RiverOak Strategic Partners

5.2-15 Environmental Statement Volume 15: Transport Assessment

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Volume 15 Contents

Transport Assessment

RiverOak Strategic Partners

Manston Airport DCO

Transport Assessment

March 2018

Amec Foster Wheeler Environment
& Infrastructure UK Limited

Report for

George Yerrall
Partner
RiverOak strategic Partners Limited
RiverOak

Main contributors

Glyn Price
Adam Guy
Helen Haring
Bev Coupe

Issued by

..... [redacted] ....
Glyn Price

Approved by

..... [redacted]
Bev Coupe

Amec Foster Wheeler

Floor 12
25 Canada Square
Canary Wharf
London E14 5LB
United Kingdom
Tel +44 (0) 203 215 16100

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No.	Details	Date
1	Draft Report	March 2017
2	Second Draft	November 2017
3	Third Draft	March 2018
4	FINAL	March 2018

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1. Introduction

1.1 Background

1.1.1 RiverOak Strategic Partners Limited (RiverOak) is seeking to secure the future of Manston Airport as a valuable regional and national asset by redeveloping the Manston Airport site as a freight airport. The proposals will provide much needed additional air freight capacity to the United Kingdom and also serve to relieve pressure from the other, already heavily congested, London and South-East airports.

1.1.2 Under the Planning Act 2008 (the 2008 Act) the redevelopment of Manston Airport as a freight airport is considered a Nationally Significant Infrastructure Project (NSIP). RiverOak is making an application under the Act for a permission known as a 'Development Consent Order' ('DCO') to construct and operate Manston Airport. The application will be submitted to the Planning Inspectorate which will examine it and make a recommendation to the Secretary of State for Transport, who will then make a decision on whether the Project is granted consent.

1.1.3 This Transport Assessment (TA) is one of a suite of traffic and transport documents which have been produced in the support of the DCO application, the other documents being as follows:

- **Appendix K**: Preliminary Construction Traffic Management Plan (CTMP);
- **Appendix L**: Travel Plan;
- **Appendix M**: Public Rights of Way Management Strategy (PRoWMS);
- **Appendix N**: Car Park Management Strategy;
- **Appendix O**: Airport Surface Access Strategy; and
- Traffic and Transport DCO Plans.

1.1.4 This TA has been produced following consultation with planning and highways officers within Kent County Council (KCC) as well as other key stakeholders. Details of this consultation undertaken are set out in **Chapter 3: Description of the Proposed Development.** The development proposals and the TA have also been informed by relevant planning policy which is set out in **Chapter 4: Planning Policy Context**.

1.2 Overview

1.2.1 The site is located to the west of Ramsgate in the district of Thanet, East Kent and covers an area of approximately 3km. **Figure 4.1** sets out the site location in its local context while **Figure 4.2** sets out the site location with local roads marked up for context. Further details of the site and local setting are provided in section 4.

1.2.2 There has been an operational airport at the Proposed Development site since 1916. Until 1998 it was operated by the Royal Air Force (RAF) as RAF Manston, and for a period in the 1950s was also a base for the United States Air Force (USAF).

1.2.3 From 1998 it was operated as a private commercial airport, known as Kent International Airport. The airport offered a range of services including scheduled passenger flights, charter flights, air freight and cargo, a flight training school, flight crew training and aircraft testing. In recent years it was operating as a specialist air freight and cargo hub servicing a range of operators. The airport was closed in May 2014 and whilst much of the airport infrastructure, including the runway, taxiways, aprons, cargo facilities and passenger terminal remains, it does require improvement and redevelopment to cater for the proposed use.

1.2.4 The Proposed Development shall consist of the following principal components, as shown in **Figure 6.2**:

- Runways and taxiways suitable for the take-off and landing of a broad range of cargo aircraft;
- an area for cargo freight operations able to handle at least 10,000 movements per year and associated infrastructure, including;
  - a new Air Traffic Control (ATC) tower;
  - a fire station; and
  - a fuel farm;
- facilities for other airport -related development, including:
  - a passenger terminal and associated facilities;
  - an aircraft teardown and recycling facility;
  - a flight training school;
  - a base for at least one passenger carrier;
  - a fixed base operation for executive travel; and
  - business facilities for airport related organisations.

1.3 Structure of the TA

1.3.1 The remainder of the TA is structured as follows:

- Section 2 - background planning policy relevant to the Proposed Development;
- Section 3 - details of consultation with key stakeholders;
- Section 4 - summary of the current conditions within the defined study area and a review of the transport network;
- Section 5 - scope of the assessment in the TA and validation of the baseline models;
- Section 6 - Proposed Development proposals, traffic generation and distribution;
- Section 7 - traffic impact assessment including junction assessments for the junctions within the network scope;
- Section 8 - impact of the Proposed Development traffic on the Highways England Strategic Road Network;
- Section 9 sets out the onsite infrastructure improvements required to facilitate the proposed development;
- Section 10 - sensitivity test of the local highways network modelling for a scenario regarding the emerging KCC transport plan;
- Section 11 - summary of the Preliminary CTMP;
- Section 12 - summary of the proposed Transport Plan;
- Section 13 - summary of the PRoWMS;
- Section 14 - a summary of the Car Park Strategy;
- Section 15 - summary of the Airport Surface Access Strategy; and
- Section 16 - summary and conclusions of the TA.

2. Planning Policy Context

2.1 Introduction

2.1.1 This section considers the key transport policies which are relevant to the development proposal. The policy documents are considered at national, county and local levels below.

2.2 National Policy

National planning policy framework

Draft text for consultation, March 2018

2.2.1 In Chapter 9 - Promoting sustainable transport, the key changes relate to:

- Transport impacts should address highway safety as well as capacity and congestion;
- Designs should prioritise pedestrian and cycle movement, followed by access to high quality public transport; and
- The importance of creating high quality places.

2.2.2 Paragraph 103b reflects the housing White Paper proposal that authorities should be expected to identify additional development opportunities arising from strategic infrastructure investment.

2.2.3 Paragraph 105f sets out new policy to recognise the importance of maintaining a national network of general aviation facilities.

2.2.4 Policy on assessing the transport impact of proposals (now at paragraphs 108-110) has been amended to refer to highway safety as well as capacity and congestion in order to make it clear that we expect that designs should prioritise pedestrian and cycle movements, followed by access to high quality public transport (so far as possible) as well as to reflect the importance of creating well-designed places.

National planning practice guidance

2.2.5 The Government's National Planning Policy Framework (NPPF) was published in March 2012, and outlines the Government's planning policies and how they are expected to be applied. The document replaces all existing Planning Policy Guidance notes and Planning Policy Statements.

2.2.6 The NPPF states that, 'the purpose of the planning system is to contribute to the achievement of sustainable development.' According to paragraph 9:

2.2.7 "***Pursuing sustainable development involves seeking positive improvements in the quality of the built, natural and historic environment, as well as in people's quality of life, including (but not limited to):***

- ***Making it easier for jobs to be created in cities, towns and villages;***
- ***Moving from a net loss of bio-diversity to achieving net gains for nature;***
- ***Replacing poor design with better design;***
- ***Improving the conditions in which people live, work, travel and take leisure; and***
- ***Widening the choice of high quality homes.***"

2.2.8 Regarding transport and travel, paragraphs 29 to 31 encourage sustainable transport modes for the movement of goods and people. Plans and decisions will take account of whether safe and suitable access to sites can be achieved for all people, whilst ensuring developments are designed to accommodate the efficient delivery of goods and supplies, give priority to pedestrian movements, and create safe and secure layouts which minimise conflicts between traffic and pedestrians.

2.2.9 Paragraph 32 requires all developments that generate a significant amount of movements to be supported by a Transport Statement or TA. Plans and decisions should take account of whether:

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

2.2.10 The NPPF states that a TA should consider the impact of the proposals on the surrounding road network, identifying transport issues relating to proposed development, and outlining measures to mitigate these impacts where necessary. The process should also identify what measures will be required to improve accessibility and safety for all modes of travel. A Transport Statement is a simplified version of a TA, required where it is agreed that the transport issues arising out of development proposals are limited and a full transport assessment is not required, whilst a TA is defined as being a long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed.

2.2.11 Paragraph 34 states that, 'plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be maximised. However, this needs to take account of polices set out elsewhere in this Framework, particularly in rural areas.'

2.2.12 Paragraph 36 identifies that all developments that are likely to generate a significant amount of movement should provide a Travel Plan.

2.2.13 Paragraphs 37-38 encourage the development of mixed use sites:

"Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities."

National planning practice guidance

2.2.14 The Government has undertaken a review of the planning guidance that supports the delivery of the NPPF and published updated NPPG online at http://planningguidance.planningportal.gov.uk/. The updated planning practice guidance includes guidance on Travel Plans, TAs and Transport Statements.

2.2.15 The Planning Practice Guidance on Travel Plans, TAs and Transport Statements includes guidance on:

- When Travel Plans, TAs and Transport Statements are required;
- How the scope of the plans and assessment should be defined; and
- What should be included within the documents.

2.2.16 This TA has been prepared in accordance with this guidance.

2.3 Kent County Council Policy

Local transport plan 4: delivering growth without gridlock (2016 – 2031)

2.3.1 KCC's Local Transport Plan 4 (LTP4) was adopted in August 2017. KCC's LTP4 'Delivering Growth without Gridlock' is a key document that sets out the transport delivery plan for the county over the next 15 years (2016-2031). Following are the key ambitions sets out in this plan:

- Economic growth and minimised congestion;
- Affordable and accessible door-to-door journey;
- Safer travel;
- Enhanced environment; and
- Better health and wellbeing.

2.3.2 Aviation is one of the key elements of County-wide priorities in LTP4. In terms of Manston Airport the current position of the KCC states:

"That we the elected members of KCC wish it to be known that we fully support the continued regeneration of Manston and East Kent and will keep an open mind on whether that should be a business park or an airport, depending upon the viability of such plans and their ability to deliver significant economic growth and job opportunity."

2.3.3 Delivery of Thanet Parkway railway station and promoting this station is one of the transport priorities for Thanet in LTP4.

Freight action plan for Kent (2017)

2.3.4 The Freight Action Plan for Kent describes the freight traffic situation in Kent and identifies actions that can be taken by KCC. It acknowledges that managing freight traffic within the county is one of the key challenges for KCC; Kent's role as a UK Gateway means that a high proportion of Heavy Goods Vehicles (HGVs) traffic heading to and from mainland Europe uses the county's road. It provides positive economic and social benefits to the county and UK as whole. However, it attracts large numbers of HGVs on local roads.

2.3.5 Objective 5 of the plan is that KCC should continue to make effective use of planning and development control powers to reduce the impact of freight traffic. New developments that are deemed to have a significant impact on the surrounding transport network are required to produce a TA.

Growth without Gridlock (December 2010)

2.3.6 KCC's 'Growth without Gridlock' is a key document that sets out the transport delivery plan for the county over the next 20 years. The plan pulls together the big strategic transport solutions that are considered to be deliverable within the county. The document states:

"Growth without Gridlock outlines how economic growth and regeneration can be delivered in a sustainable way and what infrastructure is needed to deliver an integrated transport network which is fit for purpose in the 21st Century."

