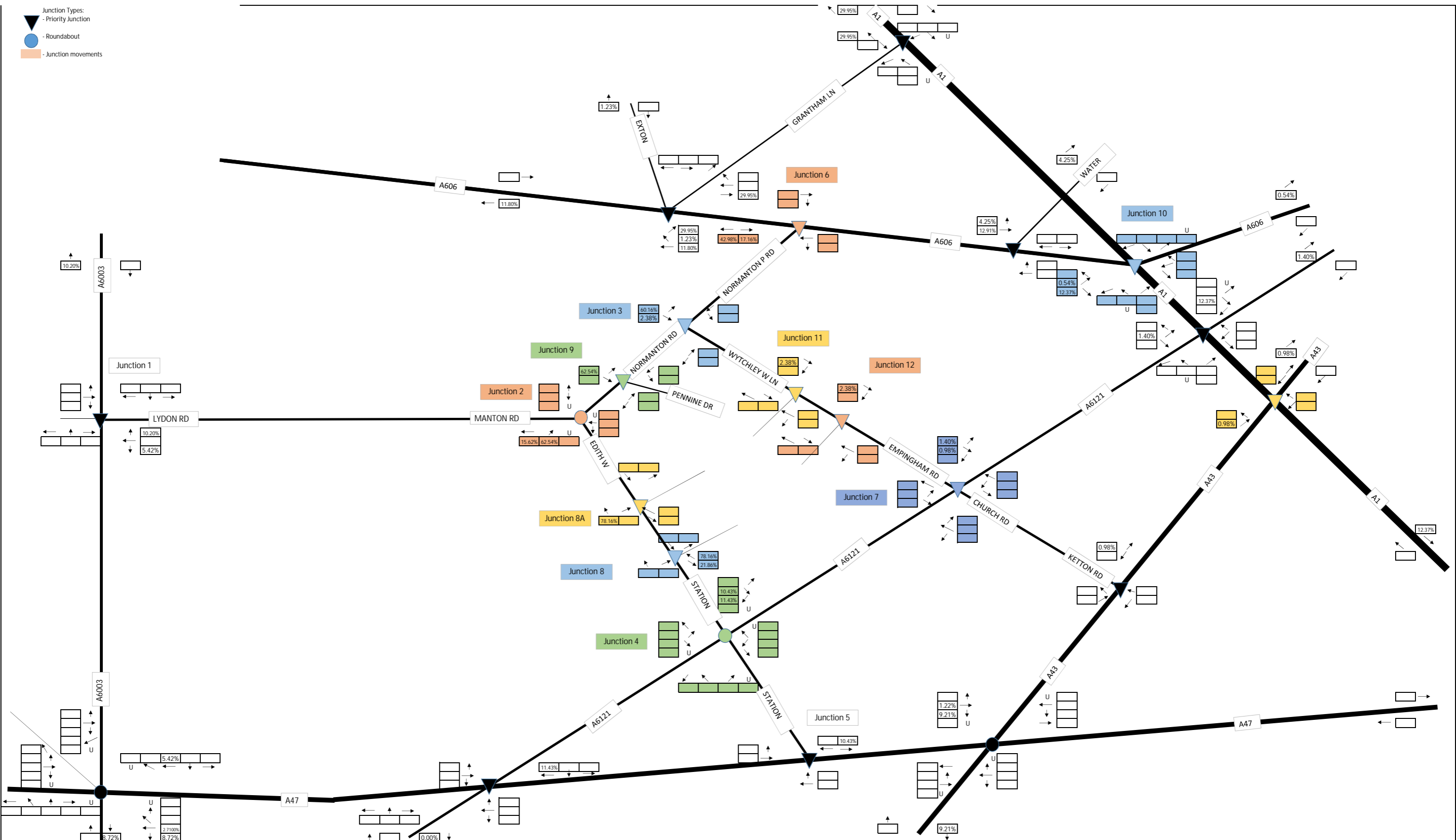


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Departures Distribution - Edith Weston Road Northern Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T17

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

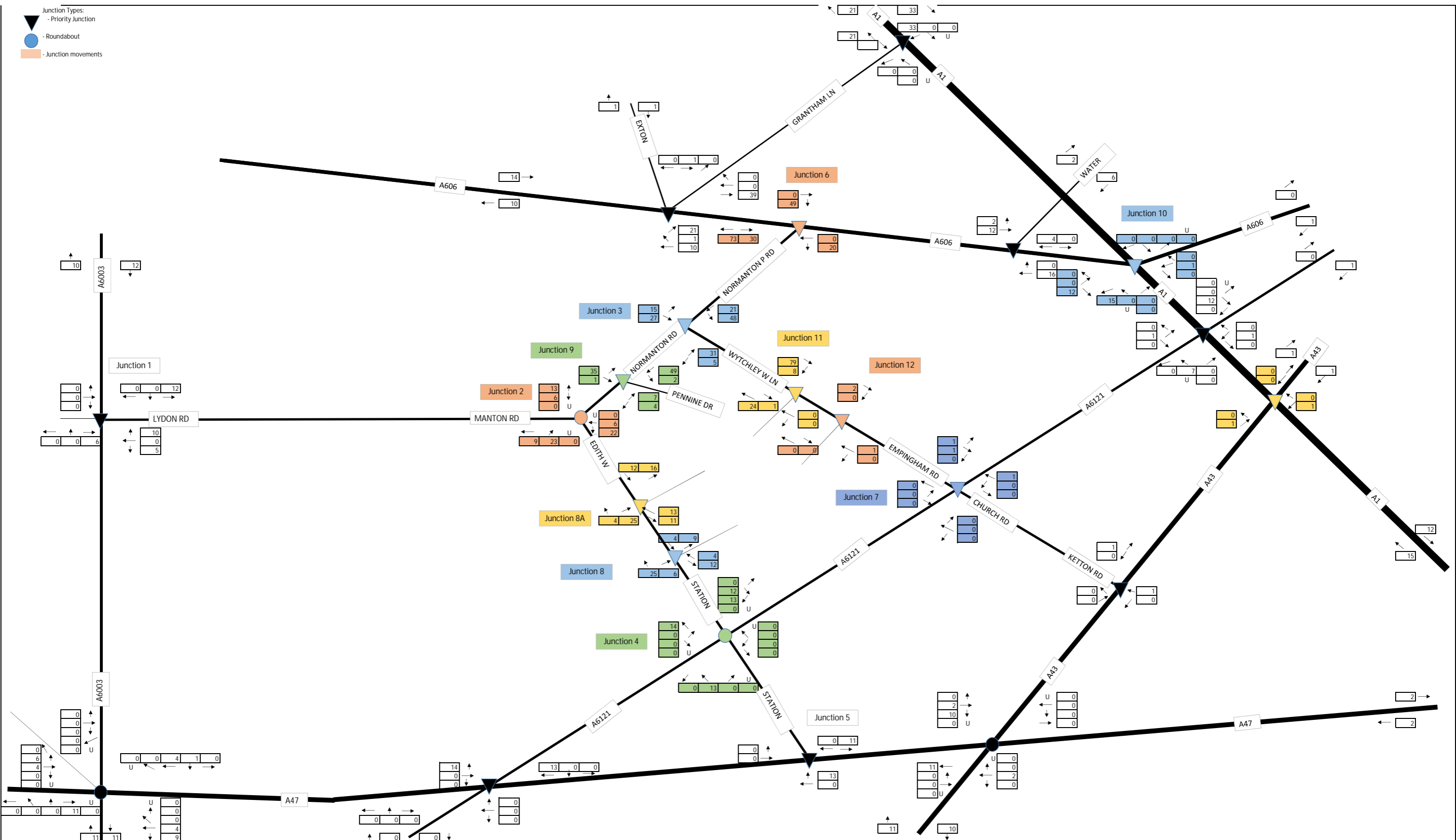


ST. Georges Barracks, Edith Weston:

Proposed Development - Commercial Element - Departures Distribution - Edith Weston Road Southern Access

Drawn	MPJ
Date	31/10/2018
Reference	Figure T18

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

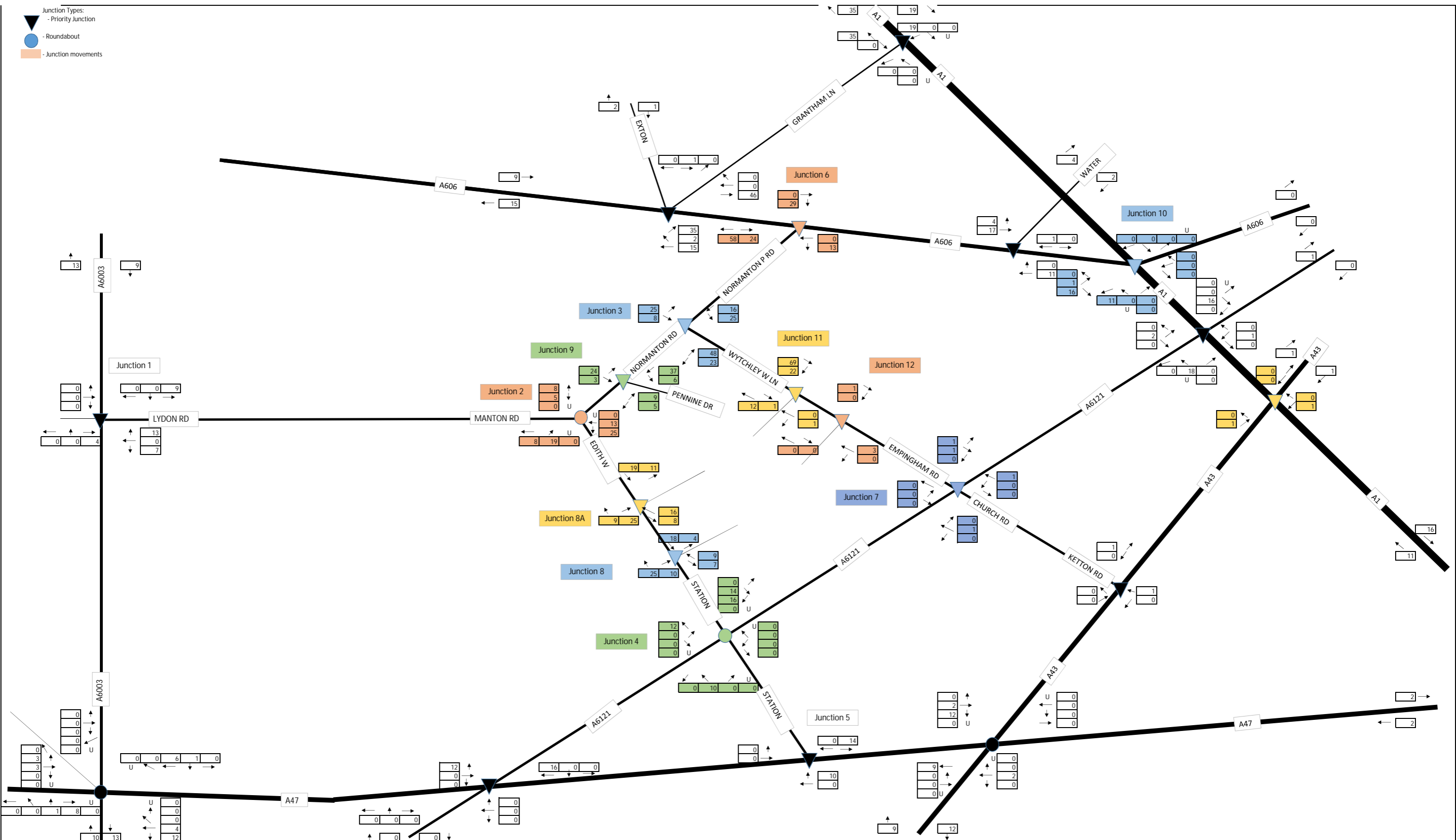


ST. Georges Barracks, Edith Weston:

2024 Proposed Development Trips Morning Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T19

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

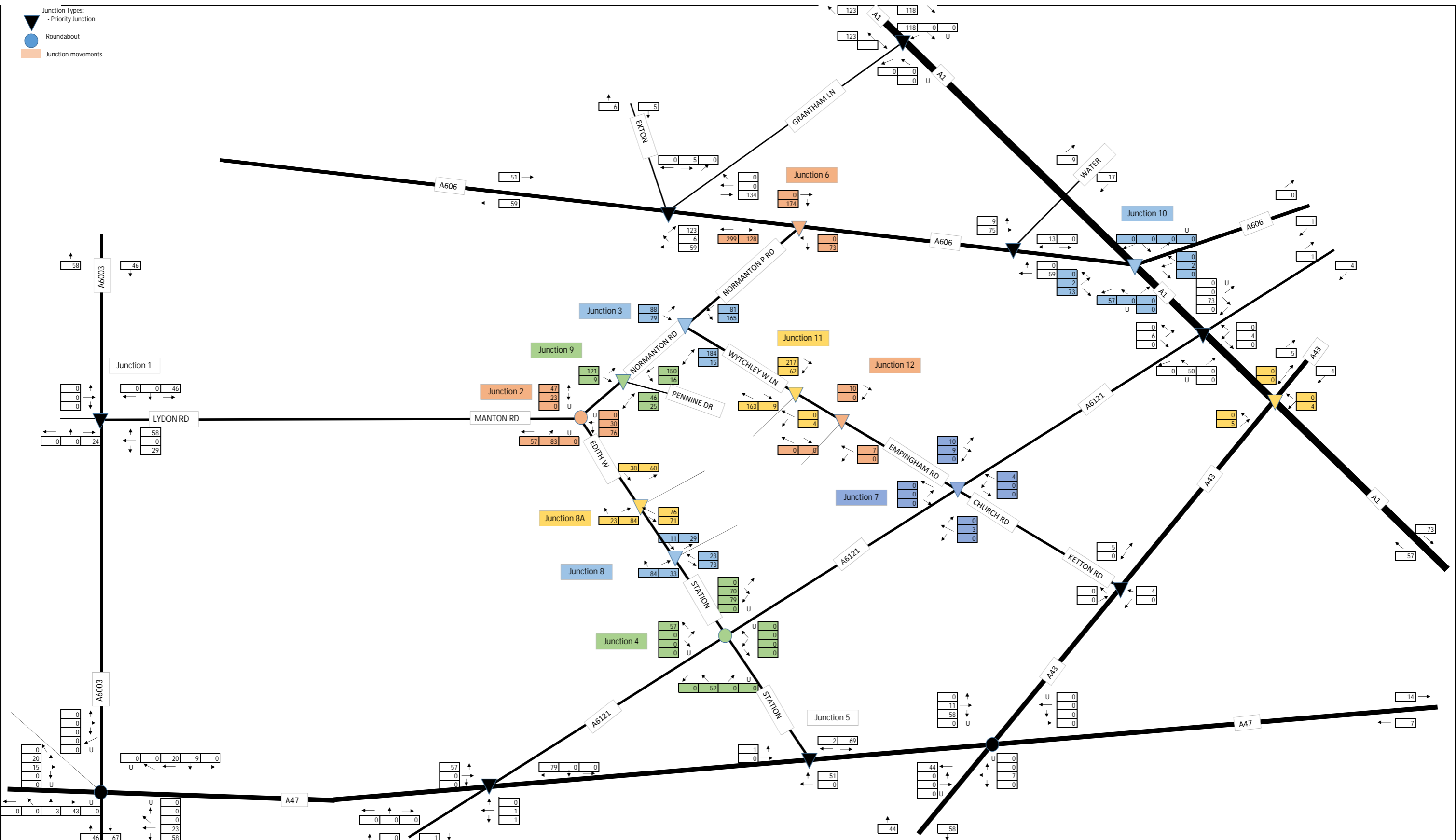


ST. Georges Barracks, Edith Weston:

2024 Proposed Development Trips Afternoon Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T20

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

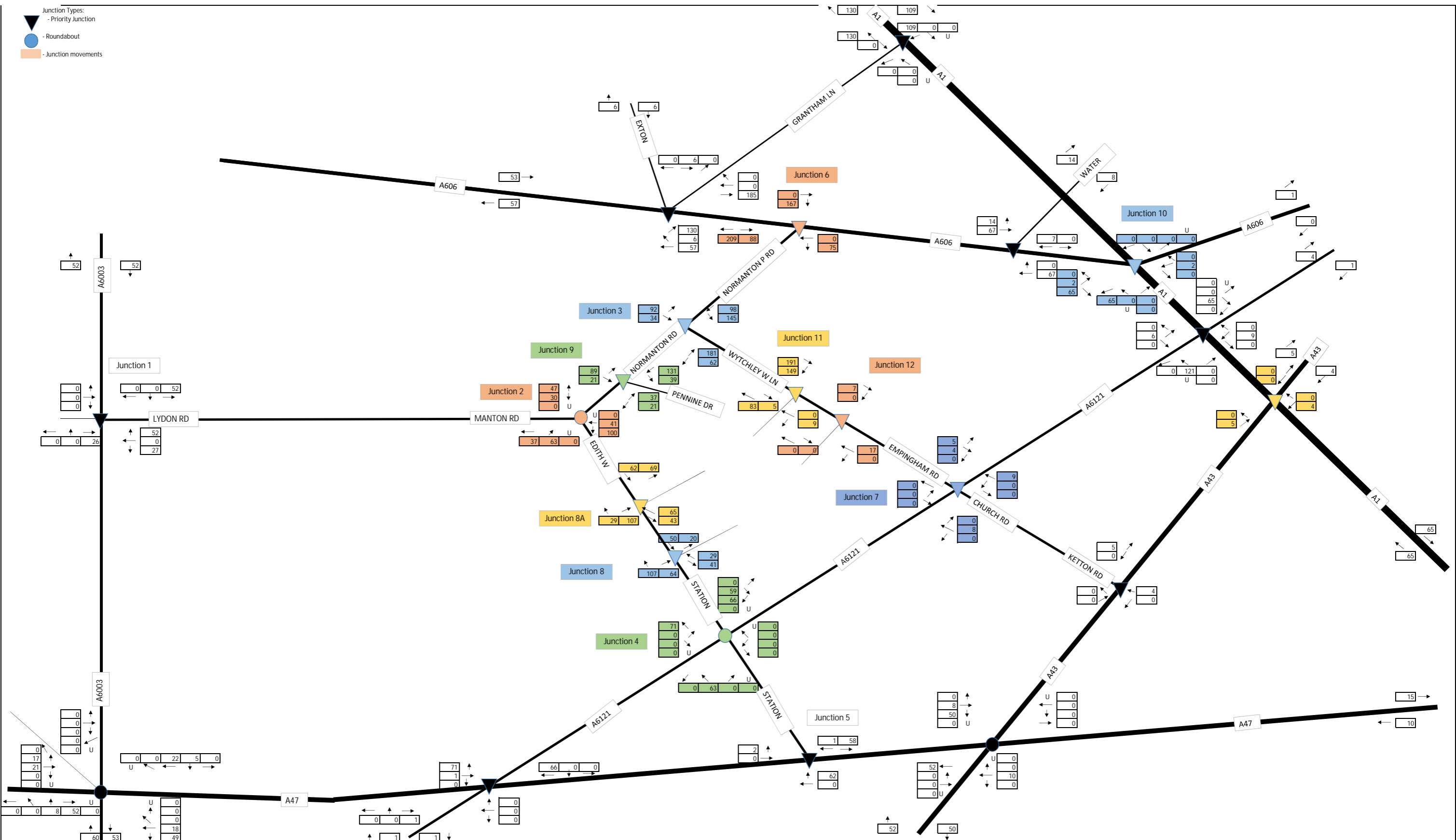


ST. Georges Barracks, Edith Weston:

2031 Proposed Development Trips Morning Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T21

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements

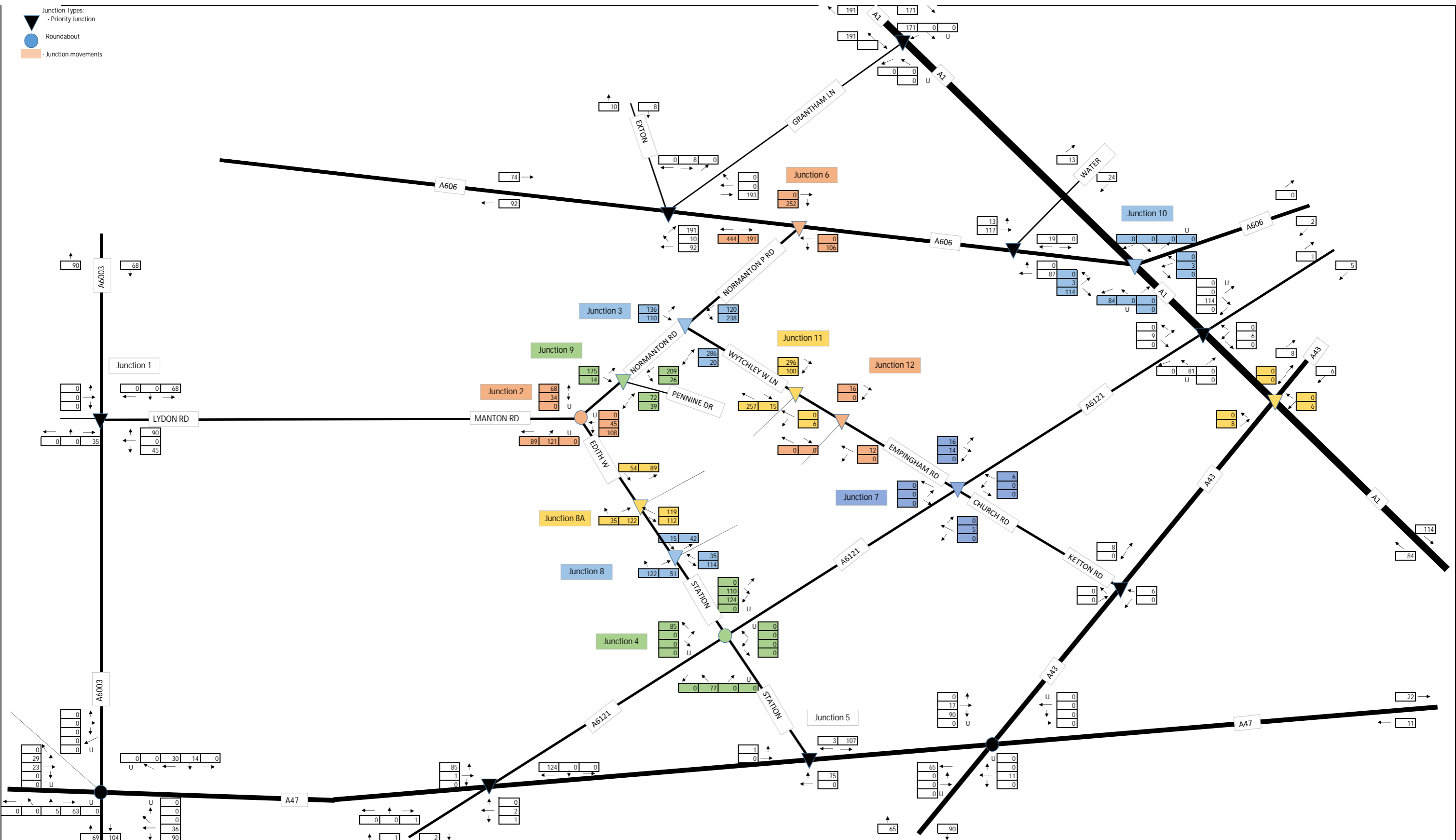


ST. Georges Barracks, Edith Weston:

2031 Proposed Development Trips Afternoon Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T22

Junction Types:
 ▼ - Priority Junction
 ● - Roundabout
 ○ - Junction movements

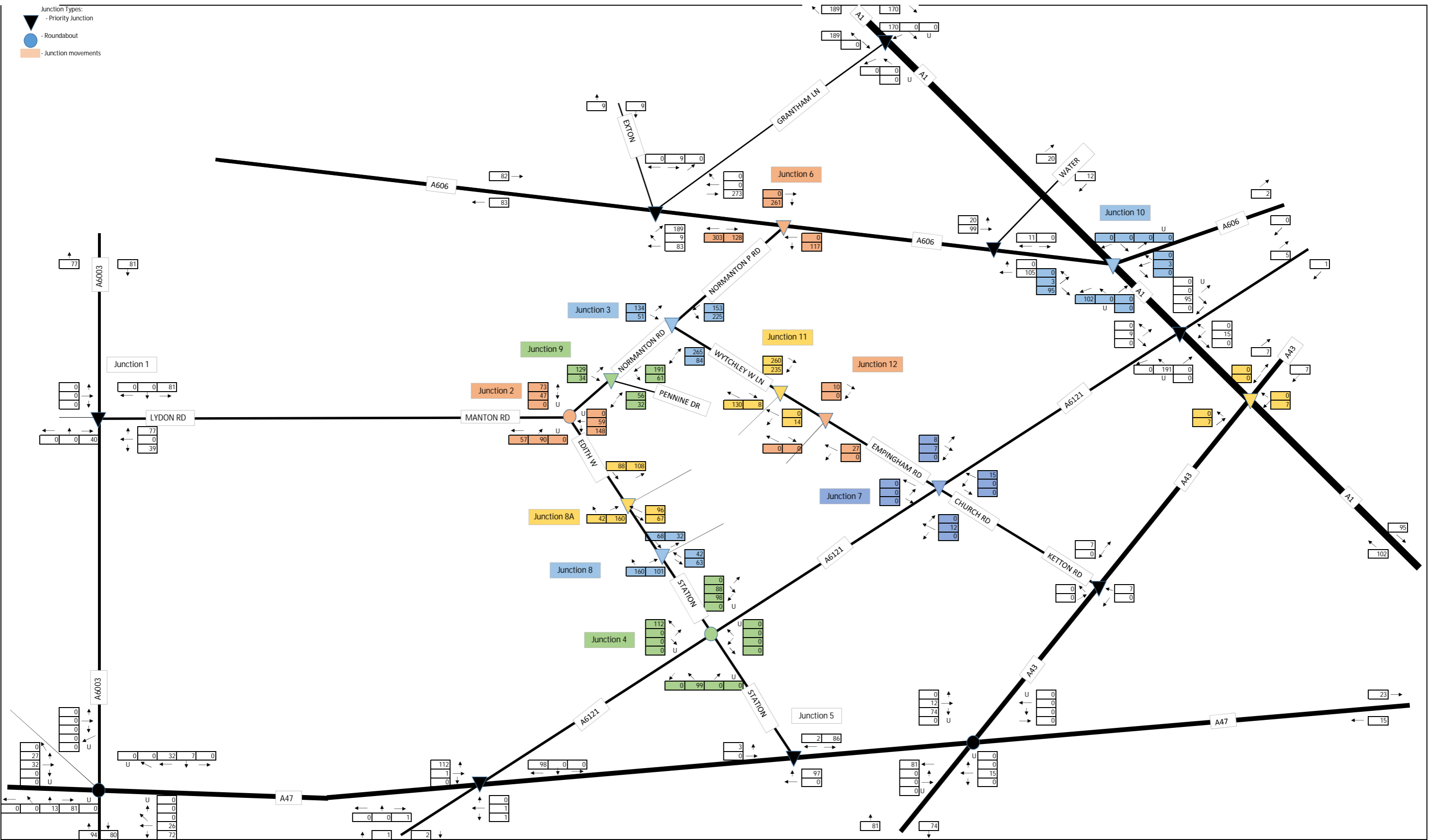


ST. Georges Barracks, Edith Weston:

2036 Proposed Development Trips Morning Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T23

Junction Types:
 - Priority Junction
 - Roundabout
 - Junction movements



ST. Georges Barracks, Edith Weston:

2036 Proposed Development Trips Afternoon Peak

Drawn	MPJ
Date	31/10/2018
Reference	Figure T24

Appendix 2: Build Out Programme and Trip Rates

St Georges Barracks - Traffic Generation and Build Out Programme

Residential:		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Totals:
<u>Officers Mess:</u>	70 Units			70														
AM Peak - Arrivals	0.110			8														
AM Peak - Departures	0.353			25														
PM Peak - Arrivals	0.332			23														
PM Peak - Departures	0.180			13														
<u>Former School Site:</u>	30 Units							30										
AM Peak - Arrivals	0.110							3										
AM Peak - Departures	0.353							11										
PM Peak - Arrivals	0.332							10										
PM Peak - Departures	0.180							5										
<u>Technical Site:</u>	2,400 Units																	
<u>Private Dwellings</u>	1320 (55%)				100	119	110	95	104	102	80	94	94	104	110	110	97	1319
AM Peak - Arrivals	0.110				11	13	12	10	11	11	9	10	10	11	12	12	11	
AM Peak - Departures	0.353				35	42	39	34	37	36	28	33	33	37	39	39	34	
PM Peak - Arrivals	0.332				33	40	37	32	35	34	27	31	31	35	37	37	32	
PM Peak - Departures	0.180				18	21	20	17	19	18	14	17	17	19	20	20	17	
<u>Affordable Dwellings</u>	720 (30%)				30	38	50	65	60	60	49	50	50	70	74	58	66	720
AM Peak - Arrivals	0.155				5	6	8	10	9	9	8	8	8	11	11	9	10	
AM Peak - Departures	0.269				8	10	13	17	16	16	13	13	13	19	20	16	18	
PM Peak - Arrivals	0.231				7	9	12	15	14	14	11	12	12	16	17	13	15	
PM Peak - Departures	0.129				4	5	6	8	8	8	6	6	6	9	10	7	9	
<u>Retirement Village</u>	210 (8.75%)								40	40	40	40	40	10				210
AM Peak - Arrivals	0.050								2	2	2	2	2	1				
AM Peak - Departures	0.055								2	2	2	2	2	1				
PM Peak - Arrivals	0.047								2	2	2	2	2	0				
PM Peak - Departures	0.045								2	2	2	2	2	0				
<u>Village Centre (apartments)</u>	150 (6.25%)						40	40	40	20	10							150
AM Peak - Arrivals	0.051						2	2	2	1	1							
AM Peak - Departures	0.186						7	7	7	4	2							
PM Peak - Arrivals	0.156						6	6	6	3	2							
PM Peak - Departures	0.091						4	4	4	2	1							

Total Employment:	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148	4148
Employment Trip Rate (AM Arrivals):	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Employment Trip Rate (AM Departs):	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Employment Trip Rate (PM Arrivals):	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Employment Trip Rate (PM Departs):	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Cumulative Employment Build Out (m2):	4148	8296	12444	16592	20740	24888	29036	33184	37332	41480	45628	49776	53924	58072	62220	-
Cumulative Residential Build Out (per unit):			76	206	363	563	763	1007	1229	1408	1592	1776	1960	2144	2312	2474

Total Impact:	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	Totals:
Residential and Commercial Trip Rate (AM Arr)	26	26	34	42	45	48	52	51	50	45	46	46	49	50	47	21	676
Residential and Commercial Trip Rate (AM Dep)	5	5	30	48	57	65	74	67	63	50	54	54	61	64	59	52	809
Residential and Commercial Trip Rate (PM Arr)	4	4	27	44	52	58	67	61	57	45	49	49	55	58	54	47	731
Residential and Commercial Trip Rate (PM Dep)	23	23	36	45	49	53	58	55	53	46	48	48	51	52	50	26	716

Total Cumulative Impact (by year):	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Residential and Commercial Trip Rate (AM Arr)	26	52	86	127	172	220	272	323	372	417	463	509	558	608	655	676
Residential and Commercial Trip Rate (AM Dep)	5	10	40	88	145	210	284	352	415	465	519	573	634	698	757	809
Residential and Commercial Trip Rate (PM Arr)	3	7	34	78	131	189	256	316	373	418	467	516	571	628	682	730
Residential and Commercial Trip Rate (PM Dep)	21	44	80	124	174	227	284	339	392	438	486	535	586	638	688	714

AM Peak Total Trips: 1485
PM Peak Total Trips: 1447

Appendix 3: TRICS Data Sheets

Calculation Reference: AUDIT-426201-181004-1028

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : B - AFFORDABLE/LOCAL AUTHORITY HOUSES
VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	NB NORTHUMBERLAND	1 days
11	SCOTLAND	
	DU DUNDEE CITY	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 15 to 97 (units:)
Range Selected by User: 11 to 516 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 13/09/17

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	4 days
Tuesday	2 days
Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	8
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

C3 9 days

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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	3 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	1 days
75,001 to 100,000	3 days
125,001 to 250,000	5 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	7 days
1.1 to 1.5	2 days

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

Travel Plan:

No 9 days

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

PTAL Rating:

No PTAL Present 9 days

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

LIST OF SITES relevant to selection parameters

1	CH-03-B-01 HOUSES & FLATS WORDSWORTH CRES. CHESTER BLACON Edge of Town Residential Zone Total Number of dwellings: 80 <i>Survey date: MONDAY 17/11/14</i>	CHESHIRE <i>Survey Type: MANUAL</i>
2	DU-03-B-01 TERRACED BUNGALOWS 307-441 BALUNIE DRIVE DUNDEE DOUGLAS & ANGUS Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 68 <i>Survey date: FRIDAY 21/04/17</i>	DUNDEE CITY <i>Survey Type: MANUAL</i>
3	LC-03-B-02 SEMI DETACHED/TERRACED BILLINGE STREET BLACKBURN Edge of Town Centre Residential Zone Total Number of dwellings: 15 <i>Survey date: MONDAY 10/06/13</i>	LANCASHIRE <i>Survey Type: MANUAL</i>
4	MS-03-B-01 TERRACED TARBOCK ROAD LIVERPOOL SPEKE Edge of Town Residential Zone Total Number of dwellings: 16 <i>Survey date: TUESDAY 18/06/13</i>	MERSEYSIDE <i>Survey Type: MANUAL</i>
5	NB-03-B-01 SEMI DET. & TERRACED WESTLEA BEDLINGTON Edge of Town Residential Zone Total Number of dwellings: 97 <i>Survey date: MONDAY 19/11/12</i>	NORTHUMBERLAND <i>Survey Type: MANUAL</i>
6	NF-03-B-01 TERRACED HOUSES NELSON ROAD NORTH GREAT YARMOUTH Edge of Town Centre Residential Zone Total Number of dwellings: 45 <i>Survey date: WEDNESDAY 13/09/17</i>	NORFOLK <i>Survey Type: MANUAL</i>
7	WO-03-B-02 TERRACED HOUSES GOODREST WALK WORCESTER MERRIMANS HILL Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of dwellings: 16 <i>Survey date: MONDAY 14/11/16</i>	WORCESTERSHIRE <i>Survey Type: MANUAL</i>
8	WY-03-B-02 MIXED HOUSES WHITEACRE STREET HUDDERSFIELD DEIGHTON Edge of Town Residential Zone Total Number of dwellings: 54 <i>Survey date: TUESDAY 17/09/13</i>	WEST YORKSHIRE <i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9 WY-03-B-03 TERRACED HOUSES WEST YORKSHIRE
LINCOLN GREEN ROAD
LEEDS

Suburban Area (PPS6 Out of Centre)
Built-Up Zone

Total Number of dwellings: 29

Survey date: THURSDAY

19/09/13

Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 VEHICLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	47	0.071	9	47	0.133	9	47	0.204
08:00 - 09:00	9	47	0.155	9	47	0.269	9	47	0.424
09:00 - 10:00	9	47	0.152	9	47	0.202	9	47	0.354
10:00 - 11:00	9	47	0.140	9	47	0.155	9	47	0.295
11:00 - 12:00	9	47	0.143	9	47	0.131	9	47	0.274
12:00 - 13:00	9	47	0.174	9	47	0.148	9	47	0.322
13:00 - 14:00	9	47	0.138	9	47	0.138	9	47	0.276
14:00 - 15:00	9	47	0.176	9	47	0.188	9	47	0.364
15:00 - 16:00	9	47	0.181	9	47	0.176	9	47	0.357
16:00 - 17:00	9	47	0.231	9	47	0.129	9	47	0.360
17:00 - 18:00	9	47	0.221	9	47	0.167	9	47	0.388
18:00 - 19:00	9	47	0.145	9	47	0.112	9	47	0.257
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.927			1.948			3.875

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

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

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Parameter summary

Trip rate parameter range selected:	15 - 97 (units:)
Survey date date range:	01/01/10 - 13/09/17
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

TAXI S

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	47	0.010	9	47	0.010	9	47	0.020
08:00 - 09:00	9	47	0.012	9	47	0.010	9	47	0.022
09:00 - 10:00	9	47	0.017	9	47	0.014	9	47	0.031
10:00 - 11:00	9	47	0.019	9	47	0.026	9	47	0.045
11:00 - 12:00	9	47	0.017	9	47	0.017	9	47	0.034
12:00 - 13:00	9	47	0.017	9	47	0.014	9	47	0.031
13:00 - 14:00	9	47	0.005	9	47	0.007	9	47	0.012
14:00 - 15:00	9	47	0.012	9	47	0.010	9	47	0.022
15:00 - 16:00	9	47	0.019	9	47	0.021	9	47	0.040
16:00 - 17:00	9	47	0.007	9	47	0.005	9	47	0.012
17:00 - 18:00	9	47	0.010	9	47	0.010	9	47	0.020
18:00 - 19:00	9	47	0.014	9	47	0.012	9	47	0.026
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.159			0.156			0.315

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 OGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	47	0.000	9	47	0.000	9	47	0.000
08:00 - 09:00	9	47	0.002	9	47	0.002	9	47	0.004
09:00 - 10:00	9	47	0.005	9	47	0.002	9	47	0.007
10:00 - 11:00	9	47	0.000	9	47	0.002	9	47	0.002
11:00 - 12:00	9	47	0.000	9	47	0.000	9	47	0.000
12:00 - 13:00	9	47	0.005	9	47	0.005	9	47	0.010
13:00 - 14:00	9	47	0.002	9	47	0.002	9	47	0.004
14:00 - 15:00	9	47	0.000	9	47	0.000	9	47	0.000
15:00 - 16:00	9	47	0.000	9	47	0.000	9	47	0.000
16:00 - 17:00	9	47	0.000	9	47	0.000	9	47	0.000
17:00 - 18:00	9	47	0.000	9	47	0.000	9	47	0.000
18:00 - 19:00	9	47	0.000	9	47	0.000	9	47	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.014			0.013			0.027

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 PSVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	47	0.000	9	47	0.000	9	47	0.000
08:00 - 09:00	9	47	0.000	9	47	0.000	9	47	0.000
09:00 - 10:00	9	47	0.000	9	47	0.000	9	47	0.000
10:00 - 11:00	9	47	0.002	9	47	0.002	9	47	0.004
11:00 - 12:00	9	47	0.000	9	47	0.000	9	47	0.000
12:00 - 13:00	9	47	0.000	9	47	0.000	9	47	0.000
13:00 - 14:00	9	47	0.000	9	47	0.000	9	47	0.000
14:00 - 15:00	9	47	0.000	9	47	0.000	9	47	0.000
15:00 - 16:00	9	47	0.000	9	47	0.000	9	47	0.000
16:00 - 17:00	9	47	0.000	9	47	0.000	9	47	0.000
17:00 - 18:00	9	47	0.000	9	47	0.000	9	47	0.000
18:00 - 19:00	9	47	0.000	9	47	0.000	9	47	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	47	0.002	9	47	0.000	9	47	0.002
08:00 - 09:00	9	47	0.005	9	47	0.012	9	47	0.017
09:00 - 10:00	9	47	0.007	9	47	0.007	9	47	0.014
10:00 - 11:00	9	47	0.005	9	47	0.000	9	47	0.005
11:00 - 12:00	9	47	0.002	9	47	0.000	9	47	0.002
12:00 - 13:00	9	47	0.000	9	47	0.000	9	47	0.000
13:00 - 14:00	9	47	0.000	9	47	0.000	9	47	0.000
14:00 - 15:00	9	47	0.000	9	47	0.002	9	47	0.002
15:00 - 16:00	9	47	0.007	9	47	0.002	9	47	0.009
16:00 - 17:00	9	47	0.010	9	47	0.012	9	47	0.022
17:00 - 18:00	9	47	0.002	9	47	0.000	9	47	0.002
18:00 - 19:00	9	47	0.005	9	47	0.000	9	47	0.005
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.045			0.035			0.080

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

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

Calculation Reference: AUDIT-426201-181004-1053

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	CW CORNWALL	1 days
	DC DORSET	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
11	SCOTLAND	
	AG ANGUS	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 23480 to 66725 (units: sqm)
Range Selected by User: 20000 to 100000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 25/04/17