2.3.7 The plan sets out how Kent will work alongside Central Government in order to achieve its goals. The plan also identifies new ways to raise revenue in response to reduced government funding. In the foreword chapter of the plan, Kent outline their desire to work with Central Government and asks of them:

- ***"Give KCC and its partners the power and funding to take forward strategic transport projects which were previously the responsibility of Central Government; to identify and realise efficiencies; and to deliver swift and meaningful growth;***

- ***Need for cheaper and faster ways to deliver strategic infrastructure. KCC proposes the transfer of Highway Agencies budgets and powers to local authorities; and***
- ***The need for Government to play its part.'***

2.3.8 In respect of Thanet District, the document outlines the following major schemes for implementation:

- East Kent Access Phase Two;
- Thanet Parkway Station; and
- Ashford to Ramsgate Line Speed Improvements.

2.3.9 East Kent Access Phase Two involved the part creation and part widening of existing roads to provide a dual carriageway link between the A299 Canterbury Road and the A256 at Sandwich. The scheme was implemented in 2012 and a dual carriageway now bounds the site to the south providing a high-quality route connecting the site to the A2/M2 at Brenley Corner in the west, Ramsgate in the east and Sandwich and Dover to the south via the A256.

2.3.10 Thanet Parkway Station is a proposed railway station on the Ramsgate to Ashford International line that would serve as a new connection point to allow access to high speed services to and from London St Pancras. Whilst the original proposal envisaged enhancing rail based public transport access to the site the station is now seen as an economic driver for growth within Thanet and the north Dover Districts. The station is envisaged to be open by 2019.

2.3.11 Alongside the proposals for Thanet Parkway Station are a series of journey time improvements to the Ramsgate to Ashford International line with the aim of bringing journey times to London to within approximately one hour.

2.4 Local Policy and Guidance

2.4.1 Thanet District Council (TDC) had been preparing a new Local Plan to guide the growth and development of the District up to 2031, but this plan was rejected in January 2018. At the time of preparing this TA, TDC were inviting a new call for development sites as they attempt to continue with the development of a new Local Plan. The draft new Thanet Local Plan (which has been rejected) included a series of new traffic and transport infrastructure proposals to support the development being planned. As the Council are now revisiting the draft new Local Plan and considering new sites for development, all these traffic and transport proposals may not now be required. We cannot say for sure at this stage whether the planned road improvements as currently contained in the draft new Local Plan will still be required once TDC have revisited their development needs.

2.4.2 It should be noted however that in this TA, the traffic and transport proposals as included in the draft new Local Plan have been considered as part of a sensitivity test in Section 10.

2.4.3 The adopted version of the Thanet Local Plan is dated 2006 and covered the period up to 2011. Some policies in the adopted Local Plan have been 'saved.' Full regard has been had to these saved policies in the adopted Local Plan unless material considerations have indicated otherwise. Very little weight has been attached to the policies in the draft new Thanet Local Plan due to the fact that as set out above this was rejected in January 2018 and the policies could change.

The Thanet local plan saved policies (2006)

2.4.4 The saved policies considered pertinent to this TA are presented below.

- **Policy TR3 – Provision of Transport Infrastructure** – "***The district and county councils will ensure, by means of a legal agreement that proper provision is made for transport infrastructure that is necessary and relevant to the development to be permitted. Proposals for transport infrastructure will be assessed in terms of their impact on capacity and safety of the transport network together with their social and economic impacts***."

- **Policy TR12 – Cycling** – "***In order to promote increased use of cycling the Local Plan states***:
  - ***The council will seek the provision at the earliest opportunity, of a network of cycle routes. Planning permission will not be granted for any development, which would prejudice the implementation of proposed cycle routes;***
  - ***The council will seek the incorporation of facilities for cyclists into the design of new and improved roads, junction improvements and traffic management proposals***;
  - ***Substantial development generating travel demand will be required to provide convenient and secure cycle-parking and changing facilities. Proposals to provide such facilities as part of development proposals in town centres and at transport interchanges, schools and places of employment will be permitted, and***
  - ***In new residential development facilities for the secure parking and storage of cycles should be provided or, in exceptional circumstances where not provided, the design should facilitate the provision in future***."
- **Policy TR15 - Green Travel Plans** – "***Development proposals likely to generate significant travel demand and/or traffic movement will be required to demonstrate, through green travel plans, specific measures to encourage and facilitate use of walking, cycling and public transport in preference to private car travel. The council will seek to approve measures, which will assist implementation of green travel plans and school travel plans***."
- **Policy TR16 - Car Parking Provision** – "***Proposals for development will be required to make satisfactory provision for the parking of vehicles (including, where appropriate, service vehicles). Proposals seeking car parking provision above the standards set out in Appendix G will not be permitted. In conservation areas where provision of parking in line with this policy would be detrimental to the character of the conservation area or have an adverse effect on the setting of a listed building or ancient monument then exceptions may be made***."

2.4.5 Appendix G of the Local Plan outlines the current TDC parking standards. The maximum car parking provision for B1 Office is 1 space per 43sqm gross floor space and for all other uses, maximum provision will be limited to 70% of the levels set out in the KCC Vehicle Parking Standards.

Thanet district transport strategy 2015 - 2031

2.4.6 Draft Version 1, dated 30/10/2017 has been prepared jointly by KCC and TDC. The Strategy is proposed to replace the former Thanet Transport Plan (2005) and its purpose is to provide a framework of transport policy to the year 2031 to support planned growth. It is intended that The Strategy will support, guide and be developed further through revisions to future LTPs and the Local Plan. It identifies that each significant development site will be expected to appraise its own specific highway impacts whilst contributing to this overarching strategy in line with an accompanying Infrastructure Delivery Plan (IDP).

2.4.7 It should be noted that little weight has been placed on this Thanet District Transport Strategy as with the Local Plan which has stalled in the planning policy process. However, this document is of particular relevance to this TA as it forms the basis for a sensitivity test undertaken later in the report which was requested by KCC during the consultation process.

2.4.8 It includes the following interventions:

- **Encourage Sustainable Travel Habits**, such as improved and new cycle and pedestrian routes, extended and improved access to bus travel through increased frequency and network coverage, improvements to the highway network to improve bus journey time reliability, provision of a new Thanet Parkway Rail Station at Cliffsend, ensure that developments provide and have access to appropriate walking and cycling facilities and Car Parking Strategy.

- **Manage Journey Times** through the provision of new & improved inner highway routes to complement existing primary road network, localised junction improvements to improve traffic flow and levels of service and reduction in the need to travel.
- **Improve Network Resilience** through the provision of new & improved inner highway routes to complement existing primary road network, improve journey time reliability within the local road network by providing new link roads and junction improvements to avoid congestion, and improved directional signage.
- **Reduce the Requirement to Travel** through the promotion of mixed use development where appropriate, robust Travel Planning Measures to be implemented for new developments, encouraging Car Sharing and improved communication infrastructure (High Speed Broadband).

Thanet district council parking policy 2015-2020 version 1.03

2.4.9 Thanet District Parking Policy provides the framework for effective parking management, which primarily supports the council's strategic objectives as outlined in the corporate plan and links in with the Thanet Transport Strategy, Local Plan, Regeneration Strategy and the Destination Management Plan. The parking policy sets out a comprehensive approach to managing on street and off-street parking, provision, control and enforcement. This is in line with legislation and guidance from the Government.

2.5 Summary

2.5.1 The development proposals have been examined in relation to national, county and local policy. These policies have been used to inform the development proposals for the site. Most of the planning policies at national and local level support the development of Manston Airport and adjacent area to improve the local economy.

3. Consultation

3.1 Background

3.1.1 Since 2015, RiverOak and Amec Foster Wheeler, as highways consultants, have engaged with consultees who have an interest in potential traffic and transport effects as part of the wider scoping/consultation effort for the Proposed Development. A Scoping Report (Appendix 1.1 to the ES), including a chapter covering traffic and transport, was produced and submitted to PINS, who distributed it to stakeholders and provided a scoping opinion (Appendix 1.2 to the ES). An initial Preliminary Environmental Impact Report (PEIR) was then submitted by the applicant for consultation and review in summer 2017. Amec Foster Wheeler has also held meetings with KCC and Highways England (HE) in relation to the strategic road network, and with Network Rail in relation to the rail network. Finally, a second PEIR consultation period was undertaken in early 2018.

3.1.2 A summary of the consultation response has been provided in the ES within **Chapter 14: Traffic and Transport**. This section sets out the details of the TA specific consultation that was undertaken with KCC as well as discussion with HE.

3.2 KCC Transport Assessment Consultation

3.2.1 A meeting was held between Amec Foster Wheeler and KCC highways officers on the 11th September 2017 to discuss the Proposed Development and scope of assessment as well as the Thanet District Transport Strategy in relation to infrastructure proposals and the Thanet Traffic Model. A TA scoping note was submitted to KCC prior to the meeting. Notes of the meeting are provided as **Appendix A** to this TA.

3.2.2 During the meeting, KCC advised that the strategic traffic model could be used to test the traffic impact of the Proposed Development, subject to the agreement of TDC, but that it would not be available for developers to use until Spring 2018 following its completion to support the (at the time) emerging Local Plan. At the time of the preparation of this TA, a formal request to use the model has been made, and a detailed scoping methodology is soon to be provided to KCC. However, the model was not ready to use before the submission of this DCO application.

3.2.3 Amec Foster Wheeler advised that in the absence of the availability of the KCC traffic model, a detailed traffic spreadsheet model based on extensive traffic count surveys of junctions and links would be used to assess the Proposed Development as part of the DCO submission. The Proposed Development would also be tested in the strategic traffic model when it becomes available in the post DCO submission period. Spreadsheet modelling is an acceptable approach and the methodology is set out in this TA. It should be noted that a growth rate has been applied to the study area highway network to account for the housing and employment growth identified in the emerging Local Plan.

3.2.4 Another key element of the consultation regarded the assessment work required taking into account the emerging local transport proposals KCC are developing. As set out above the developing KCC strategic model can't be used so a sensitivity test has been undertaken within this TA to provide more narrative to the detailed junction modelling undertaken.

3.2.5 The meeting also discussed the TA scoping note which had been submitted. It was agreed that KCC would provide comments back on this, which were received on the 21st of September 2017 and included in **Appendix A**. **Table 3.1** sets out the comments received and how these have been addressed within the TA and supporting transport documents.

Table 3.1 Consultation with KCC – Comments on Transport Scoping Note

KCC Comments and Considerations	How this has been addressed
It is noted that 2446 parking spaces are proposed. It will be necessary for this level of parking to be justified through the final Transport Assessment.	A revised masterplan design has been provided as part of this submission with updated car parking numbers for staff and passengers. With the final design established, the TA to support the DCO submission has set out in detail the justification for all car parking spaces, the split between passenger and staff parking, the split between long stay and short stay paring, detailed on the how the car park will operate and any other car parking matters. Details regarding car parking will also be included in the Surface Access Strategy for the Airport.
It is stated that it is likely that the vast majority if flights would occur between 07:00 and 23:00 hours, however the anticipated traffic flow figures appear to suggest an even split if movements across the whole 24 hour day. Further justification will be required to substantiate this approach.	A revised and detailed traffic generation methodology for the Airport has been provided in this TA**.** This considers a detailed breakdown of flights across the day and the times vehicles may route to and from the airport.
Flights destined for later departure times may result in some passengers arriving prior to booking in time, which in turn could coincide with road network peaks. Allowance for such occurrences should be made in peak hour trip generation figures.	A more detailed breakdown of the times of arrivals and departures has now been made in the Airport revised traffic generation methodology within this TA. It has been proposed that: • 20% of all passengers would arrive 2 hours before a flight • 80% of passengers would arrive 3 hours before a flight • All passengers would depart the airport 1 hour after an arrival flight has landed. These figures are based on average travel patterns at comparable airports in the UK.
A proportionally low level of passenger numbers has been estimated within the highway network peak hours. Future operators are at this time undefined and the flight patterns unknown. Therefore, in order for an appropriately robust assessment to be provided, the maximum number of flights capable of being handled by the facility within the peak hour should be considered for robust assessment purposes.	The revised traffic flow methodology is based on a flight schedule developed by looking at arrivals and departures to similar sized or natured airports from Civil Aviation Data for October 2017. This has now provided a flight schedule on which the traffic generation of passengers can be based on. This is set out in this TA**.** It should be noted that due to the nature of flights arriving and departing airports the peak traffic generation falls in the mid afternoon and not within the traditional highways network peak hours.
Passenger travel model assumptions are noted, but the submission lacks further clarification in relation to the data sources that have been used to inform such forecasts. Given the location of the site, staff and passenger travel plans may have limited scope for success. At this point in time there is no basis on which to assess the likely feasibility/likelihood of achieving the stated modal shift across the 20 year period. Rail is a feasible travel alternative for staff and passengers in the medium term, however this would rely on regular shuttle bus services being provided to link the airport to the station.	Details of the mode share targets and the justification for these are provided within the Surface Access Strategy appended to this TA for the airport that has been provided to support the DCO application. The figures have been revised based on details from aviation and airport experts consulting on this DCO application.
There is a significant amount of staff trips associated with the aviation uses, which in turn could generate a material impact on the road network. It is essential that this element of the assessment is undertaken using robust estimates. On initial inspection, it is unrealistic to assume that all staff movements would occur outside of the network peak hours and that staff will all follow the same shift patterns.it would be very difficult to monitor or ensure future compliance with such a regime and in turn this	A revised traffic generation methodology has been prepared which set out in detail the types of jobs related to the aviation uses, and breaks these down by shift patters, shift times, staff numbers and likely modal split targets. All this information has been tested to provide a robust estimate of the how staff trips would actually impact the local highway network and the times these would impact the network. This robust assessment now takes into account some staff trips occurring in the peak hour based on a better understanding of 24 hour shift pattern working (unlikely to affect peak hour) and traditional working day work patterns (likely to affect traditional highways network peak hours).

KCC Comments and Considerations	How this has been addressed
could potentially underestimate the peak hour impact of staff movements.	
The mix of uses on the Northern Grass is assumed to be 10% office, 40% light industrial and 50% warehousing. As these uses have significantly different trip profiles, it is important that they are defined in the final TA and application documentation, so that they can be conditioned as such. If unconditional consent is sought for any combination of potential uses, then the worst case scenario in terms of peak hour traffic generation would need to be assessed, in this case B1 office. The location filters appear to be generally acceptable, however it is noted that suburban areas are included in the business park analysis, which should be removed as the site is not in a suburban location. Population filters have not been applied, which could have a bearing on final trip rate outputs. I suggest that TRICS outputs are recalculated considering local demographics and as such the trips rates shown in Table 3.5 are not agreed at this stage.	The figures used for the split of land uses on the Northern Grass Area has changed significantly and is now follows; • 25% B1 (Office); and • 75% B8 (Warehousing). The zonal masterplan for the Northern Grass area has defined this split and the total GFA of the development in this area. Compared to the previous estimates for the land use on the Northern Grass Area this is a more robust traffic scenario with B1 office development having been increased from 8% to 25%. The TRICS rates have not been changed in line with the comment due to the lack of comparable sites within the defined restrictions suggested which would lead to a less robust assessment than that which has been calculated.
The [construction] Traffic figures are noted, however the final TA should outline how the impact of these movements will be managed. This could be dealt with through an associated Construction Management Plan.	A CTMP (appended to this TA) is provided as part of the final DCO submission which will set out the mitigation required to facilitate the construction of the site.
The peak traffic flow scenario for both development and network traffic need to be examined, with the scenario for both development and network traffic need to be examined, with the scenario generating the highest overall flows through a given junction being assessed/ modelled in more detail. The figures presented in table 3.8 and 3.9 will need to be revised to encompass the comments outlined within this correspondence.	This has been undertaken in this TA. In the ES Chapter, the network peaks and 24 hour period have been used as basis for assessment as is standard in environmental assessments of traffic impact. However, within the TA all junctions and links that form part of the study area will be assessed for the AM and PM peaks as well as the development peak which falls between 13:00 – 14:00.
The scope of junction to be assessed within the TA should be based on the local traffic conditions. It is noted that a blanket 50 vehicle per hour threshold for further assessment is proposed. Junctions that are severely congested could be disproportionally impacted by traffic increases, lower than 50 vehicles per hour. I recommend that existing flows on each link are examined and any links which are subject to a 5% increase or greater are examined/assessed in more detail.	Of the junctions selected to form the scope of assessment, these will be assessed to understand capacity impacts should there be any increase above 1 vehicle to complete a robust set of assessments.

3.2.6 Consultation with KCC continued through late 2017 and a further meeting was held on the 4th of December to update KCC on the changes made since September, go through the changes to the traffic generation methodology, and set out initial thoughts on the improvements schemes that might be required to support the airport development. Following this meeting it was agreed that a detailed scoping note related to the revised traffic generation methodology would be provided to KCC for comment.

3.2.7 On 24th November 2017 a skype call was arranged to update KCC further and find out the latest states of the strategic highways model, which KCC informed was still unlikely to be available until after the revised DCO submission deadline of March 2018.

3.2.8 In January 2018 a second Section 42 consultation period was undertaken and formal comments were received from KCC. **Table 3.2** sets out the key issues raised and how these are addressed within the TA. The response is included in **Appendix A**.

Table 3.2 KCC – January 2018 Section 42 Consultation Response

KCC Comments and Considerations	How this has been addressed
At this point in time, the freight cargo tonnage figures used to inform these traffic generation calculations are taken at face value, as they have simply been provided by the client team. As these figures are used to form the basis of traffic impact estimates, it is important that there is a restriction imposed on the level of freight that the airport would be permitted to handle. In the absence of such a restriction, it is essential that the maximum freight handling capacity is robustly identified and justified, as this could have a material bearing on subsequent peak hour freight traffic figures.	The figures used to build the first principles traffic and transport model are based on estimated provided by the aviation experts imbedded within the project team and based on experience at other airports. In terms of restrictions, no restrictions proposed as part of the traffic and transportation traffic generation assessments. These have been based on the aviation expert's predictions of freight tonnages.
A 30% reduction in cargo tonnage has been applied to allow for efficient HGV movements (i.e. those that enter and leave the site full). However, it is unclear where this figure has been derived from. It is essential that any reductions are fully justified using an appropriate evidence base. There is an assumption that the cargo movements will take place evenly across a 24-hour day, however in reality, there are likely to be peaks and troughs throughout the day. Whilst it is understandable that for ease of assessment, a simplistic view has been taken, for a robust assessment to be undertaken, it would be necessary to look at a worst-case scenario. A worst-case scenario would be the maximum amount of freight that could be theoretically handled at the airport within any given hour applied to the network peak, for assessment purposes.	The figures used to build the first principles traffic and transport mode including the 30% reduction in cargo tonnage for efficient HGV movements are based on estimated provided by the aviation experts imbedded within the project team and based on experience at other airports. The assumption that cargo movements take place evenly across the hour is based on how these sites traditionally operate. It is acknowledged that a worst case of the maximum HGVs leaving in an hour could have been undertaken, but is was felt this considering the low numbers of freight HGVs entering and exiting the network in an hour (in year 20, 5 arrivals and 5 departures per hour) it would not be a material impact.
A similar methodology should also be applied to proposed passenger flights. Whilst an attempt to estimate likely passenger numbers has been provided, a number of assumptions have been made that could have an impact on subsequent traffic generation. For a robust assessment to be undertaken, a realistic maximum passenger throughput should be estimated, and necessary restrictions placed on operations. Paragraph 3.1.22 (pg. 19) refers to aviation experts providing an estimate of passenger travel mode share, however no further information to cross reference these forecasts has been provided.	The development proposals and traffic generation section of this TA sets out the methodology used to develop the passenger traffic generation. The assumptions used have been provided from aviation experts on the wider project team for the assumptions on mode share, staff shifts and passenger occupancy as well as information extracted from the civil Aviation Authority data.
The methodology of using TRICS to inform Northern Grass area trip rates is largely accepted, however as outlined within the recent Transport Assessment (TA) scoping exercise, this is based on the understanding that land uses in this area of the site are restricted to the proportions as outlined within the assessment document.	The land use mix and site area GFA have been fixed in the masterplan and this matches what has been assessed in the TA. If the DCO is granted this is the mix of land uses and GFA that could be constructed.
Fuel tanker trips are noted, however it is necessary to provide further justification in relation to the number of deliveries required to service the site in a worst-case scenario. For example, the capacity of each tanker and how much fuel is required for each plane (as identified earlier within the report based on tank capacity). This should then correlate with the number of planes	Further details of the development of fuel farm tanker trips are set out in this TA. It is based capacity of the tankers that are to be used, the fuel required per year which has then been broken down to understanding the fuel requirements per day. It should also be noted that tankers are not required on a one tanker vs one aircraft ratio, tankers are required as and when just keep the reserves topped up to a certain level at the fuel farm.

KCC Comments and Considerations	How this has been addressed
estimated, with an allowance made for operational fuel requirements for on-site vehicles and equipment.	
As outlined in the TA scoping exercise, it is unrealistic to assume that all staff movements will occur outside of the network peak hours and that staff will all follow the same shift patterns. It would be very difficult to monitor or ensure future compliance with such a regime and in turn, this could potentially underestimate the actual peak hour impact of staff movements.	Differing staff members have differing shift patterns, arrival times and departure times depending on the job that is being undertaken in the traffic generation methodology set out in this TA. It is a key issue to note that airports are not traditional 9-5 business working hours and as such a majority of staff trips do not have an impact on the peak hours. 24 hour shift patterns and the differing requirements of an airport and cargo handling facility across the day mean that staff have a wide range of travel times. There are however trips that effect the network peak associated with the airport for the operational and administration jobs proposed at the site.
The document states that a gravity model approach has been used to identify the origins and destinations and subsequent routes, and this has been informed by information provided by the wider project team. Further information to substantiate the assumptions made on origins and destinations would be helpful to support the final TA document. It is noted that a gravity model approach has also been used to derive origin and destination information for the Northern Grass uses. It would be more appropriate to use census data to provide an improved local perspective on likely trip distribution, and this could be derived by interrogating the data for local output areas that encompass other key employment areas within the Thanet District to provide a more robust basis for assessment.	The gravity models that have been prepared are based on the journey to work census data from 2011 for Thanet and where required further afield. Details of this methodology are set out in this TA in section 6.
The provision for a new highway link between A256 Haine Road and the B2050 Manston Road, as outlined in the emerging Thanet Transport Strategy, is absent from the proposed masterplan. The indicative layout also appears to compromise the delivery of an appropriate form of link road in the future. Failure to comply with this emerging infrastructure requirement could prejudice the delivery of identified highway solutions to manage the impact of future housing growth requirements over the emerging Local Plan period (subject to further highway modelling outputs).	This link in the emerging local Thanet Transport Strategy has been considered as part of the sensitivity test set out in this TA as requested by KCC. However as set out in section 2 issues with the emerging Local Plan mean that this sensitivity test is provided to address KCC consultation responses rather than an acknowledgement of the status of the emerging/draft plans.
In addition, there are initial concerns in relation to the absence of provision for a new highway route to and from Westwood (including appropriate walking and cycling links). The proposed development has the potential to encourage inappropriate use of rural roads within the proximity of the site by both vehicles and non-motorised users. It is evident that limited pedestrian facilities or improvements are proposed outside of the immediate site confines, which further limits the accessibility of the site by non-motorised transport.	This link in the emerging local Thanet Transport Strategy has been considered as part of the sensitivity test set out in this TA as requested by KCC. However as set out in section 2 issues with the emerging Local Plan mean that this sensitivity test is provided to address KCC consultation responses rather than an acknowledgement of the status of the emerging/draft plans.
The previously indicated roundabout solution at the Spitfire Way has been replaced by a signalised junction arrangement. An initial appraisal would suggest that this is not an optimal form of junction and is potentially out of keeping with the nature of the approach roads to the site. There are initial concerns over the approach geometry to the junction and future capacity for increased traffic flow in line with planned growth. In the absence of strategic highway modelling and detailed junction appraisal, it would not be	The detailed traffic and transport modelling of this junction sets out the need for a junction improvement and that a signalisation scheme is a suitable solution. It should be noted as a result of the development proposals the “nature of the roads around the northern airport boundary will change as a new roundabout, and three sets of signalised junctions are proposed along the access from the A299 as well as the widening of Spitfire Way and Manston Road. The detailed geometric designs (to relevant DRMB standards) and associated transport models are included within this TA. If further discussion on the final layout is required, then this could be included in