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	2 days
Tuesday	1 days
Wednesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	1
Free Standing (PPS6 Out of Town)	1

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

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	1
Village	1
Out of Town	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

Not Known	1 days
B2	4 days

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

Population within 1 mile:

1,000 or Less	1 days
5,001 to 10,000	2 days
10,001 to 15,000	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:

25,001 to 50,000	2 days
50,001 to 75,000	1 days
125,001 to 250,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	2 days

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

Travel Plan:

No	5 days
----	--------

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

PTAL Rating:

No PTAL Present	5 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	AG-02-D-02 A933 WESTWAY ARBROATH HOSPITALFIELD Edge of Town No Sub Category Total Gross floor area: <i>Survey date: TUESDAY</i>	INDUSTRIAL ESTATE 78500 sqm 25/04/17	ANGUS	<i>Survey Type: MANUAL</i>
2	CW-02-D-03 LONG ROCK ROAD NEAR PENZANCE LONG ROCK Neighbourhood Centre (PPS6 Local Centre) Village Total Gross floor area: <i>Survey date: MONDAY</i>	IND. ESTATE 36500 sqm 03/10/11	CORNWALL	<i>Survey Type: MANUAL</i>
3	DC-02-D-20 OLD BARN FARM ROAD NEAR BOURNEMOUTH THREE LEGGED CROSS Free Standing (PPS6 Out of Town) Out of Town Total Gross floor area: <i>Survey date: MONDAY</i>	INDUSTRIAL ESTATE 70000 sqm 24/03/14	DORSET	<i>Survey Type: MANUAL</i>
4	WM-02-D-02 DUNLOP WAY BIRMINGHAM Edge of Town Residential Zone Total Gross floor area: <i>Survey date: WEDNESDAY</i>	INDUSTRIAL ESTATE 23480 sqm 07/11/12	WEST MIDLANDS	<i>Survey Type: MANUAL</i>
5	WY-02-D-03 ARMLEY ROAD LEEDS Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: <i>Survey date: FRIDAY</i>	INDUSTRIAL ESTATE 24980 sqm 20/09/13	WEST YORKSHIRE	<i>Survey Type: MANUAL</i>

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	43477	0.079	5	43477	0.052	5	43477	0.131
07:30 - 08:00	5	43477	0.215	5	43477	0.058	5	43477	0.273
08:00 - 08:30	5	43477	0.160	5	43477	0.085	5	43477	0.245
08:30 - 09:00	5	43477	0.162	5	43477	0.081	5	43477	0.243
09:00 - 09:30	5	43477	0.113	5	43477	0.088	5	43477	0.201
09:30 - 10:00	5	43477	0.086	5	43477	0.066	5	43477	0.152
10:00 - 10:30	5	43477	0.087	5	43477	0.076	5	43477	0.163
10:30 - 11:00	5	43477	0.084	5	43477	0.081	5	43477	0.165
11:00 - 11:30	5	43477	0.089	5	43477	0.083	5	43477	0.172
11:30 - 12:00	5	43477	0.094	5	43477	0.098	5	43477	0.192
12:00 - 12:30	5	43477	0.086	5	43477	0.087	5	43477	0.173
12:30 - 13:00	5	43477	0.091	5	43477	0.093	5	43477	0.184
13:00 - 13:30	5	43477	0.109	5	43477	0.109	5	43477	0.218
13:30 - 14:00	5	43477	0.098	5	43477	0.079	5	43477	0.177
14:00 - 14:30	5	43477	0.090	5	43477	0.104	5	43477	0.194
14:30 - 15:00	5	43477	0.061	5	43477	0.082	5	43477	0.143
15:00 - 15:30	5	43477	0.070	5	43477	0.097	5	43477	0.167
15:30 - 16:00	5	43477	0.075	5	43477	0.109	5	43477	0.184
16:00 - 16:30	5	43477	0.074	5	43477	0.155	5	43477	0.229
16:30 - 17:00	5	43477	0.120	5	43477	0.122	5	43477	0.242
17:00 - 17:30	5	43477	0.036	5	43477	0.209	5	43477	0.245
17:30 - 18:00	5	43477	0.034	5	43477	0.126	5	43477	0.160
18:00 - 18:30	5	43477	0.026	5	43477	0.058	5	43477	0.084
18:30 - 19:00	5	43477	0.040	5	43477	0.055	5	43477	0.095
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			2.179			2.253			4.432

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

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

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Parameter summary

Trip rate parameter range selected:	23480 - 66725 (units: sqm)
Survey date date range:	01/01/10 - 25/04/17
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 TAXI S
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
07:30 - 08:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
08:00 - 08:30	5	43477	0.001	5	43477	0.001	5	43477	0.002
08:30 - 09:00	5	43477	0.000	5	43477	0.001	5	43477	0.001
09:00 - 09:30	5	43477	0.002	5	43477	0.002	5	43477	0.004
09:30 - 10:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
10:00 - 10:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
10:30 - 11:00	5	43477	0.001	5	43477	0.001	5	43477	0.002
11:00 - 11:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
11:30 - 12:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
12:00 - 12:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
12:30 - 13:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
13:00 - 13:30	5	43477	0.001	5	43477	0.001	5	43477	0.002
13:30 - 14:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
14:00 - 14:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
14:30 - 15:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
15:00 - 15:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
15:30 - 16:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
16:00 - 16:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
16:30 - 17:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
17:00 - 17:30	5	43477	0.001	5	43477	0.001	5	43477	0.002
17:30 - 18:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
18:00 - 18:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
18:30 - 19:00	5	43477	0.000	5	43477	0.001	5	43477	0.001
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.011			0.008			0.019

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 OGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	43477	0.006	5	43477	0.004	5	43477	0.010
07:30 - 08:00	5	43477	0.007	5	43477	0.007	5	43477	0.014
08:00 - 08:30	5	43477	0.006	5	43477	0.007	5	43477	0.013
08:30 - 09:00	5	43477	0.009	5	43477	0.008	5	43477	0.017
09:00 - 09:30	5	43477	0.009	5	43477	0.009	5	43477	0.018
09:30 - 10:00	5	43477	0.008	5	43477	0.004	5	43477	0.012
10:00 - 10:30	5	43477	0.006	5	43477	0.012	5	43477	0.018
10:30 - 11:00	5	43477	0.010	5	43477	0.009	5	43477	0.019
11:00 - 11:30	5	43477	0.007	5	43477	0.007	5	43477	0.014
11:30 - 12:00	5	43477	0.007	5	43477	0.013	5	43477	0.020
12:00 - 12:30	5	43477	0.014	5	43477	0.008	5	43477	0.022
12:30 - 13:00	5	43477	0.008	5	43477	0.007	5	43477	0.015
13:00 - 13:30	5	43477	0.009	5	43477	0.011	5	43477	0.020
13:30 - 14:00	5	43477	0.009	5	43477	0.009	5	43477	0.018
14:00 - 14:30	5	43477	0.006	5	43477	0.011	5	43477	0.017
14:30 - 15:00	5	43477	0.005	5	43477	0.006	5	43477	0.011
15:00 - 15:30	5	43477	0.006	5	43477	0.008	5	43477	0.014
15:30 - 16:00	5	43477	0.010	5	43477	0.008	5	43477	0.018
16:00 - 16:30	5	43477	0.007	5	43477	0.009	5	43477	0.016
16:30 - 17:00	5	43477	0.004	5	43477	0.006	5	43477	0.010
17:00 - 17:30	5	43477	0.003	5	43477	0.006	5	43477	0.009
17:30 - 18:00	5	43477	0.005	5	43477	0.002	5	43477	0.007
18:00 - 18:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
18:30 - 19:00	5	43477	0.002	5	43477	0.003	5	43477	0.005
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.163			0.174			0.337

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 PSVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	43477	0.000	5	43477	0.004	5	43477	0.004
07:30 - 08:00	5	43477	0.000	5	43477	0.005	5	43477	0.005
08:00 - 08:30	5	43477	0.002	5	43477	0.001	5	43477	0.003
08:30 - 09:00	5	43477	0.000	5	43477	0.001	5	43477	0.001
09:00 - 09:30	5	43477	0.004	5	43477	0.000	5	43477	0.004
09:30 - 10:00	5	43477	0.001	5	43477	0.001	5	43477	0.002
10:00 - 10:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
10:30 - 11:00	5	43477	0.000	5	43477	0.002	5	43477	0.002
11:00 - 11:30	5	43477	0.000	5	43477	0.001	5	43477	0.001
11:30 - 12:00	5	43477	0.002	5	43477	0.001	5	43477	0.003
12:00 - 12:30	5	43477	0.000	5	43477	0.001	5	43477	0.001
12:30 - 13:00	5	43477	0.003	5	43477	0.000	5	43477	0.003
13:00 - 13:30	5	43477	0.002	5	43477	0.001	5	43477	0.003
13:30 - 14:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
14:00 - 14:30	5	43477	0.000	5	43477	0.002	5	43477	0.002
14:30 - 15:00	5	43477	0.000	5	43477	0.001	5	43477	0.001
15:00 - 15:30	5	43477	0.000	5	43477	0.002	5	43477	0.002
15:30 - 16:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
16:00 - 16:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
16:30 - 17:00	5	43477	0.003	5	43477	0.001	5	43477	0.004
17:00 - 17:30	5	43477	0.001	5	43477	0.001	5	43477	0.002
17:30 - 18:00	5	43477	0.003	5	43477	0.000	5	43477	0.003
18:00 - 18:30	5	43477	0.004	5	43477	0.000	5	43477	0.004
18:30 - 19:00	5	43477	0.005	5	43477	0.001	5	43477	0.006
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.032			0.026			0.058

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	5	43477	0.002	5	43477	0.001	5	43477	0.003
07:30 - 08:00	5	43477	0.005	5	43477	0.000	5	43477	0.005
08:00 - 08:30	5	43477	0.004	5	43477	0.001	5	43477	0.005
08:30 - 09:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
09:00 - 09:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
09:30 - 10:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
10:00 - 10:30	5	43477	0.001	5	43477	0.002	5	43477	0.003
10:30 - 11:00	5	43477	0.004	5	43477	0.004	5	43477	0.008
11:00 - 11:30	5	43477	0.000	5	43477	0.000	5	43477	0.000
11:30 - 12:00	5	43477	0.001	5	43477	0.001	5	43477	0.002
12:00 - 12:30	5	43477	0.000	5	43477	0.001	5	43477	0.001
12:30 - 13:00	5	43477	0.000	5	43477	0.001	5	43477	0.001
13:00 - 13:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
13:30 - 14:00	5	43477	0.001	5	43477	0.000	5	43477	0.001
14:00 - 14:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
14:30 - 15:00	5	43477	0.000	5	43477	0.000	5	43477	0.000
15:00 - 15:30	5	43477	0.001	5	43477	0.000	5	43477	0.001
15:30 - 16:00	5	43477	0.000	5	43477	0.003	5	43477	0.003
16:00 - 16:30	5	43477	0.000	5	43477	0.004	5	43477	0.004
16:30 - 17:00	5	43477	0.000	5	43477	0.002	5	43477	0.002
17:00 - 17:30	5	43477	0.001	5	43477	0.005	5	43477	0.006
17:30 - 18:00	5	43477	0.000	5	43477	0.004	5	43477	0.004
18:00 - 18:30	5	43477	0.000	5	43477	0.002	5	43477	0.002
18:30 - 19:00	5	43477	0.002	5	43477	0.000	5	43477	0.002
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.027			0.031			0.058

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

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Calculation Reference: AUDIT-426201-181022-1021

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE

VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC HAMPSHIRE		1 days
	SC SURREY		1 days
04	EAST ANGLIA		
	SF SUFFOLK		1 days
08	NORTH WEST		
	LC LANCASHIRE		1 days
09	NORTH		
	DH DURHAM		1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 2555 to 10100 (units: sqm)
Range Selected by User: 2000 to 20000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 12/09/17

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	2 days
Tuesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
------------------------------------	---

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

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	2
Built-Up Zone	1
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

B1	5 days
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This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	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:

25,001 to 50,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	2 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
1.1 to 1.5	4 days

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

Travel Plan:

Yes	2 days
No	3 days

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

PTAL Rating:

No PTAL Present	5 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

- | | | | |
|---|---|-----------------|------------|
| 1 | DH-02-A-01
BRINKBURN ROAD
DARLINGTON | RPMI OFFICES | DURHAM |
| | Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 3372 sqm
<i>Survey date: FRIDAY 05/11/10</i> | | |
| 2 | HC-02-A-12
NORTHERN ROAD
PORTSMOUTH
COSHAM | HMRC | HAMPSHIRE |
| | Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 10100 sqm
<i>Survey date: MONDAY 23/11/15</i> | | |
| 3 | LC-02-A-09
FURTHERGATE
BLACKBURN | OFFICES | LANCASHIRE |
| | Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 2600 sqm
<i>Survey date: TUESDAY 04/06/13</i> | | |
| 4 | SC-02-A-17
ST GEORGE'S AVENUE
WEYBRIDGE
THE HEATH | PHARMACEUTICALS | SURREY |
| | Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 10293 sqm
<i>Survey date: TUESDAY 18/10/11</i> | | |
| 5 | SF-02-A-01
BEETONS WAY
BURY ST. EDMUNDS | COUNCIL OFFICES | SUFFOLK |
| | Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 8000 sqm
<i>Survey date: MONDAY 27/09/10</i> | | |