KCC Comments and Considerations	How this has been addressed
possible to confirm if this junction would be supported as an appropriate solution.	post submission discussions with KCC as part of agreeing a statement of common ground. It is hoped further discussion will allow KCC and the project team to come to a junction layout that is supported.
There is a proposed priority junction on B2050 Manston Road between the two new signalised junctions, which would appear to be intended to serve the cargo facilities. It is strongly recommended that access at this junction is restricted to emergency access to manage traffic flow at the Spitfire Junction and traffic flow on the B2050. The proposed junction onto Manston Road (to the west of the Northern Grass) could potentially encourage HGV rat running along this section of highway.	There is no proposal for a priority junction onto Manston Road from the south between Spitfire Way and the Airport Access. This was something shown on a previous masterplan which has led to confusion that has now been amended. It's not clear what vehicles on what routes could potentially rat run though the northern grass areas as there are very few HGVs using Manston Road to the North.
A full Stage 1 Road Safety Audit and associated designer's response will be required for all proposed highway changes. In view of the above, at this moment in time it would not be possible to provide a definitive steer on the acceptability of the proposed highway alterations.	This has not been included at this stage of the DCO submission but as with all highways improvements will be provided at the appropriate time.
It is important to reiterate that due to its existing constrained geometry, the B2190 Spitfire Way (between Columbus Avenue and the proposed site access) is not suited to accommodate a significant increase in HGV movements. This section of highway should be improved to reflect the likely change in HGV demand from expanded aviation activity and associated development on the Northern Grass (both in terms of geometry and construction specification where appropriate). No improvements to the B2190 are indicated on the Masterplan document although Section 14.2.12 of the PEIR (pg. 14-2) refers to potential improvements on Spitfire Way/Manston Road, but with limited clarity on the extent of such proposals. Failure to appropriately improve these important highway links could have an impact on the ability of the local road network to serve the proposed development and could prejudice a future aviation operation.	The final masterplan proposals are to widen Spitfire Way from Columbus Avenue to Spitfire Way and also Manston Road from Spitfire Way to the Airport Access. This route is identified as the key HGV route to the site and as such it is agreed that the route needs to be widened to a 7.3m wide carriageway for the entirety of the length. The details of these improvements schemes are set out in detail in this TA.
The increase in on-site parking provision is noted. The ability of the main site access junction onto the B2050 Manston Road to accommodate the potential increase in demand will need to be examined within the detailed TA.	Detailed traffic assessments of the site access junction are included within this TA.
The ability for traffic (particularly HGVs and abnormal loads) to enter and leave the site in a forward gear should be demonstrated in the final submission. Any existing informal access points onto the public highway that are planned to remain in use will also need to be clarified along with their anticipated uses.	Details on the proposed accesses (formal) and any informal accesses are set out within the DCO submission documentation. For clarity however, the TA sets out the issues with the operational accesses into and out of the proposed site. All of the accesses have been designed as formal DRMB compliant access junctions which would not present any issues for vehicles to leave in a forward gear. Informal accesses primarily refer to crash gates which are simply not used unless there is an airport emergency. This is the only time any informal access will be allowed onto the site.

3.3 Highways England Consultation

3.3.1 A meeting was held with HE on the 28th of September 2017. The details of the Proposed Development were set out and the potential impacts of the site could be on the wider strategic highways network (M20, A20, and A2) were discussed. Initial estimates of traffic on these links were provided to HE and Amec Foster Wheeler gave the opinion that these were significant.

3.3.2 It was however agreed that the TA would include an assessment of the wider strategic highway network including the entirety of the A2/M2 corridor, the M20/A20 around Dover and Folkstone and some further sections of the M20 and M25 (north and south of the A2). This work has been undertaken and is included within section 8 of this TA.

3.4 Network Rail Consultation

3.4.1 A meeting was held on the 14th of September 2017 with Network Rail to update them on the proposals for Manston Airport and address any issues Network Rail had with the proposals. Three key issues were raised and discussed (which were included in the Network Rail consultation response). The details of this consultation response are included in **Appendix A.**

Cliffs End 9 level crossing

3.4.2 Network Rail wanted some clarification as to any potential impacts on the Cliffs End level crossing (south of Cliffs End on Foads Lane). Network Rail were informed by Amec Foster Wheeler that, based on the traffic distribution modelling work undertaken, there would be no impact on this road or level crossing.

Minster and Ramsgate stations

3.4.3 Network Rail were informed by Amec Foster Wheeler that the focus of shuttle bus services to and from the site would be Ramsgate Station and no shuttle services would be promoted or provided to Minster Station. The potential impact on Ramsgate Station is set out in the Surface Access Strategy (**Appendix O**), although no improvements to the station are as yet proposed. It is likely there will be ongoing discussion with Network Rail with regards to Ramsgate Station post DCO submission with the anticipated agreements being included in a Statement of Common Ground (SoCG) with Network Rail.

Thanet Park Way station:

3.4.4 Whilst Thanet Park Way Station is part of KCC's transport strategy, there is no committed funding for its delivery. It has therefore not been included within the Surface Access Strategy, although there is scope to look at this further post DCO submission as part of the SoCG with KCC.

4. Existing Conditions

4.1 Introduction

4.1.1 This section provides a description of the existing site operation and location; a review of the existing walking, cycling and public transport facilities in the vicinity of the site and access to amenities; a description of the existing highway network and a review of highway safety.

4.2 Site Location

4.2.1 The application site is on the existing site of Manston Airport, west of Manston and north east of Minster. Margate lies approximately 5km to the north of the site, Ramsgate approximately 4km to the east, and Sandwich Bay is located approximately 4-5km to the south east. The northern part of the site is bisected by the B2050 (Manston Road), and the site is bounded by the A299 dual carriageway to the south and the B2190 (Spitfire Way) to the west. The Manston Airport is located on the south side of the B2050 and the Northern Grass Area is located to the north. The location of the site is shown on **Figure 4.1**.

4.3 Existing Highway Network

Local highway network surrounding the site

4.3.1 The main airport site is bound to the north by the B2050 Manston Road and B2190 Spitfire Way, to the west by Minster Road and to the south by the A299 and Canterbury Road West. The Northern Grass Area is bound to the south by the B2050 Manston Road, the east by Manston Court Road and west by Manston Road. **Figure 4.2** provides a plan indicating the proposed development site and the local road network around it.

4.3.2 The following section sets out the details of these key highways links followed by details of some of the key location junctions.

Key local highways links

B2050 Manston Road

4.3.3 The B2050 Manston Road is a single carriageway road that runs between Birchington-on-Sea (to the north west of the site) and Ramsgate (to the east of the site). This road forms the northern boundary to the site for a short distance and is a key link for access to various elements of the Proposed Development. Access to the Passenger Terminal, and to the Northern Grass Area will be from the B2050 Manston Road. The road intersects with Spitfire Way to the west and the A256 (Haine Road) to the east. The village of Manston is situated some 800m east of the site on Manston Road and is traffic calmed to 30mph. In the vicinity of the site the road is not street lit and subject to a 40mph speed limit.

Spitfire Way

4.3.4 Spitfire Way is a single carriageway road (with a small section of duel carriageway between Minster Road and Columbus Avenue) that runs between the B2190 (Minster Road) and the B2050 Manston Road. This road forms the northern boundary to the site for a short distance and is a key link for access to the various elements of the Proposed Development. Access to the Cargo Facility will be from Spitfire Way. This section of Spitfire Way is not street lit and subject to a 50mph speed limit. The road has some street lights around the junctions of Minster Road and Columbus Avenue.

B2190 Minster Road

4.3.5 The B2190 (Minster Road) is a short section of road which runs between the A299 and Spitfire Way and forms the western boundary of the site. The road is initially dual carriageway and then single carriageway as it becomes Spitfire Way. This forms part of the main link into the development site from the A299. The road is subject to a 50mph speed limit and is provided with street lights. Minster Road also continues north of the junction with Spitfire Way as a small rural road through the village of Acol.

A299

4.3.6 The A299 is a key strategic road which runs between the M2/A2/A299 junction near Faversham to the access to the Port of Ramsgate. The road is a dual carriageway and a high standard carriageway. The A299 forms the southern boundary to the site for a short distance. The A299 is a key link for the development as a large percentage of arrival and departure trips will use this road to local and strategic destinations. With the exception of the junctions the road is not street lit and subject to national speed limit (70mph).

Manston Road

4.3.7 Manston Road runs between the junction with Spitfire Way/B2050 (Manston Road) to Coffin Corner, South Margate. This is single carriageway road which is width restricted in some locations. This road forms the western boundary to the site for a short distance and is a key link as it provides a direct access into the Northern Grass Area.

Manston Court Road

4.3.8 Manston Court Road runs between Manston Road (B2050) and Star Lane. This is single carriageway road which is width restricted in some locations. This road provides access from the B2050 Manston Road corridor running through the site area to Margate.

Canterbury Road West

4.3.9 Canterbury Road West runs between the A299 and the A256 Lord of the Manor Roundabout. The short road link has two characteristics. The first section runs from the A299 to the fuel farm access and is the southern boundary to the Airport site. East of the fuel farm access the road runs through a village (Cliffs End) setting. It is not proposed traffic would use the eastern element of the road and only tankers and some small private vehicles would access the fuel farm from the west (A299). Through the village of Cliffs End Canterbury Road West is subject to a 30mph speed limit and is street lit. Either side of this the road is subject to national speed limit (60mph).

Key local highways junctions

B2050 Manston Road/Spitfire Way/Manston Road

4.3.10 The junction is currently a four-arm staggered priority junction with a right-left stagger, located near to the airport site but also near to residential dwellings. There is a footway running along the north side of Spitfire Way south and a further one on the southern side of the B2050.

B2050 Manston Road/Manston Court Road

4.3.11 The junction is currently a standard priority junction. It is predominantly surrounded by green space associated with airport and agricultural land, situated just north of the airport site, also with some housing. There are no pedestrian/cyclist facilities on or close to the junction.

Spitfire Way/Columbus Avenue

4.3.12 The junction is currently a three-arm standard roundabout. The roundabout is located west of the runway. There is a shared footway/cycleway that runs from the north side of the western B2190 arm to the northern Columbus Avenue arm. There is a further footway/cycleway connecting the Columbus Avenue arm to the eastern B2190 Spitfire way. The roundabout arms mostly consist of grassed verges however the B2190 east arm runs parallel to the airport perimeter fence.

Spitfire Way/B2190 Minster Road

4.3.13 The junction is currently a three-arm roundabout junction, predominantly surrounded by agricultural land. A shared cycleway/footway runs along the west side of the carriageway on the B2190 Minster Road south arm and along the B2190 east arm on the north side of the carriageway. An uncontrolled crossing is provided on the Minster Road north arm.

B2190 Minster Road/A299/Tuthill Street

4.3.14 The junction is currently a four-arm roundabout junction. It is surrounded by agricultural land as well as some housing and service facilities. A footway runs along the north side of the A299 Hengist Way on the east and west arms. An uncontrolled pedestrian crossing is provided across the B2190 Minster on the north arm with a central refuge. A shared cycleway/footway runs along the west side of the carriageway on the north and south arms. A pedestrian/cyclist signal controlled crossing is provided across the A229 Hengist Way west arm.

A299 Canterbury Road West

4.3.15 This junction is currently a three-arm roundabout junction. It is predominantly surrounded by agricultural land and road verge with the Manston Airport perimeter boundary around 15m north of the roundabout. There are no footways or crossings provided. Between the A299 Hengist Way southern arm and the A299 Hengist Way western arm there is a gated side road leading to field access.

Existing site access from the local highway network

4.3.16 The proposed development site is currently accessed via a number of formal and informal access points, some of which are proposed to be retained and enhanced and some closed. The accesses to the site currently are follows;

Formal access to the main airport site

- Passenger Terminal Access – This access is a formal priority junction with the B2050 which provides access to the formal passenger terminal and carpark. The access to the site is the minor arm and traffic entering the junction is controlled by a stop line;
- Polar Helicopter Access –The access is a formal priority junction with the B2190 (Spitfire Way) where the access to the site is the minor arm. Traffic entering the junction on the minor arm is controlled into the junction by a stop line;
- Emergency fire and recuse access - The access is a formal priority junction with the B2190 (Spitfire Way) where the access to the site is the minor arm. Traffic entering the junction from the minor arm is controlled by a stop line;
- Access to existing aircraft hangars - The access is a formal priority junction with the B2190 (Spitfire Way) where the access to the site is the minor arm. Traffic entering the junction from the minor arm is controlled by a give way line.
- Fuel farm access – This access is a formalised access bellmouth which is served from Canterbury Road West. Access to the fuel farm site is via an automatic gate.

4.3.17 There are also many less formal access gates for emergency's around the site which are not provided with any hard standing or formal junctions, these are often referred to as "Crash Gates".

Access to the northern grass area

- Access to former taxiway – This access forms a formal access bellmouth with Manston Road. Access into the northern grass site is via a gated access road.
- Access to former aircraft apron- This access forms a formal access bellmouth with Manston Road. Access into the northern grass site is via a gated access road.
- Northern access to the boundary road – This access forms a formal access bellmouth with Manston Road. Access into the northern grass area is via a gated access road.
- Southern access to the boundary road – This access is a formal priority junction with the B2050 Manston Road where the access is the minor arm. Traffic entering the junction from the minor arm is controlled by a stop line.
- Southern Access to the taxiway – This access is a formal priority junction with the B2050 Manston Road where the access is the minor arm. Traffic entering the junction from the minor arm is controlled by a stop line.

4.3.18 **Figure 4.3** shows the location of the existing accesses.

Wider highway network

4.3.19 Following consultation with KCC, a wider study area was identified and is described in this section and shown in **Figure 4.4.**

Wider highway network links

A256

4.3.20 The A256 runs between the A2 near Dover to the A255 in Margate. The road forms part of a key route for traffic routing to and from the site from Ramsgate, Dover, Sandwich, Margate and Broadstairs as well as a key route for HGVs for Dover. The road varies in standard from dual carriageway sections (south towards Dover) to sections in residential areas in Margate.

A254

4.3.21 The A254 runs between Margate and Ramsgate town centres and has a short section of dual carriageway but is predominantly single carriageway. This road connects residential areas between Margate and Ramsgate such as Haine and Newington.

A255

4.3.22 The A255 runs between Margate town centre and Broadstairs and is single carriageway. This road runs between Broadstairs and south Margate.

A28 Canterbury Road

4.3.23 The A28 runs between Canterbury and Margate and is a key link in the area for east/west traffic. The road has sections of dual carriageway but is predominantly single carriageway.

M2

4.3.24 The M2 is part of the HE strategic road network and runs from the junction of the A299/A2 in the east to where it merges into the A2 near Strood. The road is a motorway classification road with various lane configurations between two and four running lanes in both directions. The motorway

has 7 junctions and is 41.4km long and is one of the major routes to and from London and the surrounding region as well as any other national destinations.

A2

4.3.25 The A2 is also part of the HE strategic road network and runs between London and Dover. It has various lane configurations between two and three running lanes in both directions. It is one of the major routes to and from London and the surrounding region as well as any other national destinations.

A20

4.3.26 The A20 between Folkstone and Dover is part of the HE strategic road network and is a dual carriageway.

B2050 Park Lane

4.3.27 The B2050 Park Lane is a single carriageway road which runs between the junction of Acol Hill and Manston Road and the A28 in Birchington-on-Sea. This road provides access from the site towards Birchington on Sea and areas in the A28 corridor.

Shottendane Road

4.3.28 Shottendane Road is a single carriageway which routes southeast/northwest between the B2050 Manston Road in the south east to a priority junction with Manston Road in the northwest. This road will accommodate some trips from the development routing to and from the Westgate on Sea.

B2014 Newington Road

4.3.29 The B2014 Newington Road is a single carriageway road which runs between the A255 in Ramsgate to a junction with the A254 in Northwood. The road routes through urban areas and is subject to a 30-mph speed limit.

Vincent Road

4.3.30 Vincent Road is a single carriageway road that runs between Manston Road to the west and Manston Court Road to the east, providing access easterly/westerly between these two roads. This road is subject to a 60mph speed limit.

Hartsdown Road

4.3.31 Hartsdown Road is a single carriageway road that runs in a north-westerly direction between the Manston Road, Hartsdown Road/Nash Road/Tivoli Road cross roads up to the Hartsdown Road/Canterbury Road priority junction. This road is subject to a 30mph speed limit.

George V Avenue

4.3.32 George V Avenue is a single carriageway road which runs between the Hartsdown Road priority junction to the east and the Canterbury Road priority junction to the west. This road is subject to a 30mph speed limit.

B2052 Tivoli Road

4.3.33 The B2052 Tivoli Road is a one-way road that runs north from the Hartsdown Road, Manston Road and Nash Roads crossroads until it meets the B2052 Beatrice Road and Tivoli Road priority junction. As it is a one-way only street, vehicles may only enter at the crossroad entrance and not exit. When reaching the Beatrice Road priority junction, cars may turn right or continue to travel

northerly up Tivoli Road where it becomes a single carriageway. This road is subject to a 30mph speed limit.

B2052 Beatrice Road

4.3.34 The B2052 Beatrice Road is a one-way road that runs east from the Tivoli Road priority junction where cars may only enter in an easterly direction towards the Ramsgate Road, B2052 College Road east, A254 Ramsgate Road and B2052 College Road west cross roads where cars may only exit. This road is subject to a 30mph speed limit.

B2052 College Road

4.3.35 The B2052 College Road runs as a one-way system between the A254 Ramsgate Road north, B2052 College Road south, A254 Ramsgate Road south and B2052 College Road south east Cross-roads in a south-easterly direction until it meets the Hartsdown Road, B2052 Manston Road north, B2052 College Road, Nash Road and Manston Road south cross roads. This road is subject to a 30mph speed limit.

Star Lane Road

4.3.36 Star Lane Road is a single carriageway road that routes in a south-western direction from a roundabout meeting the A254, Poorhole Lane and Margate Road and ends at a priority junction with Manston Court Road. This road is subject to a 30mph speed limit.

Star Lane Link Road

4.3.37 Star Lane Link Road is a short single carriageway road that begins at a priority junction with Star Lane and travels in a southern direction until it meets the A256 north east, Westwood Cross shopping centre access and A256 south west roundabout. This road is subject to a 30mph speed limit.

Alland Grange Lane

4.3.38 Alland Grange Lane is a single carriageway that routes in a northern direction from a priority junction at Spitfire way up towards the B2050 Manston Road and Woodchurch Road cross-roads. This road is situated closely north of the western side of the airport site. This road is subject to a 60mph speed limit.

Columbus Avenue

4.3.39 Columbus Avenue is a dual carriageway that routes in a northern direction from the B2190 west and B2190 Spitfire way roundabout to a roundabout further north that leads to The Loop road and power generation centre access. Columbus Avenue is situated close to the airport site in a north-west direction. This road is subject 40mph speed limit.

A253 Canterbury Road

4.3.40 A253 Canterbury Road is a single carriageway road that routes from Monkton Roundabout in an eastern direction until it meets the Gore Street priority junction, where it becomes the A253 Ramsgate Road. This road is subject to a 60mph speed limit.

Wider Highway Network Junctions

A256/Jutes Lane/Sandwich Road

4.3.41 This junction is a four-arm roundabout junction. It is surrounded by agricultural land, also with some nearby commercial enterprises. There is a pedestrian footway located along the western and

eastern side of the A256 south arm. There is also a signal controlled crossing south of the roundabout on the A256.

A256/A299/Cottington Link Road

4.3.42 This junction is a four-arm roundabout junction. It is centred amongst agricultural land and is flanked by grassed road verges. There are no pedestrian footways/cycleways or crossings provided. The roundabout has a dedicated bypass lane from the A299 north arm to the A299 east arm.

A299/Seamark Road/A253/Willetts Hill

4.3.43 This junction is a five-arm roundabout junction, surrounded by agricultural land. A footway runs along the entirety of the Northern A299 arm on the east and west sides with an uncontrolled crossing at the roundabout. Footways also run along the west side of Seamark Road until it reaches the Seamark Road/Barrow Man Road junction around 220m from the roundabout. There are also uncontrolled crossings at the roundabout exit of the A299 east and the A253 west.

A299/A28 Canterbury Road/Potten Street Road

4.3.44 The junction is a five-arm roundabout junction, surrounded by agricultural land. Footways are provided along the north and south side of the A28 Canterbury road east, of which the north side is a shared cycle/footway. Additionally, footways are provided on the north side of Potten St road with central reserves for crossing at the roundabout entrance. There are also footways along the northern and southern side of A28 Canterbury road to the west and on the western and eastern side of the A299 to the south, again both these roads provide an uncontrolled crossing opportunity at the roundabout entrance.

A28 Canterbury Road/Park Lane/Station Road

4.3.45 The junction is a three-arm mini roundabout junction with an adjacent priority junction. It is located in a built-up area predominantly surrounded by small commercial businesses and residential dwellings. There are footways along both sides of each roundabout arm, a signal controlled pedestrian crossing located on the A28 Canterbury Road and a zebra crossing on the Station Road. A small side road ‘the square’ runs between the two A28 Canterbury Road arms of the mini roundabout.

B2050 Manston Road/B2050 Park Lane/Acol Hill

4.3.46 The junction is a standard priority junction. This junction is surrounded by agricultural land with road verge. There are two small access roads both north and south of the junction which provide access to a residential property, located exactly opposite the junction. No footways/cycleways or crossings are provided.

B2050 Manston Road/Margate Hill/Shottendane Road

4.3.47 The junction is a four-arm staggered priority junction that has a right-left stagger. It is surrounded by agricultural land and road verge. There is residential property located between the north and east arms. This property can be accessed both from the northern Shottendane Road, as well as directly on from the front of Manston Road, although there are no footways/crossings to accommodate for this.