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.406	1	10100	0.030	1	10100	0.436
06:30 - 07:00	1	10100	0.703	1	10100	0.139	1	10100	0.842
07:00 - 07:30	5	6640	0.316	5	6640	0.021	5	6640	0.337
07:30 - 08:00	5	6640	0.530	5	6640	0.072	5	6640	0.602
08:00 - 08:30	5	6640	0.663	5	6640	0.111	5	6640	0.774
08:30 - 09:00	5	6640	1.012	5	6640	0.078	5	6640	1.090
09:00 - 09:30	5	6640	0.828	5	6640	0.187	5	6640	1.015
09:30 - 10:00	5	6640	0.419	5	6640	0.229	5	6640	0.648
10:00 - 10:30	5	6640	0.190	5	6640	0.123	5	6640	0.313
10:30 - 11:00	5	6640	0.142	5	6640	0.145	5	6640	0.287
11:00 - 11:30	5	6640	0.163	5	6640	0.175	5	6640	0.338
11:30 - 12:00	5	6640	0.178	5	6640	0.157	5	6640	0.335
12:00 - 12:30	5	6640	0.184	5	6640	0.268	5	6640	0.452
12:30 - 13:00	5	6640	0.262	5	6640	0.262	5	6640	0.524
13:00 - 13:30	5	6640	0.217	5	6640	0.289	5	6640	0.506
13:30 - 14:00	5	6640	0.226	5	6640	0.190	5	6640	0.416
14:00 - 14:30	5	6640	0.160	5	6640	0.229	5	6640	0.389
14:30 - 15:00	5	6640	0.154	5	6640	0.377	5	6640	0.531
15:00 - 15:30	5	6640	0.111	5	6640	0.413	5	6640	0.524
15:30 - 16:00	5	6640	0.193	5	6640	0.395	5	6640	0.588
16:00 - 16:30	5	6640	0.151	5	6640	0.654	5	6640	0.805
16:30 - 17:00	5	6640	0.136	5	6640	0.584	5	6640	0.720
17:00 - 17:30	5	6640	0.139	5	6640	0.901	5	6640	1.040
17:30 - 18:00	5	6640	0.102	5	6640	0.488	5	6640	0.590
18:00 - 18:30	5	6640	0.018	5	6640	0.304	5	6640	0.322
18:30 - 19:00	5	6640	0.030	5	6640	0.148	5	6640	0.178
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			7.633			6.969			14.602

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

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

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Parameter summary

Trip rate parameter range selected:	2555 - 10100 (units: sqm)
Survey date date range:	01/01/10 - 12/09/17
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TAXI S

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.000	1	10100	0.000	1	10100	0.000
06:30 - 07:00	1	10100	0.000	1	10100	0.000	1	10100	0.000
07:00 - 07:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
07:30 - 08:00	5	6640	0.018	5	6640	0.018	5	6640	0.036
08:00 - 08:30	5	6640	0.012	5	6640	0.012	5	6640	0.024
08:30 - 09:00	5	6640	0.006	5	6640	0.006	5	6640	0.012
09:00 - 09:30	5	6640	0.009	5	6640	0.012	5	6640	0.021
09:30 - 10:00	5	6640	0.012	5	6640	0.009	5	6640	0.021
10:00 - 10:30	5	6640	0.000	5	6640	0.003	5	6640	0.003
10:30 - 11:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
11:00 - 11:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
11:30 - 12:00	5	6640	0.003	5	6640	0.003	5	6640	0.006
12:00 - 12:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
12:30 - 13:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
13:00 - 13:30	5	6640	0.009	5	6640	0.009	5	6640	0.018
13:30 - 14:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
14:00 - 14:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
14:30 - 15:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
15:00 - 15:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
15:30 - 16:00	5	6640	0.006	5	6640	0.006	5	6640	0.012
16:00 - 16:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
16:30 - 17:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
17:00 - 17:30	5	6640	0.009	5	6640	0.006	5	6640	0.015
17:30 - 18:00	5	6640	0.009	5	6640	0.012	5	6640	0.021
18:00 - 18:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
18:30 - 19:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.105			0.108			0.213

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 OGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.000	1	10100	0.000	1	10100	0.000
06:30 - 07:00	1	10100	0.010	1	10100	0.010	1	10100	0.020
07:00 - 07:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
07:30 - 08:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
08:00 - 08:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
08:30 - 09:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
09:00 - 09:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
09:30 - 10:00	5	6640	0.003	5	6640	0.003	5	6640	0.006
10:00 - 10:30	5	6640	0.006	5	6640	0.003	5	6640	0.009
10:30 - 11:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
11:00 - 11:30	5	6640	0.009	5	6640	0.003	5	6640	0.012
11:30 - 12:00	5	6640	0.000	5	6640	0.009	5	6640	0.009
12:00 - 12:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
12:30 - 13:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
13:00 - 13:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
13:30 - 14:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
14:00 - 14:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
14:30 - 15:00	5	6640	0.003	5	6640	0.000	5	6640	0.003
15:00 - 15:30	5	6640	0.000	5	6640	0.003	5	6640	0.003
15:30 - 16:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
16:00 - 16:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
16:30 - 17:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
17:00 - 17:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
17:30 - 18:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
18:00 - 18:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
18:30 - 19:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.040			0.040			0.080

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

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TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 PSVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.000	1	10100	0.000	1	10100	0.000
06:30 - 07:00	1	10100	0.000	1	10100	0.000	1	10100	0.000
07:00 - 07:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
07:30 - 08:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
08:00 - 08:30	5	6640	0.003	5	6640	0.000	5	6640	0.003
08:30 - 09:00	5	6640	0.006	5	6640	0.000	5	6640	0.006
09:00 - 09:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
09:30 - 10:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
10:00 - 10:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
10:30 - 11:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
11:00 - 11:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
11:30 - 12:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
12:00 - 12:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
12:30 - 13:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
13:00 - 13:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
13:30 - 14:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
14:00 - 14:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
14:30 - 15:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
15:00 - 15:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
15:30 - 16:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
16:00 - 16:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
16:30 - 17:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
17:00 - 17:30	5	6640	0.000	5	6640	0.003	5	6640	0.003
17:30 - 18:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
18:00 - 18:30	5	6640	0.000	5	6640	0.000	5	6640	0.000
18:30 - 19:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.009			0.003			0.012

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

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

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 CYCLISTS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30	1	10100	0.010	1	10100	0.000	1	10100	0.010
06:30 - 07:00	1	10100	0.010	1	10100	0.000	1	10100	0.010
07:00 - 07:30	5	6640	0.012	5	6640	0.000	5	6640	0.012
07:30 - 08:00	5	6640	0.012	5	6640	0.000	5	6640	0.012
08:00 - 08:30	5	6640	0.024	5	6640	0.000	5	6640	0.024
08:30 - 09:00	5	6640	0.027	5	6640	0.000	5	6640	0.027
09:00 - 09:30	5	6640	0.009	5	6640	0.000	5	6640	0.009
09:30 - 10:00	5	6640	0.003	5	6640	0.000	5	6640	0.003
10:00 - 10:30	5	6640	0.000	5	6640	0.003	5	6640	0.003
10:30 - 11:00	5	6640	0.003	5	6640	0.003	5	6640	0.006
11:00 - 11:30	5	6640	0.003	5	6640	0.000	5	6640	0.003
11:30 - 12:00	5	6640	0.006	5	6640	0.000	5	6640	0.006
12:00 - 12:30	5	6640	0.003	5	6640	0.000	5	6640	0.003
12:30 - 13:00	5	6640	0.000	5	6640	0.000	5	6640	0.000
13:00 - 13:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
13:30 - 14:00	5	6640	0.003	5	6640	0.009	5	6640	0.012
14:00 - 14:30	5	6640	0.003	5	6640	0.003	5	6640	0.006
14:30 - 15:00	5	6640	0.000	5	6640	0.003	5	6640	0.003
15:00 - 15:30	5	6640	0.000	5	6640	0.009	5	6640	0.009
15:30 - 16:00	5	6640	0.003	5	6640	0.012	5	6640	0.015
16:00 - 16:30	5	6640	0.003	5	6640	0.009	5	6640	0.012
16:30 - 17:00	5	6640	0.000	5	6640	0.015	5	6640	0.015
17:00 - 17:30	5	6640	0.000	5	6640	0.018	5	6640	0.018
17:30 - 18:00	5	6640	0.000	5	6640	0.024	5	6640	0.024
18:00 - 18:30	5	6640	0.000	5	6640	0.003	5	6640	0.003
18:30 - 19:00	5	6640	0.000	5	6640	0.003	5	6640	0.003
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			0.137			0.117			0.254

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

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

Calculation Reference: AUDIT-426201-181022-1033

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	HC HAMPSHIRE		1 days
	KC KENT		2 days
	WS WEST SUSSEX		1 days
03	SOUTH WEST		
	DV DEVON		3 days
	WL WILTSHIRE		1 days
04	EAST ANGLIA		
	CA CAMBRIDGESHIRE		2 days
	NF NORFOLK		2 days
	SF SUFFOLK		1 days
05	EAST MIDLANDS		
	LN LINCOLNSHIRE		1 days
	NR NORTHAMPTONSHIRE		1 days
06	WEST MIDLANDS		
	WK WARWICKSHIRE		1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY NORTH YORKSHIRE		4 days
08	NORTH WEST		
	CH CHESHIRE		1 days
09	NORTH		
	DH DURHAM		1 days
10	WALES		
	PS POWYS		1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 6 to 363 (units:)
 Range Selected by User: 500 to 1800 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 19/04/18

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	7 days
Tuesday	6 days
Wednesday	4 days
Thursday	2 days
Friday	3 days
Saturday	1 days

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

Selected survey types:

Manual count	23 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	23
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	23
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories

Secondary Filtering selection:

Use Class:

C3 22 days

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

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	4 days
10,001 to 15,000	4 days
15,001 to 20,000	4 days
20,001 to 25,000	5 days
25,001 to 50,000	3 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	4 days
25,001 to 50,000	1 days
50,001 to 75,000	3 days
75,001 to 100,000	5 days
100,001 to 125,000	1 days
125,001 to 250,000	9 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	7 days
1.1 to 1.5	16 days

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

Travel Plan:

Yes	2 days
No	21 days

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

PTAL Rating:

No PTAL Present	23 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-A-04	DETACHED		CAMBRI DGESHI RE
	PETERBOROUGH THORPE PARK ROAD Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 9 <i>Survey date: TUESDAY 18/10/11</i>			<i>Survey Type: MANUAL</i>
2	CA-03-A-05	DETACHED HOUSES		CAMBRI DGESHI RE
	EASTFIELD ROAD PETERBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 28 <i>Survey date: MONDAY 17/10/16</i>			<i>Survey Type: MANUAL</i>
3	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD CHESTER BOUGHTON HEATH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 11 <i>Survey date: TUESDAY 22/05/12</i>			<i>Survey Type: MANUAL</i>
4	DH-03-A-01	SEMI DETACHED		DURHAM
	GREENFIELDS ROAD BISHOP AUCKLAND Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 50 <i>Survey date: TUESDAY 28/03/17</i>			<i>Survey Type: MANUAL</i>
5	DV-03-A-01	TERRACED HOUSES		DEVON
	BRONSHILL ROAD TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 37 <i>Survey date: WEDNESDAY 30/09/15</i>			<i>Survey Type: MANUAL</i>
6	DV-03-A-02	HOUSES & BUNGALOWS		DEVON
	MILLHEAD ROAD HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 116 <i>Survey date: FRIDAY 25/09/15</i>			<i>Survey Type: MANUAL</i>
7	DV-03-A-03	TERRACED & SEMI DETACHED		DEVON
	LOWER BRAND LANE HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 70 <i>Survey date: MONDAY 28/09/15</i>			<i>Survey Type: MANUAL</i>
8	HC-03-A-19	HOUSES & FLATS		HAMPSHI RE
	CANADA WAY LIPHOOK Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 62 <i>Survey date: MONDAY 27/11/17</i>			<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	KC-03-A-03 HYTHE ROAD ASHFORD WILLESBOROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 51 <i>Survey date: THURSDAY 14/07/16</i>	MIXED HOUSES & FLATS	KENT	<i>Survey Type: MANUAL</i>
10	KC-03-A-06 MARGATE ROAD HERNE BAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 363 <i>Survey date: WEDNESDAY 27/09/17</i>	MIXED HOUSES & FLATS	KENT	<i>Survey Type: MANUAL</i>
11	LN-03-A-03 ROOKERY LANE LINCOLN BOULTHAM Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 22 <i>Survey date: TUESDAY 18/09/12</i>	SEMI DETACHED	LINCOLNSHIRE	<i>Survey Type: MANUAL</i>
12	NF-03-A-01 YARMOUTH ROAD CAISTER-ON-SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 27 <i>Survey date: TUESDAY 16/10/12</i>	SEMI DET. & BUNGALOWS	NORFOLK	<i>Survey Type: MANUAL</i>
13	NF-03-A-02 DEREHAM ROAD NORWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 98 <i>Survey date: MONDAY 22/10/12</i>	HOUSES & FLATS	NORFOLK	<i>Survey Type: MANUAL</i>
14	NR-03-A-01 BOUGHTON GREEN ROAD NORTHAMPTON KINGSTHORPE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 102 <i>Survey date: SATURDAY 22/09/12</i>	HOUSES	NORTHAMPTONSHIRE	<i>Survey Type: MANUAL</i>
15	NY-03-A-06 HORSEFAIR BOROUGHBRIDGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 115 <i>Survey date: FRIDAY 14/10/11</i>	BUNGALOWS & SEMI DET.	NORTH YORKSHIRE	<i>Survey Type: MANUAL</i>
16	NY-03-A-08 NICHOLAS STREET YORK Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 21 <i>Survey date: MONDAY 16/09/13</i>	TERRACED HOUSES	NORTH YORKSHIRE	<i>Survey Type: MANUAL</i>
17	NY-03-A-09 GRAMMAR SCHOOL LANE NORTHALLERTON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 52 <i>Survey date: MONDAY 16/09/13</i>	MIXED HOUSING	NORTH YORKSHIRE	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