A28 Canterbury Road/George V Avenue

4.3.48 The junction is a standard priority junction. There are footways on both the north and south sides of the B2052 George V Avenue. There are also footways both sides of the A28 Canterbury Road. There is a ghost right turn located on Canterbury Road to keep traffic moving. A speed camera is located 60m west of Canterbury Road next to a central refuge forming an uncontrolled pedestrian

crossing. There is also an additional road connected to George V Avenue named 'Manyard Avenue' leading to further housing, a box junction is used to calm traffic at the George V Avenue/Canterbury junction.

Manston Road/Nash Road/B2052 College Road/B2052 Hartsdown Road/B2052 Tivoli Road

4.3.49 This junction is a signalised junction with four arms, in a primarily residential area. College Road has a dedicated right-turn lane just before the main junction into Tivoli Road, these two roads are both one-way systems. Both Hartsdown Road and Nash road have opposing ghost turn right areas in the middle of the junction allowing traffic to continue moving. A side road -Empire Terrace is located off Nash Road and these roads meet prior to the junction. Each of the arms have footways on both sides, with central reserves for crossing on Manston and Hartsdown Road. All arms that enter in to the junction have advanced stop lines for cyclists.

B2050 College Road/A254 Ramsgate Road/B2052 Beatrice Road

4.3.50 This junction is a signalised junction. It is located in a residential and commercial area. Beatrice Road has a dedicated right turn lane just before the main junction in to College Road, these two roads are one way only with traffic only being able to enter the junction on Beatrice Road and exit on College Road. Ramsgate Road north and south both have opposing ghost turn right designated areas allowing traffic to continue moving. A side road, Helena Avenue joins Beatrice Road around 30m prior to the junction. Each of the junction arms have footways on both sides with pelican crossings on all arms except Ramsgate Road south, the B2052 south west/west arm also has a central refuge between the two one-way roads.

A254 Ramsgate Road/A254 Margate Road/Star Lane/Poorhole Lane

4.3.51 This junction is a four-arm roundabout junction. It is located in a mixed land use area of residential, retail and agricultural land. Footways are located on all arms of the roundabout on both road sides, of which the north, east and south arms have shared cycle/footway designation. Uncontrolled pedestrian crossings with central refuges are located across the north and east roundabout arms.

Star Lane/Star Lane Link

4.3.52 The Junction is a standard priority junction. The junction is located within a residential estate situated close to the Westwood Cross shopping centre and retail park to the south and west and agricultural land to the north. There are shared pedestrian footways and cycleways located on both sides of the major and access roads with an incorporated signal controlled crossing around 30m north of the junction on Star Lane.

A256 (Haine Road)/New Cross Road

4.3.53 This junction is a three-arm standard roundabout junction. This junction is in a predominantly built up area to the north including a large shopping and leisure complex, whilst agricultural land exists in the south and residential areas are located to the east. There are footways/cycleways surrounding the entirety of the roundabout connecting all three arms. There are also uncontrolled crossings on the exit of all arms with central reserves.

A256 (Haine Road)/B2050 Manston Road

4.3.54 This junction comprises two smaller junctions; a three-arm roundabout to the south and a connecting priority junction to the north. These are located primarily in an agricultural area with a golf course to the north west and residential and commercial buildings between 200-400m around the eastern side. The junction is adjacent to a roundabout (Junction 20B) which has a right turn lane leading from it to turn right in to Manston Road. All traffic entering the junction from Manston Road must turn left only and traffic heading south on Haine Road turning left in to Manston Road must give way to traffic turning right from the northbound direction of Haine Road. All roads have grass verges with no footways or crossings.

4.3.55 The south junction is currently a three-arm roundabout junction. The northbound exit in to Haine Road is formed of three lanes of which the right-hand lane goes on to form part of Junction 20A where it turns right on to Manston Road to the east. The roads within this junction all have grass verges and hold no pedestrian footways.

Canterbury Road West/A256 -Junction 21A

4.3.56 This junction is a three-arm roundabout junction. The junction is located in a primarily agricultural area. A footway runs along the southern edge of the Canterbury Road West which links to an unmarked crossing with a central refuge across the A256 south east arm and then continues along the eastern edge of this road to the south east. All other road edges have a grass verge.

A299 Hengist Way/A299 Canterbury Road East/A256/Sandwich Road – junction 21B

4.3.57 This junction is a four-arm roundabout. It is located in an agricultural area with the A256 north west arm forming a bridge over a railway line running underneath. The A299 east arm, A299 south west arm and A256 arm are all signal controlled. The entrance to the junction from the A299 south arm comprises three lanes with a turn left only lane to the A256 exit. A footway runs along the eastern side of the A256 continuing along the north side of the A299 east arm. All other road edges have a grass verge.

B2052 Tivoli Road/B2052 Beatrice Road

4.3.58 This junction is a three-arm priority junction which forms part of a one-way system in a residential area. The B2052 routes through the junction from south to east as Tivoli Road on the south arm and Beatrice Road on the east. The B2052 is subject to one-way traffic flow. Tivoli Road is the north arm of the junction and is two-way traffic flow.

4.3.59 The B2050 Tivoli road south arm has one-way traffic routing northbound into the junction. The arm splits into two lanes; ahead to Tivoli Road and right turn into the B2052 Beatrice Road. Footways exist on both sides of the arm.

4.3.60 Tivoli Road north arm has two-way traffic flow, southbound traffic entering the junction is subject to a left turn only to the B2052 Beatrice Road to enter the one-way system. Footways exist on both sides of the arm.

4.3.61 The B2052 Beatrice Road is subject to one-way traffic which routes eastbound from the junction. Footways exist on both sides of the arm.

A28 Canterbury Road/ B2050 Park Lane

4.3.62 The junction is a three-arm priority junction. B2050 Park Lane is the minor arm and traffic entering the junction from this arm is controlled by a stop line. The junction is located in close proximity to the commercial centre of Birchington on sea and the A28 Canterbury Road east arm forms a junction into “The Square”. Residential properties and footways exist on all arms of the junction. Due to the close proximity of residential properties and a pedestrian footway the B2050 Park Lane arm requires a section of single track carriageway where southbound traffic exiting the junction has priority.

B2050 Manston Road/Airport Site Access

4.3.63 The junction is a three-arm standard priority junction. It currently acts as the main access to the airport and is surrounded by the airport grounds on all sides with land use generally comprised of car parking and green spaces. Footways are restricted to either side of the airport access arm which both end a few metres from the give way lines.

Star Lane Link/Nash Road

4.3.64 The junction is a four-arm standard roundabout junction. It is located in a mixed land use area comprising residential properties north and south and an industrial estate beyond this to the north. Additionally, there is a retail/leisure complex to the east and agricultural land to the west. Footways and cycleways are located on both sides of Star Lane east and west and on Nash Road south, however none are provided on the Nash Road northern arm. There are no crossings provided directly at the roundabout, however there are pedestrian/cyclist controlled crossings situated 30m from the junction on the Star Lane west arm and 140m on Nash Road south arm.

B2050 Manston Road/Superstore Access

4.3.65 This junction is a three-arm standard roundabout junction. It is located in a residential and commercial setting, with housing located north and a large superstore and petrol station located south. A shared cycle/footway runs between the Manston Road arms along the north side of the junction. A footway runs on the south side of both Manston Road arms which leads in to the superstore on both sides of the Tesco Access arm. There are uncontrolled crossings provided on the Tesco Access south arm and the Manston Road west arm. There is also a staggered signal controlled crossing on Manston Road east arm.

B2050 Manston Road/B2014 Newington Road

4.3.66 The junction is a three-arm roundabout junction. It is located in a largely residential area with a leisure centre and school located 50m north and small local business located 70m south and 85m west. All arms of the roundabout have footways on either road side and uncontrolled pedestrian crossings with central refuges 20m south and immediately west of the junction.

A255/B2014 Newington Road

4.3.67 The junction is a three-arm mini roundabout junction. It is in a mixed commercial and residential area. All arms have footways on both road sides and all arms have unmarked crossings with central refuges. The A255 south west arm has an additional unmarked crossing with central refuge around 30m from the junction.

A255/Wilfred Road/Grange Road

4.3.68 The junction is a crossroad priority junction with a right-left stagger. It's located in a mixed commercial and residential area. All arms have footways on both road sides. The Grange Road arm has an unmarked crossing 10m from the junction, the Wilfred Road arm has an unmarked crossing north of the junction and the A255 west arm has a signal controlled (pelican) crossing around 15m from the junction. The A255 has opposite central ghost right turns in both directions allowing traffic to keep moving.

4.4 Existing Pedestrian Infrastructure

4.4.1 The Chartered Institute of Highways and Transportation (CIHT) guidance document '***Providing for Journeys on Foot***' (2000) provides details on acceptable walking distances between homes and employment, services and facilities. For commuting, the guidelines state that a distance of up to 500m is considered to be desirable, whilst 1km and 2km are considered to be acceptable and preferred maximum walking distances respectively. These distances have been used when assessing pedestrian infrastructure in the vicinity of the site.

4.4.2 There are currently limited facilities for pedestrians on the highway network in the vicinity of the site. The B2050 which intersects the site has no pedestrian footway provision along the site frontage. Where the B2050 Manston Road bisects the village of Manston, some 800m east of the site access, a footway is provided on the northern side of the carriageway.

4.4.3 There are no pedestrian facilities along Spitfire Way with the exception of a short section of shared cycle/footway near the Manston Business Park and a footway between Bell Davies Drive and Spitfire Corner. There is a section of informal shared cycle/footway adjacent to the A299 Hengist Way which bounds the site to the south. This connects the Minster roundabout with the old Canterbury Road West highway with some amenity for pedestrians and cyclists wishing to travel along the southern boundary.

4.4.4 There are footways in the vicinity of the Minster roundabout and a toucan (pedestrian and cycle) crossing across the A299 Hengist Way linking the southwestern corner of the site to Minster and the Viking Coastal Trail to the south. However, provision is disjointed and overall pedestrian infrastructure is considered limited.

4.4.5 In addition to the provision of some footways adjacent to highways in the local area, there is a network of Public Rights of Way (PRoW) comprising public bridleways and public footpaths in the vicinity of the site. Most notably the TR8, 9 and 10 which pass through the proposed site and connects the east of the site with Ramsgate.

4.4.6 **Figure 4.5** shows the sections of footway noted above, the crossings and the PRoWs in the vicinity of the site along with walking isochrones for 2km from the centre of the site.

4.5 Existing Cycling Infrastructure

4.5.1 The Department for Transport (DfT) Local Transport Note 2/08 '***Cycling Infrastructure Design***' states that many utility cycle trips are less than three miles (4.8km), but for commuter journeys a distance of over five miles (8km) is not uncommon. Distances of up to 8km have been used to define the study area for cycle infrastructure.

4.5.2 No formal cycle facilities are available along Manston Road, however a local on-road route is located along Spratling Street, Haine Road and Stirling Way, providing access to Westwood Cross and Newington. Although there are no cycle facilities provided on Spitfire Way, a shared cycle/footway is provided from the Manston Business Park through to the Minster roundabout. At this junction a toucan crossing is provided to facilitate cycle connections south towards Minster village and west along the A299. A section of shared cycle/footway is provided between the Minster roundabout and the old highway of Canterbury Road West to the immediate south of the site.