18	NY-03-A-13	TERRACED HOUSES	NORTH YORKSHIRE
	CATTERICK ROAD CATTERICK GARRISON OLD HOSPITAL COMPOUND Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 10 <i>Survey date: WEDNESDAY 10/05/17</i>		
	<i>Survey Type: MANUAL</i>		
19	PS-03-A-02	DETACHED/SEMI -DETACHED	POWYS
	GUNROG ROAD WELSHPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 28 <i>Survey date: MONDAY 11/05/15</i>		
	<i>Survey Type: MANUAL</i>		
20	SF-03-A-04	DETACHED & BUNGALOWS	SUFFOLK
	NORMANSTON DRIVE LOWESTOFT Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 7 <i>Survey date: TUESDAY 23/10/12</i>		
	<i>Survey Type: MANUAL</i>		
21	WK-03-A-01	TERRACED/SEMI /DET.	WARWICKSHIRE
	ARLINGTON AVENUE LEAMINGTON SPA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 6 <i>Survey date: FRIDAY 21/10/11</i>		
	<i>Survey Type: MANUAL</i>		
22	WL-03-A-02	SEMI DETACHED	WILTSHIRE
	HEADLANDS GROVE SWINDON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 27 <i>Survey date: THURSDAY 22/09/16</i>		
	<i>Survey Type: MANUAL</i>		
23	WS-03-A-05	TERRACED & FLATS	WEST SUSSEX
	UPPER SHOREHAM ROAD SHOREHAM BY SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 48 <i>Survey date: WEDNESDAY 18/04/12</i>		
	<i>Survey Type: MANUAL</i>		

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	23	59	0.068	23	59	0.259	23	59	0.327
08:00 - 09:00	23	59	0.110	23	59	0.353	23	59	0.463
09:00 - 10:00	23	59	0.150	23	59	0.163	23	59	0.313
10:00 - 11:00	23	59	0.135	23	59	0.163	23	59	0.298
11:00 - 12:00	23	59	0.140	23	59	0.148	23	59	0.288
12:00 - 13:00	23	59	0.172	23	59	0.170	23	59	0.342
13:00 - 14:00	23	59	0.173	23	59	0.161	23	59	0.334
14:00 - 15:00	23	59	0.156	23	59	0.189	23	59	0.345
15:00 - 16:00	23	59	0.239	23	59	0.168	23	59	0.407
16:00 - 17:00	23	59	0.287	23	59	0.179	23	59	0.466
17:00 - 18:00	23	59	0.332	23	59	0.180	23	59	0.512
18:00 - 19:00	23	59	0.239	23	59	0.171	23	59	0.410
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.201			2.304			4.505

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

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

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Parameter summary

Trip rate parameter range selected:	6 - 363 (units:)
Survey date date range:	01/01/10 - 19/04/18
Number of weekdays (Monday-Friday):	22
Number of Saturdays:	1
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	23	59	0.001	23	59	0.001	23	59	0.002
08:00 - 09:00	23	59	0.004	23	59	0.004	23	59	0.008
09:00 - 10:00	23	59	0.006	23	59	0.002	23	59	0.008
10:00 - 11:00	23	59	0.001	23	59	0.004	23	59	0.005
11:00 - 12:00	23	59	0.001	23	59	0.001	23	59	0.002
12:00 - 13:00	23	59	0.001	23	59	0.001	23	59	0.002
13:00 - 14:00	23	59	0.001	23	59	0.001	23	59	0.002
14:00 - 15:00	23	59	0.001	23	59	0.002	23	59	0.003
15:00 - 16:00	23	59	0.004	23	59	0.001	23	59	0.005
16:00 - 17:00	23	59	0.001	23	59	0.002	23	59	0.003
17:00 - 18:00	23	59	0.001	23	59	0.001	23	59	0.002
18:00 - 19:00	23	59	0.001	23	59	0.001	23	59	0.002
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.023			0.021			0.044

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

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	23	59	0.000	23	59	0.000	23	59	0.000
08:00 - 09:00	23	59	0.004	23	59	0.004	23	59	0.008
09:00 - 10:00	23	59	0.004	23	59	0.004	23	59	0.008
10:00 - 11:00	23	59	0.004	23	59	0.004	23	59	0.008
11:00 - 12:00	23	59	0.003	23	59	0.004	23	59	0.007
12:00 - 13:00	23	59	0.001	23	59	0.004	23	59	0.005
13:00 - 14:00	23	59	0.001	23	59	0.001	23	59	0.002
14:00 - 15:00	23	59	0.003	23	59	0.003	23	59	0.006
15:00 - 16:00	23	59	0.001	23	59	0.001	23	59	0.002
16:00 - 17:00	23	59	0.002	23	59	0.001	23	59	0.003
17:00 - 18:00	23	59	0.001	23	59	0.002	23	59	0.003
18:00 - 19:00	23	59	0.000	23	59	0.000	23	59	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.028			0.052

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

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

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

PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

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

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

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	23	59	0.006	23	59	0.018	23	59	0.024
08:00 - 09:00	23	59	0.002	23	59	0.011	23	59	0.013
09:00 - 10:00	23	59	0.001	23	59	0.006	23	59	0.007
10:00 - 11:00	23	59	0.004	23	59	0.008	23	59	0.012
11:00 - 12:00	23	59	0.004	23	59	0.004	23	59	0.008
12:00 - 13:00	23	59	0.007	23	59	0.005	23	59	0.012
13:00 - 14:00	23	59	0.004	23	59	0.001	23	59	0.005
14:00 - 15:00	23	59	0.002	23	59	0.007	23	59	0.009
15:00 - 16:00	23	59	0.015	23	59	0.003	23	59	0.018
16:00 - 17:00	23	59	0.014	23	59	0.004	23	59	0.018
17:00 - 18:00	23	59	0.015	23	59	0.008	23	59	0.023
18:00 - 19:00	23	59	0.007	23	59	0.005	23	59	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.081			0.080			0.161

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

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

Calculation Reference: AUDIT-426201-181009-1037

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : N - RETIREMENT FLATS
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
10	WALES	
	CF CARDIFF	1 days
	VG VALE OF GLAMORGAN	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 25 to 88 (units:)
 Range Selected by User: 25 to 88 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 21/11/17

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	3 days
Tuesday	2 days
Wednesday	3 days
Friday	1 days

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

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

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

Selected Locations:

Town Centre	1
Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	8
Built-Up Zone	1

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

Secondary Filtering selection:

Use Class:

C3 9 days

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

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	3 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	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	2 days
1.1 to 1.5	5 days

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

Travel Plan:

Yes	1 days
No	8 days

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

PTAL Rating:

No PTAL Present	9 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CA-03-N-02 DOGSTHORPE ROAD PETERBOROUGH	RETIREMENT FLATS		CAMBRI D G E S H I R E
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 32 <i>Survey date: MONDAY 17/10/16</i>			
2	CF-03-N-01 CARDIFF ROAD CARDIFF LLANDAFF	RETIREMENT FLATS		C A R D I F F
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of dwellings: 60 <i>Survey date: WEDNESDAY 05/10/16</i>			
3	CH-03-N-01 HOBSON STREET MACCLESFIELD	RETIREMENT FLATS		C H E S H I R E
	Edge of Town Centre Residential Zone Total Number of dwellings: 33 <i>Survey date: FRIDAY 16/09/16</i>			
4	KC-03-N-08 CANTERBURY ROAD HERNE BAY EDDINGTON	RETIREMENT FLATS		K E N T
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 88 <i>Survey date: TUESDAY 26/09/17</i>			
5	NF-03-N-01 RECORDER ROAD NORWICH	RETIREMENT FLATS		N O R F O L K
	Town Centre Built-Up Zone Total Number of dwellings: 38 <i>Survey date: WEDNESDAY 17/10/12</i>			
6	NY-03-N-01 EASTGATE PICKERING	RETIREMENT FLATS		N O R T H Y O R K S H I R E
	Edge of Town Residential Zone Total Number of dwellings: 30 <i>Survey date: MONDAY 26/09/16</i>			
7	SY-03-N-01 MOSS CLOSE NEAR ROTHERHAM WICKERSLEY	RETIREMENT FLATS		S O U T H Y O R K S H I R E
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 28 <i>Survey date: WEDNESDAY 19/12/12</i>			
8	VG-03-N-01 BRADFORD PLACE PENARTH	RETIREMENT FLATS		V A L E O F G L A M O R G A N
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 46 <i>Survey date: MONDAY 16/07/12</i>			
9	WM-03-N-01 SHORT STREET STOURBRIDGE	RETIREMENT BUNGALOWS		W E S T M I D L A N D S
	Edge of Town Centre Residential Zone Total Number of dwellings: 25 <i>Survey date: TUESDAY 21/11/17</i>			

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

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
 VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	42	0.011	9	42	0.016	9	42	0.027
08:00 - 09:00	9	42	0.050	9	42	0.055	9	42	0.105
09:00 - 10:00	9	42	0.045	9	42	0.068	9	42	0.113
10:00 - 11:00	9	42	0.063	9	42	0.068	9	42	0.131
11:00 - 12:00	9	42	0.108	9	42	0.089	9	42	0.197
12:00 - 13:00	9	42	0.071	9	42	0.076	9	42	0.147
13:00 - 14:00	9	42	0.058	9	42	0.074	9	42	0.132
14:00 - 15:00	9	42	0.084	9	42	0.092	9	42	0.176
15:00 - 16:00	9	42	0.053	9	42	0.037	9	42	0.090
16:00 - 17:00	9	42	0.055	9	42	0.042	9	42	0.097
17:00 - 18:00	9	42	0.047	9	42	0.045	9	42	0.092
18:00 - 19:00	9	42	0.042	9	42	0.034	9	42	0.076
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.687			0.696			1.383

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

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

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Parameter summary

Trip rate parameter range selected:	25 - 88 (units:)
Survey date date range:	01/01/10 - 21/11/17
Number of weekdays (Monday-Friday):	9
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS

TAXI S

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	42	0.003	9	42	0.003	9	42	0.006
08:00 - 09:00	9	42	0.003	9	42	0.003	9	42	0.006
09:00 - 10:00	9	42	0.005	9	42	0.005	9	42	0.010
10:00 - 11:00	9	42	0.003	9	42	0.003	9	42	0.006
11:00 - 12:00	9	42	0.008	9	42	0.005	9	42	0.013
12:00 - 13:00	9	42	0.000	9	42	0.003	9	42	0.003
13:00 - 14:00	9	42	0.000	9	42	0.000	9	42	0.000
14:00 - 15:00	9	42	0.005	9	42	0.005	9	42	0.010
15:00 - 16:00	9	42	0.000	9	42	0.000	9	42	0.000
16:00 - 17:00	9	42	0.003	9	42	0.003	9	42	0.006
17:00 - 18:00	9	42	0.000	9	42	0.000	9	42	0.000
18:00 - 19:00	9	42	0.000	9	42	0.000	9	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.030			0.030			0.060

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

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TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	42	0.000	9	42	0.000	9	42	0.000
08:00 - 09:00	9	42	0.000	9	42	0.000	9	42	0.000
09:00 - 10:00	9	42	0.000	9	42	0.000	9	42	0.000
10:00 - 11:00	9	42	0.005	9	42	0.003	9	42	0.008
11:00 - 12:00	9	42	0.000	9	42	0.000	9	42	0.000
12:00 - 13:00	9	42	0.000	9	42	0.000	9	42	0.000
13:00 - 14:00	9	42	0.003	9	42	0.000	9	42	0.003
14:00 - 15:00	9	42	0.000	9	42	0.003	9	42	0.003
15:00 - 16:00	9	42	0.000	9	42	0.000	9	42	0.000
16:00 - 17:00	9	42	0.000	9	42	0.000	9	42	0.000
17:00 - 18:00	9	42	0.000	9	42	0.003	9	42	0.003
18:00 - 19:00	9	42	0.000	9	42	0.000	9	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.009			0.017

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

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TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS

PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	42	0.000	9	42	0.000	9	42	0.000
08:00 - 09:00	9	42	0.000	9	42	0.000	9	42	0.000
09:00 - 10:00	9	42	0.003	9	42	0.000	9	42	0.003
10:00 - 11:00	9	42	0.000	9	42	0.003	9	42	0.003
11:00 - 12:00	9	42	0.000	9	42	0.000	9	42	0.000
12:00 - 13:00	9	42	0.000	9	42	0.000	9	42	0.000
13:00 - 14:00	9	42	0.000	9	42	0.000	9	42	0.000
14:00 - 15:00	9	42	0.000	9	42	0.000	9	42	0.000
15:00 - 16:00	9	42	0.000	9	42	0.000	9	42	0.000
16:00 - 17:00	9	42	0.003	9	42	0.003	9	42	0.006
17:00 - 18:00	9	42	0.000	9	42	0.000	9	42	0.000
18:00 - 19:00	9	42	0.000	9	42	0.000	9	42	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/N - RETIREMENT FLATS
 CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	42	0.005	9	42	0.003	9	42	0.008
08:00 - 09:00	9	42	0.000	9	42	0.003	9	42	0.003
09:00 - 10:00	9	42	0.000	9	42	0.000	9	42	0.000
10:00 - 11:00	9	42	0.000	9	42	0.000	9	42	0.000
11:00 - 12:00	9	42	0.000	9	42	0.000	9	42	0.000
12:00 - 13:00	9	42	0.003	9	42	0.003	9	42	0.006
13:00 - 14:00	9	42	0.000	9	42	0.000	9	42	0.000
14:00 - 15:00	9	42	0.000	9	42	0.000	9	42	0.000
15:00 - 16:00	9	42	0.000	9	42	0.000	9	42	0.000
16:00 - 17:00	9	42	0.000	9	42	0.000	9	42	0.000
17:00 - 18:00	9	42	0.000	9	42	0.000	9	42	0.000
18:00 - 19:00	9	42	0.003	9	42	0.003	9	42	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.011			0.012			0.023

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

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

Calculation Reference: AUDIT-426201-181009-1000

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	2 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
09	NORTH	
	TV TEES VALLEY	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 51 to 135 (units:)
Range Selected by User: 50 to 215 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 05/06/18

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	4 days
Wednesday	2 days
Thursday	2 days
Friday	1 days
Saturday	1 days

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

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	5
Edge of Town	1

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

Selected Location Sub Categories:

Residential Zone	5
Built-Up Zone	3
No Sub Category	3

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

Secondary Filtering selection:

Use Class:

C3 11 days

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

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	5 days
50,001 to 100,000	1 days

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

Population within 5 miles:

50,001 to 75,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	6 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	8 days

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

Travel Plan:

Yes	1 days
No	10 days

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

PTAL Rating:

No PTAL Present	11 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	CA-03-C-03 BLOCKS OF FLATS CROMWELL ROAD CAMBRIDGE		CAMBRI DGESHI RE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 82 <i>Survey date: MONDAY 18/09/17</i>		<i>Survey Type: MANUAL</i>
2	ES-03-C-01 BLOCK OF FLATS OLD SHOREHAM RD BRIGHTON HOVE		EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 71 <i>Survey date: TUESDAY 26/09/17</i>		<i>Survey Type: MANUAL</i>
3	EX-03-C-02 BLOCK OF FLATS WESTCLIFF PARADE SOUTHEND-ON-SEA WESTCLIFF		ESSEX
	Edge of Town Centre Residential Zone Total Number of dwellings: 94 <i>Survey date: TUESDAY 22/10/13</i>		<i>Survey Type: MANUAL</i>
4	HC-03-C-01 BLOCKS OF FLATS CROSS STREET PORTSMOUTH		HAMPSHIRE
	Edge of Town Centre Built-Up Zone Total Number of dwellings: 90 <i>Survey date: TUESDAY 05/06/18</i>		<i>Survey Type: MANUAL</i>
5	NF-03-C-01 BLOCKS OF FLATS PAGE STAIR LANE KING'S LYNN		NORFOLK
	Edge of Town Centre Built-Up Zone Total Number of dwellings: 51 <i>Survey date: THURSDAY 11/12/14</i>		<i>Survey Type: MANUAL</i>
6	NT-03-C-01 HOUSES (SPLIT INTO FLATS) LAWRENCE WAY NOTTINGHAM		NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 56 <i>Survey date: TUESDAY 08/11/16</i>		<i>Survey Type: MANUAL</i>
7	NT-03-C-02 HOUSES (SPLIT INTO FLATS) CASTLE MARINA ROAD NOTTINGHAM		NOTTINGHAMSHIRE
	Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 135 <i>Survey date: WEDNESDAY 09/11/16</i>		<i>Survey Type: MANUAL</i>
8	SC-03-C-04 BLOCK OF FLATS LONDON ROAD GUILDFORD BURPHAM		SURREY
	Edge of Town Residential Zone Total Number of dwellings: 72 <i>Survey date: SATURDAY 23/10/10</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

9	SF-03-C-01 STATION HILL BURY ST EDMUNDS	BLOCKS OF FLATS	SUFFOLK
	Edge of Town Centre Built-Up Zone		
	Total Number of dwellings:	85	
	Survey date: THURSDAY	18/12/14	Survey Type: MANUAL
10	TV-03-C-02 ACKLAM ROAD MIDDLESBROUGH LINTHORPE	FLATS	TEES VALLEY
	Suburban Area (PPS6 Out of Centre) Residential Zone		
	Total Number of dwellings:	85	
	Survey date: WEDNESDAY	29/06/11	Survey Type: MANUAL
11	WM-03-C-04 GILLQUART WAY COVENTRY PARKSIDE	BLOCKS OF FLATS	WEST MIDLANDS
	Edge of Town Centre Residential Zone		
	Total Number of dwellings:	55	
	Survey date: FRIDAY	11/11/16	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 VEHICLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	80	0.056	11	80	0.121	11	80	0.177
08:00 - 09:00	11	80	0.051	11	80	0.186	11	80	0.237
09:00 - 10:00	11	80	0.075	11	80	0.108	11	80	0.183
10:00 - 11:00	11	80	0.086	11	80	0.094	11	80	0.180
11:00 - 12:00	11	80	0.088	11	80	0.088	11	80	0.176
12:00 - 13:00	11	80	0.103	11	80	0.097	11	80	0.200
13:00 - 14:00	11	80	0.099	11	80	0.112	11	80	0.211
14:00 - 15:00	11	80	0.104	11	80	0.099	11	80	0.203
15:00 - 16:00	11	80	0.091	11	80	0.074	11	80	0.165
16:00 - 17:00	11	80	0.118	11	80	0.089	11	80	0.207
17:00 - 18:00	11	80	0.156	11	80	0.091	11	80	0.247
18:00 - 19:00	11	80	0.134	11	80	0.075	11	80	0.209
19:00 - 20:00	1	72	0.111	1	72	0.097	1	72	0.208
20:00 - 21:00	1	72	0.083	1	72	0.069	1	72	0.152
21:00 - 22:00	1	72	0.083	1	72	0.042	1	72	0.125
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.438			1.442			2.880

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

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

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Parameter summary

Trip rate parameter range selected:	51 - 135 (units:)
Survey date date range:	01/01/10 - 05/06/18
Number of weekdays (Monday-Friday):	10
Number of Saturdays:	1
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 TAXI S
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	72	0.000	1	72	0.000	1	72	0.000
07:00 - 08:00	11	80	0.007	11	80	0.007	11	80	0.014
08:00 - 09:00	11	80	0.001	11	80	0.001	11	80	0.002
09:00 - 10:00	11	80	0.003	11	80	0.002	11	80	0.005
10:00 - 11:00	11	80	0.003	11	80	0.005	11	80	0.008
11:00 - 12:00	11	80	0.007	11	80	0.007	11	80	0.014
12:00 - 13:00	11	80	0.007	11	80	0.006	11	80	0.013
13:00 - 14:00	11	80	0.001	11	80	0.002	11	80	0.003
14:00 - 15:00	11	80	0.005	11	80	0.005	11	80	0.010
15:00 - 16:00	11	80	0.002	11	80	0.002	11	80	0.004
16:00 - 17:00	11	80	0.007	11	80	0.007	11	80	0.014
17:00 - 18:00	11	80	0.003	11	80	0.003	11	80	0.006
18:00 - 19:00	11	80	0.006	11	80	0.005	11	80	0.011
19:00 - 20:00	1	72	0.014	1	72	0.014	1	72	0.028
20:00 - 21:00	1	72	0.000	1	72	0.000	1	72	0.000
21:00 - 22:00	1	72	0.000	1	72	0.000	1	72	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.066			0.066			0.132

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 OGVS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	80	0.003	11	80	0.003	11	80	0.006
08:00 - 09:00	11	80	0.000	11	80	0.000	11	80	0.000
09:00 - 10:00	11	80	0.001	11	80	0.001	11	80	0.002
10:00 - 11:00	11	80	0.000	11	80	0.000	11	80	0.000
11:00 - 12:00	11	80	0.001	11	80	0.001	11	80	0.002
12:00 - 13:00	11	80	0.001	11	80	0.001	11	80	0.002
13:00 - 14:00	11	80	0.001	11	80	0.001	11	80	0.002
14:00 - 15:00	11	80	0.001	11	80	0.000	11	80	0.001
15:00 - 16:00	11	80	0.001	11	80	0.001	11	80	0.002
16:00 - 17:00	11	80	0.000	11	80	0.000	11	80	0.000
17:00 - 18:00	11	80	0.000	11	80	0.000	11	80	0.000
18:00 - 19:00	11	80	0.000	11	80	0.000	11	80	0.000
19:00 - 20:00	1	72	0.000	1	72	0.000	1	72	0.000
20:00 - 21:00	1	72	0.000	1	72	0.000	1	72	0.000
21:00 - 22:00	1	72	0.000	1	72	0.000	1	72	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.008			0.017

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

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

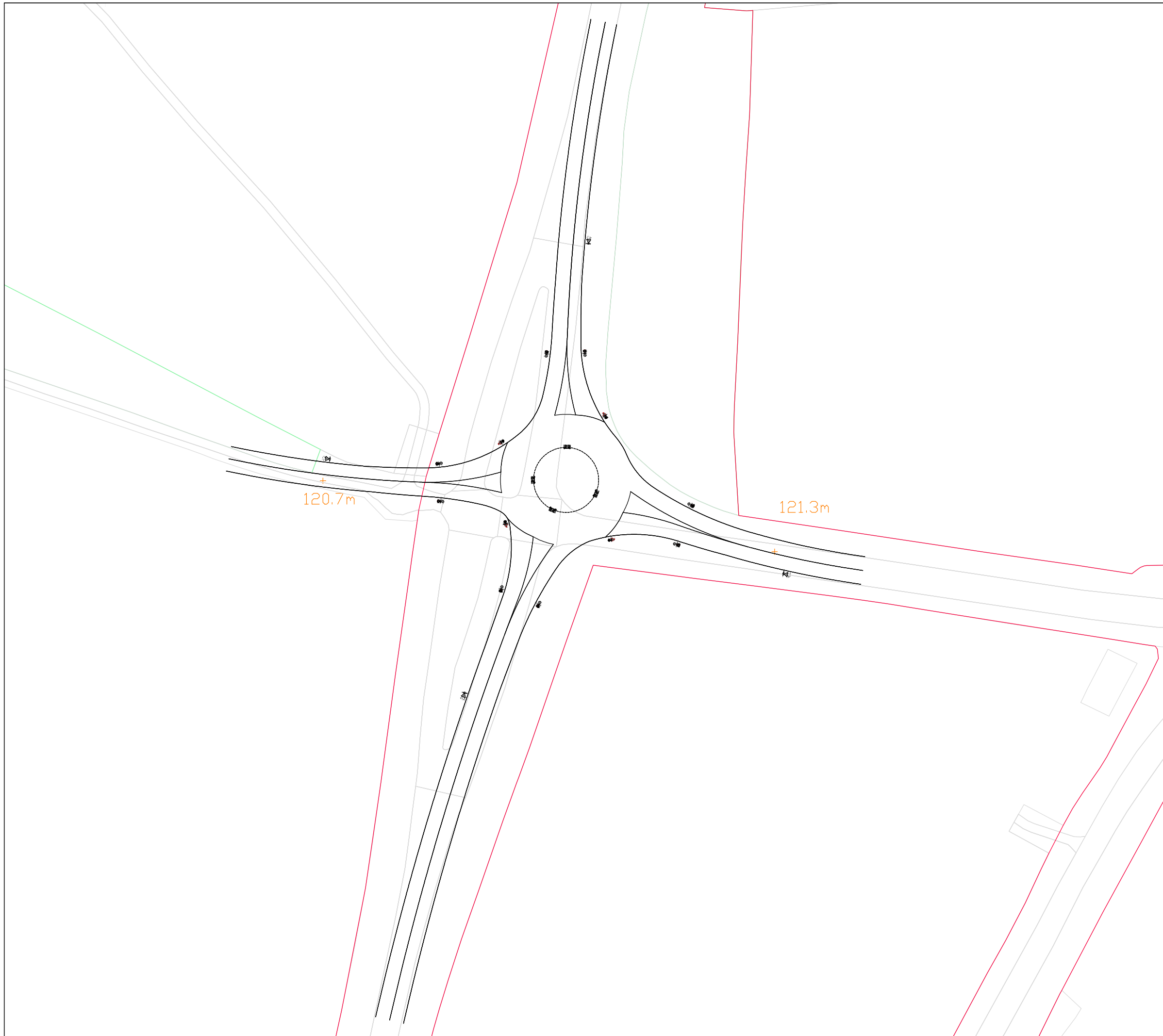
TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
 CYCLISTS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	80	0.003	11	80	0.013	11	80	0.016
08:00 - 09:00	11	80	0.003	11	80	0.008	11	80	0.011
09:00 - 10:00	11	80	0.002	11	80	0.000	11	80	0.002
10:00 - 11:00	11	80	0.002	11	80	0.007	11	80	0.009
11:00 - 12:00	11	80	0.008	11	80	0.003	11	80	0.011
12:00 - 13:00	11	80	0.003	11	80	0.005	11	80	0.008
13:00 - 14:00	11	80	0.001	11	80	0.000	11	80	0.001
14:00 - 15:00	11	80	0.005	11	80	0.001	11	80	0.006
15:00 - 16:00	11	80	0.006	11	80	0.005	11	80	0.011
16:00 - 17:00	11	80	0.000	11	80	0.002	11	80	0.002
17:00 - 18:00	11	80	0.008	11	80	0.003	11	80	0.011
18:00 - 19:00	11	80	0.007	11	80	0.001	11	80	0.008
19:00 - 20:00	1	72	0.000	1	72	0.014	1	72	0.014
20:00 - 21:00	1	72	0.000	1	72	0.000	1	72	0.000
21:00 - 22:00	1	72	0.014	1	72	0.000	1	72	0.014
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.062			0.062			0.124

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

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

Appendix 4: Mitigated Junction Drawings

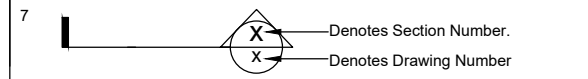


NOTES ITEM 27

- 1 DO NOT SCALE THIS DRAWING ON PRINT OR ELECTRONICALLY. WORK FROM FIGURED DIMENSIONS ONLY.
- 2 No deviation from the details shown on this drawing is allowed without CampbellReith's prior permission in writing.
- 3 Read this drawing with all Architects, Service Engineers and CampbellReith's relevant details and drawings.
- 4 All work is to be in accordance with the relevant specifications issued by CampbellReith, British Standard Codes of Practice, Statutory requirements and the Contract Documents.
- 5 DRAWING STATUS
P : PRELIMINARY - Evolving drawings for approvals, Tenders, Billings, etc.
C : CONSTRUCTION - Fully developed drawings issued under instruction for construction.