4.5.3 The nearest National Cycle Network (NCN) route is Regional Route 15 (RR15), located 800m (crow fly distance) south of the site's southern boundary. RR 15 is also known as the Viking Trail and runs from St Nicholas At Wade and follows the coast north east through Ramsgate, Margate and Broadstairs and southeast to Whitfield and Dover. A plan illustrating the Sustrans cycle routes in the vicinity of the site and cycle isochrone representing an 8km journey from the centre of the site are illustrated in **Figure 4.6**. This plan illustrates that a number of villages and towns are accessible within 8km of the site including:

- Birchington on Sea;
- Kingsgate;
- Newington;
- Northdown;
- Westgate on Sea;
- Broadstairs;
- Manston;
- Ramsgate;
- Garlinge;
- Northwood;

- Cliffs End;
- Monkton;
- Margate;
- St Lawrence;
- Minster; and
- Acol.

4.6 Access to Bus Based Public Transport

4.6.1 Bus services 11, 38 and 38A currently operate along Spitfire Way and Manston Road along the site boundary. There are two pairs of bus stops provided along the site boundary, one set on Minster Road to the southwest of the site and one along Spitfire Way at Spitfire Corner. A further bus stop is provided outside of the former terminal building. Facilities at these bus stops are limited with flag poles and timetable information at some stops and a shelter provided on Spitfire Way.

4.6.2 Bus routes 9 and 9X operate services along Canterbury Road West to the southeast of the site and a pair of bus stops are provided along this road to the south of the eastern extents of the site. These stops feature bus stop flags and timetable information. The frequency of bus services in the vicinity of the site is summarised in **Table 4.1**.

Table 4.1 Bus Services, Frequencies and Routes in the Vicinity of the Site

Service	Destinations	Weekday Frequency Per Day Outbound	Weekday Frequency Per Day Inbound	First/Last Bus Outbound	First/Last Bud Inbound
9	Westwood Cross - Canterbury	11	14	06:18 / 16:42	08:45 / 18:15
11	Canterbury – Westwood Cross	5	5	10:51 /18:41	07:04 / 16:05
38	Ramsgate – Birchington on Sea	13	14	07:46 / 17:36	08:38 / 17:52
38A	Ramsgate - St Nicholas at Ware	4	2	07:11 / 16:13	07:55 / 07:55

4.6.3 The location of bus stops and bus routes are illustrated **in Figure 4.7.**

4.6.4 The 9 and 9X routes run between Canterbury and Westwood Cross. The services combine to provide approximately one service per hour in either direction during the day. The 9X service provides one AM peak hour service towards Canterbury however there are no AM peak hour services provided in the opposite direction towards Westwood Cross.

4.6.5 The 38 and 38A routes run between Ramsgate and Birchington and combine to provide a service with a headway of approximately one hour during the day. One AM peak hour service is provided from Birchington to Ramsgate via the site, however there are no AM peak hour services provided in the opposite direction.

4.6.6 Bus route 11 runs between Canterbury and Westwood Cross and operates with a headway of two to three hours throughout the day with no peak hour services.

Destinations Served by Bus

4.6.7 Bus route 11 serves Canterbury and Westwood Cross, bus route 38 serves Ramsgate railway station, Ramsgate and Broadstairs and bus route 9 serves Westwood and Canterbury via Ramsgate and Broadstairs. An assessment of the suitability of the destinations served by existing bus routes has been undertaken to understand whether the existing routes would be sufficient to serve the development. This assessment considers the destinations served by bus based public transport and the potential demand for travel to these destinations from the proposed development.

4.6.8 An interrogation of Census 2011 Journey to Work data has been undertaken to identify where employees of the site historically have travel from as set out in table 4.2. The site is located within the Thanet 014A lower-Level Super Output Area and analysis of the journey to work travel patterns for this lower layer indicates the following:

Table 4.2 Distribution of Census 2011 Journey to Work Trips

Origin	Distribution	Origin	Distribution	Origin	Distribution	Origin	Distribution
Thanet District	**70.1%**	**Dover District**	**11%**	**Canterbury District**	**8.4%**	**Other**	**10.1%**
Birchington-on-Sea	4.9%	Sandwich	1.1%	Canterbury	1.5%		
Westgate-on-Sea	5.3%	Deal	4.0%	Hernebay	3.1%		
Garlinge	2.5%	Dover	2.1%	Whitstable	1.6%		
Margate	7.1%	Other	16.5%	Other	2.2%		
Northdown	3.4%						
Kingsgate	3.3%						
Broadstairs	7.9%						
Ramsgate	12.9%						
St Lawrence	4.1%						
Newington	5.2%						
Northwood	2.6%						
Cliffsend	2.0%						
Minster	2.9%						
Other	5.9%						

4.6.9 The bus routes available within the vicinity of the site serve Ramsgate, Broadstairs, Westwood Cross (near Northwood), Birchington-on-Sea and Canterbury and may therefore offer an alternative to the private car for 45% of journeys to work subject to appropriate service timing enhancements and assuming that the potential employees originate in similar locations. The bus service coverage is therefore considered to be reasonable and suitable as a starting point to serve the development on the site subject to appropriate re-routing and increases in frequency. These points are explored in more detail as part of the public transport strategy outlined in Section 9.

Access to Rail Based Public Transport

4.6.10 The closest railway stations to the site are Ramsgate station located approximately 4km to the east and Minster station approximately 2km to the south of the boundary of the site. Ramsgate station is operated by Southeastern and benefits from access to both high speed and standard services. A wide range of destinations across Kent are accessible directly from Ramsgate including Dover, Folkestone, Canterbury, Ashford and the Medway Towns with onwards travel to London St Pancras, Charing Cross and Victoria.

4.6.11 Access to high speed services from Ramsgate are provided via two routes. The first provides an hourly service to London St Pancras via Canterbury West with a journey time of approximately 80 minutes. A further north Kent loop service travels via Whitstable, Sittingbourne and the Medway Towns and takes approximately 110 minutes to reach London. Combined these services provide trains to/from London on a 30-minute frequency throughout the day. Ramsgate Station is also served by an hourly standard service train to London Charing Cross via Canterbury West, and one train an hour to London Victoria via Sittingbourne and Bromley South. The station is served by bus route 11 and therefore connects the proposed development site to the station.

4.6.12 Minster Station is located approximately 2km south of the southwest corner of the site and is considered accessible by cycling and bus routes 38A and 11. Minster train station provides one train per hour to London Charing Cross (via Canterbury). However, the station does not offer access to high speed services making this station less attractive for access to rail based public transport.

4.6.13 Proposals for 'Thanet Parkway Station' to the south of the site are included in the draft Thanet District Transport Strategy. The scheme does not yet have funding.

4.6.14 Thanet Parkway station is part of a wider package of improvements on the Ramsgate to Ashford line that aims to reduce journey times to London from Ramsgate to around one hour. This two-phase project is broken down as follows:

- Phase 1 - Ashford to Canterbury West; and
- Phase 2 - Canterbury West to Ramsgate.

4.6.15 Reduced journey times to London will greatly enhance the accessibility of Thanet as a whole and provide access to London within approximately one hour.

Access to Amenities

4.6.16 Access to local amenities has been considered by reference to the number of services and facilities available within walking, cycling and driving distance of the site. As set out in Section 4.4, a maximum walking distance to commute, access an amenity is up to 2km. An acceptable cycling distance is considered to be up to 5km.

4.6.17 The site is located remote from large urban centres and therefore existing access to amenities on foot is limited. However, as identified, parts of Westwood, Ramsgate and Margate are accessible by bicycle.

4.6.18 **Figure 4.8** illustrates the amenities and facilities in the local area and **Table 4.3** summarises the distance between the former terminal building on the site and local facilities and demonstrates that whilst limited amenities are available within walking distance of the site a range of facilities are within cycling distance.

Table 4.3 Access to Facilities and Amenities

Facility	Distance	Walking Time	Cycling Time
Convenience Store	0.8km	10 mins	3 mins
Public House	0.8km	10 mins	3 mins
Supermarket	2.4km	30 mins	10 mins
Shopping Centre (Westwood Cross)	3.6km	45 mins	14 mins
Doctor	4.1km	51 mins	16 mins
Leisure Centre	4.4km	55 mins	18 mins
Dentist	4.8km	1 hour	19 mins
Hospital	5.0km	One hour two mins	20 mins

4.7 Accident Analysis

Wider Accident Assessment Overview

4.7.1 This section reviews the Personal Injury Accident (PIA) data that has been obtained from KCC for the most recent five-year period up to and including June 2016. A five-year period was selected to ensure a thorough understanding of the existing accident record was gained. The area covered in the PIA analysis is illustrated in **Figure 4.9** along with the accident locations and severity, whilst the full accident report is presented in **Appendix B**. The scope of the roads which have been included in this assessment is as was agreed with KCC.

4.7.2 The data provided by KCC includes incident location, severity, a brief description, time and date and weather conditions. Assumed causation has been included within the analysis based on the PIA description provided. It should be noted that the assumed causations are inferred only and do not represent the views of Police Officers that attended the scene of the accident.

4.7.3 The impact of casualties differs according to the severity of the injuries sustained. Three groups are usually differentiated as follows:

- Fatal: any death that occurs within 30 days from causes arising out of the accident;
- Serious: records casualties who require hospital treatment and have lasting injuries, but who do not die within the recording period for a fatality; and
- Slight: where casualties have injuries that do not require hospital treatment, or, if they do, the effects of the injuries quickly subside.

4.7.4 The PIA data indicates that there were 568 accidents recorded within the wider study area over the five-year period, of which 195 were on junctions/roads analysed below. Of those analysed, 169 were classified as ‘slight’ in severity, 18 were classified as ‘serious’ and four were classed as ‘fatal’. The accidents have been split into junctions and key links in order to present the data geographically. **Table 4.4** and **Table 4.5** summarise the number of accidents and the severity over the assessment period.

Table 4.4 Summary of Accident Record 2011-2016 (Junctions)

Junctions	Total	Fatal	Serious	Slight	Rate per annum
A299 / A28	9	1		8	**1.8**

Junctions	Total	Fatal	Serious	Slight	Rate per annum
A253 / A299 / Willetts Hill	10		1	9	**2**
A299 / B2190	6			6	**1.2**
B2050 / Manston Road / Spitfire Way	6			6	**1.2**
A299 / Canterbury Road W	8		1	7	**1.6**
A256 / A299	8		1	7	**1.6**
Cottington Link Road/Cottington Road	5			5	1
A256/Sandwich Road	5		1	4	1
Canterbury Road E/Sandwich Road/Hengist Way	6			6	**1.2**
Haine Road/Canterbury Road W	1			1	0.2
A256 / Manston Road	7			7	**1.4**
A256/Spratling Lane	3		1	2	0.6
New Haine Road/Marlowe Way	1			1	0.2
Haine Road/New Haine Road	4				0.8
Haine Road /Star Lane Link	2			2	0.4
A254 / B2052	3			3	0.6
B2050 / Acol Hill / Park Lane	4			4	0.8
B2190 / Minster Road	1		1		0.2
A256/Margate Road	4			4	0.8
B2050 / Shottendane Road / Margate Hill	7			7	**1.4**
B2050 / Manston Court Road	4		1	3	0.8
Spitfire Way/Minster Road	2		1	1	0.4
Minster Road/A299/Tothill Street	10	1		9	**2**
A299/Canterbury Road West	11		1	10	**2.2**
Spitfire Way/Columbus Avenue	4			4	0.8

4.7.5 Eleven of the twenty-four junctions exceeded the typical accident threshold of one accident per annum however the vast majority of these were recorded as slight incidents with only 2% being recorded as fatal and 5% being recorded as serious. Given the typical accident threshold exceedances, it is possible some of local junctions which will experience the highest changes in traffic flows have inherent accident problems and have been further assessed in the detailed junction assessment.