ONLY STATUS C DRAWINGS TO BE USED FOR CONSTRUCTION.

6 SUITABILITY CODE
WORK IN PROGRESS:
S0 - Work in progress
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S1 - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.
DOCUMENTATION (FOR CONTRACTOR PURPOSES):
D1 - For costing, **D2** - For Tender, **D3** - For contractor design, **D4** - For manufacture / procurement.



P1	ISSUED FOR INFORMATION	31.10.18	MPJ
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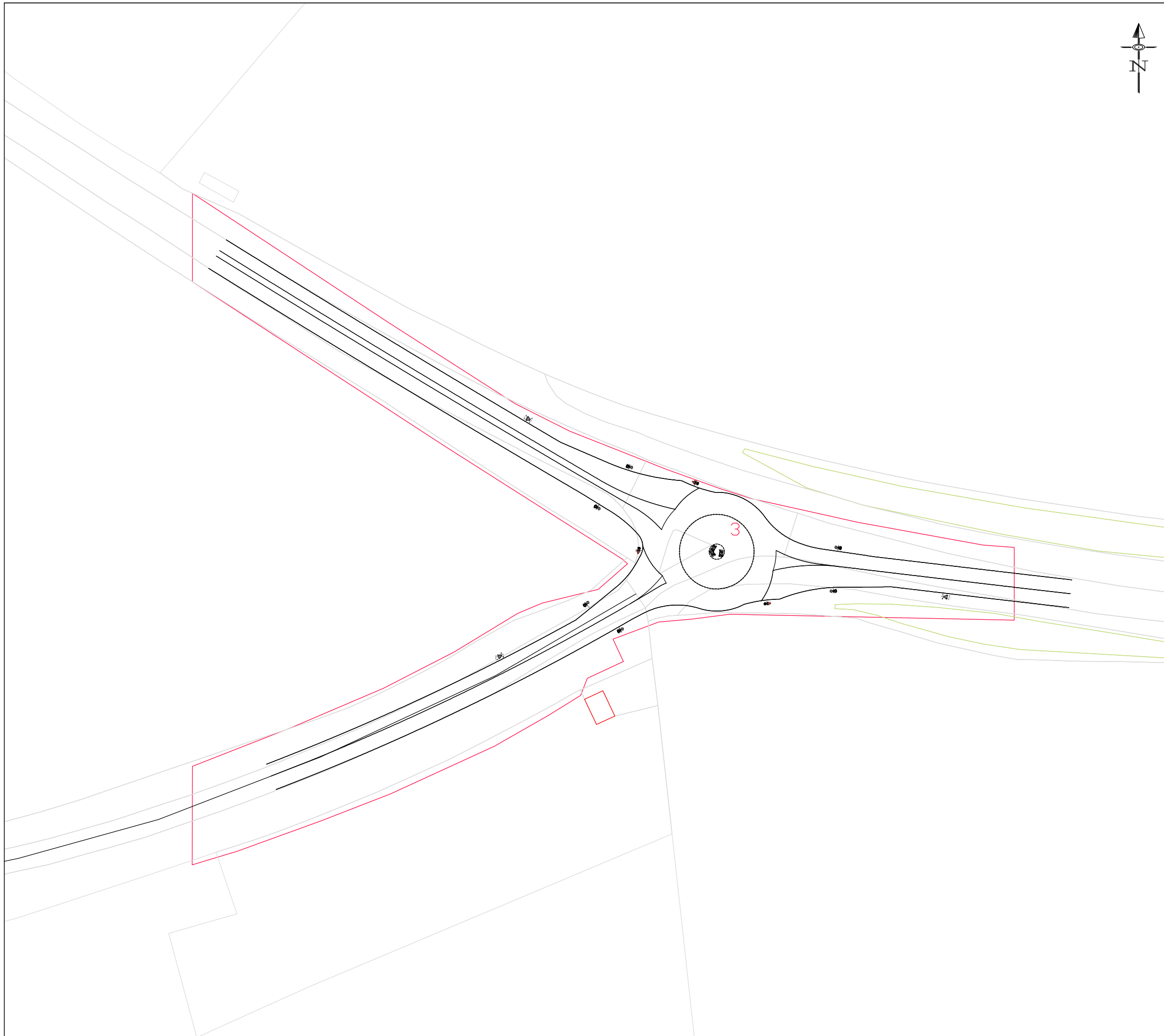
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 SURREY 01737 784 500 BIRMINGHAM 01675 467 484
 BRISTOL 0117 916 1066 DUBAI 00 971 4345 7088
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Job Title
ST. GEORGES BARRACKS

JUNCTION 1 INDYCATIVE LAYOUT OF A NEW JUNCTION

drawn	date	scale @ A3	C1 checked	CR Project No.
MPJ	31.10.18	1:1000	-	12825

Drg No. 12825-CRH-Z1-00-DR-D-6050	Suitability S2	Status/Rev P1
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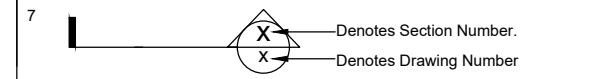


NOTES ITEM 27

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P : PRELIMINARY - Evolving drawings for approvals, Tenders, Billings, etc.
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ONLY STATUS C DRAWINGS TO BE USED FOR CONSTRUCTION.

- 6 SUITABILITY CODE
- WORK IN PROGRESS:
S0 - Work in progress
- SHARED (NON-CONTRACTUAL):
S1 - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.
- DOCUMENTATION (FOR CONTRACTOR PURPOSES):
D1 - For costing, **D2** - For Tender, **D3** - For contractor design, **D4** - For manufacture / procurement.



P1	ISSUED FOR INFORMATION	31.10.18	MPJ
Status/Rev	Description	Date	By

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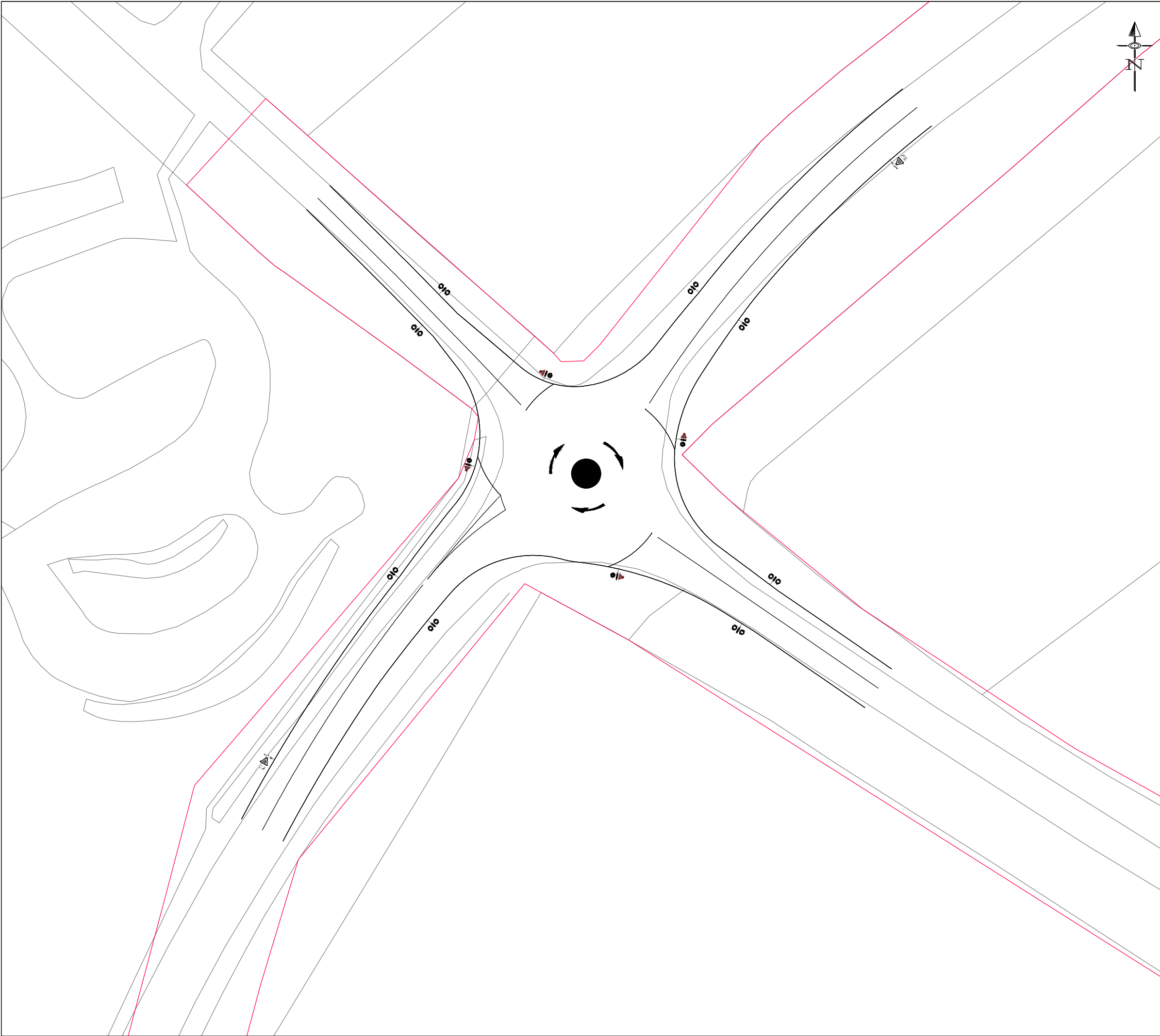
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 SURREY 01737 784 500 BIRMINGHAM 01675 467 484
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Job Title
ST. GEORGES BARRACKS

JUNCTION 6 INDICATIVE LAYOUT OF A ROUNDAABOUT

drawn	date	scale @ A3	C1 checked	CR Project No.
MPJ	31.10.18	1:1000	-	12825

Drg No. 12825-CRH-Z1-00-DR-D-6051	Suitability S2	Status/Rev P1
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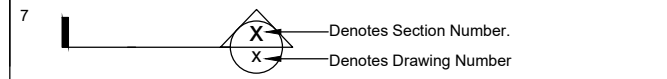


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- 5 DRAWING STATUS
P : PRELIMINARY - Evolving drawings for approvals, Tenders, Billings, etc.
C : CONSTRUCTION - Fully developed drawings issued under instruction for construction.

ONLY STATUS C DRAWINGS TO BE USED FOR CONSTRUCTION.

- 6 SUITABILITY CODE
- WORK IN PROGRESS:
S0 - Work in progress
- SHARED (NON-CONTRACTUAL):
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- DOCUMENTATION (FOR CONTRACTOR PURPOSES):
D1 - For costing, **D2** - For Tender, **D3** - For contractor design, **D4** - For manufacture / procurement.



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Job Title
ST. GEORGES BARRACKS

JUNCTION 3 INDICATIVE LAYOUT OF A ROUNDAABOUT

drawn	date	scale @ A3	C1 checked	CR Project No.
MPJ	31.10.18	1:1000	-	12825

Drg No. 12825-CRH-Z1-00-DR-D-6052	Suitability S2	Status/Rev P1
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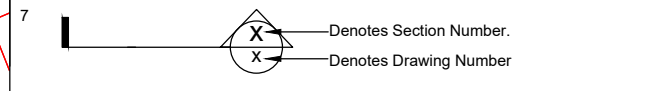


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C : CONSTRUCTION - Fully developed drawings issued under instruction for construction.

ONLY STATUS C DRAWINGS TO BE USED FOR CONSTRUCTION.

- 6 SUITABILITY CODE
- WORK IN PROGRESS:**
S0 - Work in progress
- SHARED (NON-CONTRACTUAL):**
S1 - For coordination, **S2** - For information, **S3** - For internal review and comment, **S4** - For construction approval.
- DOCUMENTATION (FOR CONTRACTOR PURPOSES):**
D1 - For costing, **D2** - For Tender, **D3** - For contractor design, **D4** - For manufacture / procurement.



P1	ISSUED FOR INFORMATION	26.11.18	MPJ
Status/Rev	Description	Date	By

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Job Title
ST. GEORGES BARRACKS

JUNCTION 12 INDICATIVE LAYOUT OF A IMPROVED JUNCTION

drawn	date	scale @ A3	C1 checked	CR Project No.
MPJ	26.11.18	1:500	-	12825

Drg No.	Suitability	Status/Rev
12825-CRH-Z1-00-DR-D-6053	S2	P1

Appendix 5: Traffic Survey Data

(Available upon request)

Appendix 6: Junction Modelling Outputs

(Available upon request)



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