Table 4.5 Summary of Accident Record 2011-2016 (Links)

Links	Total	Fatal	Serious	Slight	Rate per annum
A299 between A253 and A28	0				0
A299 between B2190 and A253	3			3	0.6
A299 Hengist Way between Canterbury Road W and Minster Road	3		2	1	0.6
Canterbury Road W between Haine Road and the Cliffsend Roundabout	7		1	6	**1.4**
Hengist Way between Richborough Way and Sandwich Road	4	1		3	0.8
A256 between Sandwich Road and Cottington Road	2	1		1	0.4
Haine Road between Canterbury Road W and Manston Road	3			3	0.6
Haine Road between Spratling Road and Spratling Street	3			3	0.6
A256 between Star Lane and Link Margate Road	6		1	5	**1.2**
Manston Court Road between Manston Road and Star Lane	5			5	**1**
B2050 Manston Road between Spitfire Way and Shottendane Road	19		3	16	**3.8**
Manston Road between Manston Court Road and A256	8			8	**1.6**
Manston Road between Spitfire Way and Manston Court Road	2			2	0.4
Manston Road between Spitfire Way and Shottendane Road	4			4	0.8
Spitfire Way between Minster Road and Manston Road	15	1	2	12	**3**
Minster Road and The St between B2190 and Acol	6		1	5	**1.2**
B2190 between A299 and Minister Road	1		1		0.2

4.7.6 7 of the 17 road inks exceeded the typical accident threshold of one accident per annum however the vast majority of these were recorded as slight incidents with only 2% being recorded as fatal and 13% being recorded as serious.

4.7.7 Minster Road, Canterbury Road West and the A256 between Star Lane Link and Margate Road are discounted from further consideration as they are not proposed to experience a change in traffic as a result of the development.

4.7.8 It is notable that the Manston Road and Spitfire Way form three of the six links above the threshold and as such forms a basis for mitigation schemes on this link.

4.7.9 The final link is Manston Court Road which recorded 5 slight accidents over 5 years but over a link length of 1.6 miles with no recurring patterns. As such is considered that this would not trigger the need for any safety mitigation schemes.

Detailed Junction Safety Assessment

4.7.10 Based on the junction assessment in **Table 4.4**, it was considered appropriate to undertake detailed analysis of the key junctions that will experience the largest change in traffic flows which are:

- Spitfire Way/Columbus Avenue;
- Spitfire Way/Alland Grange Lane;
- Spitfire Way/ B2050 Manston Road;
- B5020 Manston Road/Manston Court Road;
- B5020 Manston Road/Haine Road Roundabout;
- Manston Road/Vincent Road;
- Manston Road/Fleet Road;
- Spitfire Way/Minster Road Roundabout;
- Minster Road/A299/Tothill Street Roundabout; and
- A299/Canterbury Road West Roundabout

4.7.11 **Figure 4.10** sets out the locations of the assessed junction.

Spitfire Way/Columbus Ave

4.7.12 Four accidents were recorded at this junction during the assessment timeframe and **Table 4.6** sets out the details of these accidents.

Table 4.6 Accidents Recorded at Spitfire Way/Columbus Avenue

Ref	Date	Time	Severity	Type	Category
314	18/06/2014	08:02	Slight	Motorbike	Wet Conditions
428	03/05/2015	10:50	Slight	Cycle	Wet Conditions
184	30/06/2013	19:20	Slight	Car/Car	Failure to give way at roundabout
119	26/04/2017	08:30	Slight	Cycle	Driver Error

4.7.13 Four accidents have been recorded at this location, two of which (including a vulnerable user - motorbike) involved the vehicles slipping/sliding out on to the roundabout during wet conditions at slow speeds, with another involving a cyclist falling off their bike possibly due to a small amount of oil on the road surface. As this is a relatively small number of accidents for this location and none of the causations appear to be attributed to the design of the junction, it is considered that there are no inherent accident problems as this location.

Spitfire Way/Alland Grange Lane

4.7.14 Five accidents were recorded at this junction during the assessment timeframe and **Table 4.7** sets out the details of these accidents.

Table 4.7 Accidents Recorded at Spitfire Way/Alland Grange Lane

Ref	Date	Time	Severity	Type	Category
187	20/05/2013	14:00	Serious	Car/Motorbike	Priority Movement
561	09/06/2016	11:57	Slight	Car/Car	Priority Movement
217	12/09/2013	07:40	Slight	Car/Motorbike	Priority Movement
8	16/07/2016	11:00	Slight	Car/Car	Priority Movement
133	14/06/2017	22:14	Slight	Car/Goods	Driver Error

4.7.15 Five accidents have occurred at this location of which four concern vehicles pulling out of Alland Grange lane on to Spitfire Way with remaining incident involving an attempted U-turn to avoid traffic. As four accidents occurred with the same causation it is possible there is an inherent accident issue from this location which is supported by 'high vegetation and the curve of the road' being an issue when turning as commented in incident 8. Possible design considerations could therefore include providing adequate visibility including regular vegetation trimming around these locations particularly as this route currently holds a national speed limit designation.

Spitfire Way/Manston Rd

4.7.16 Six accidents were recorded at this junction during the assessment timeframe and **Table 4.8** sets out the details of these accidents.

Table 4.8 Accidents Recorded at Spitfire Way/Manston Road

Ref	Date	Time	Severity	Type	Category
500	07/11/2015	20:45	Slight	Car/Car	Priority Movement
264	21/12/2013	07:35	Slight	Car/Car	Priority Movement
414	15/02/2015	20:50	Slight	Car	Priority Movement
43	22/10/2016	14:50	Slight	Car/Car	Priority Movement
112	30/03/2017	11:15	Serious	Motorbike/Car/Car	Priority Movement
344	02/09/2014	20:14	Slight	Motorbike	Visibility (Dark)

4.7.17 Five of the six accidents at this junction concern priority movements involving vehicles pulling out in to the path of oncoming vehicles. Given the high number of incidents resulting from the same causation is possible that despite being a driver error issue, there is an inherent accident issue with the junction. Notes from 264 comments on the driver believing they had right of way and issues with road signage, and given that visibility from this approach appears to be good, a review of markings and signage could help improve the safety of the junction. The way in the which junction is staggered also may contribute to the number of accidents as it is currently difficult for vehicles wishing to go straight on from the Spitfire Way/Manston Road direction and may therefore contribute to increased driver error. A review of the junction layout and moving the NE Manston Road arm to be more linear to Spitfire Way may resolve this.

Manston Road/Manston Court Rd

4.7.18 Five accidents were recorded at this junction during the assessment timeframe and **Table 4.9** sets out the details of these accidents.

Table 4.9 Accidents Recorded at Manston Road/Manston Court Road

Ref	Date	Time	Severity	Type	Category
474	04/09/2015	13:35	Slight	Car/Car	Priority Movement
532	31/01/2016	12:08	Slight	Bus/Car/Car	Priority Movement
355	22/09/2014	16:00	Slight	Car/Car	Priority Movement
537	27/02/2016	17:24	Serious	Car/Car	Priority Movement
18	12/08/2016	08:45	Slight	Car/Car	Priority Movement

4.7.19 All five accidents apply to priority movements from the T junction concerning both traffic turning right in to Manston Court Rd (474, 532) and pulling out of the junction to enter Manston Road (355, 537 & 18). Given the high number of accidents with the same causation it is possible that the junction has inherent problems and is not just due to driver error. Manston Road is moderately straight along this location and visibility appears to be good along the road. Visibility from Manston Court Rd when trying to turn on Manston Rd. is less adequate, particularly from the right where it is obstructed by fencing around 20m from the junction. Increased visibility from this location therefore could reduce the risk of collisions. Additionally, providing more signage and awareness of the upcoming junction to traffic may help alleviate this as although the set speed limit is 40mph the substantial straight length of this road section may encourage some drivers to travel at higher speeds.

Manston Road/Haine Road Roundabout

4.7.20 Six accidents were recorded at this junction during the assessment timeframe and **Table 4.10** sets out the details of these accidents.

Table 4.10 Accidents Recorded at Manston Road/Haine Road Roundabout

Ref	Date	Time	Severity	Type	Category
430	02/05/2015	13:15	Slight	Car/Cycle	Failure to give way at roundabout
101	31/07/2012	14:30	Slight	Car/Motorbike	Failure to give way at roundabout
496	29/10/2015	06:15	Slight	Car/Car	Priority Movement
82	20/04/2012	15:38	Slight	Car/Car	Priority Movement
505	10/11/2015	11:45	Slight	Car/Car	Priority Movement
547	04/05/2016	14:30	Slight	Car/Car	Priority Movement
37	14/10/2011	17:10	Slight	Car/Motorbike	Driver Error

4.7.21 The incidents in this location concern both the roundabout and the associated turning area which forms part of the junction in to Manston Road to the East. Two very similar incidents (430 + 101) concern both a pedal cycle and motorbike travelling from South to North and being hit whilst on the roundabout from cars failing to give way from Manston Road to the West. Incidents 496, 82 and 505 involve collisions from the junction in to Manston Road to the East of which 82 and 505 both concern vehicles failing to give way when turning right from the turning area and crossing the path of traffic heading South on Haine Road. Incident 547 involves a vehicle colliding with another where the two lanes north of the roundabout merge to one, the remaining incident involving a car

attempting a U-turn to avoid traffic and hitting a motorbike. As the incidents recorded at this junction are driver error based and do not occur in the same locations of the junction it is not considered there is any inherent accident problems with this junction.

Manston Road/Vincent Road

4.7.22 Three accidents were recorded at this junction during the assessment timeframe and **Table 4.11** sets out the details of these accidents.

Table 4.11 Accidents Recorded at Manston Road/Vincent Road

Ref	Date	Time	Severity	Type	Category
489	29/09/2015	10:10	Slight	Car/Car	Priority Movement
147	14/01/2013	08:25	Slight	Car/Car	Icy Conditions
98	15/07/2012	10:57	Slight	Car/Car	Priority Movement

4.7.23 Two of the incidents involve priority movements in which vehicles pulled out in to the path of another. The remaining incident involved a vehicle being unable to stop due to snowy conditions. As there is small number of incidents which occurred to driver error/weather conditions it is not considered this junction has any inherent accident issues.

Manston Road/Fleet Road

4.7.24 Two accidents were recorded at this junction during the assessment timeframe and **Table 4.12** sets out the details of these accidents.

Table 4.12 Accidents Recorded at Manston Road/Fleet Road

Ref	Date	Time	Severity	Type	Category
242	17/11/2013	16:30	Slight	Car/Car	Priority Movement
156	08/03/2013	08:53	Slight	Car/Car	Priority Movement

4.7.25 Both of these incidents were caused by traffic pulling out of Fleet Road in to the path of oncoming traffic in Manston Road (heading SW to NE in both cases). As there is small number of incidents which occurred to driver error it is not considered this junction has any inherent accident issues.

Spitfire Way/Minster Road roundabout

4.7.26 Two accidents were recorded at this junction during the assessment timeframe and **Table 4.13** sets out the details of these accidents.

Table 4.13 Accidents Recorded at Spitfire Way/Minster Road Roundabout

Ref	Date	Time	Severity	Type	Category
302	13/04/2014	05:00	Serious	Car	Driver Error
487	08/03/2013	08:53	Slight	Car	Driver Error

4.7.27 Both of these accidents were caused by the vehicles losing control, one by oversteering and the other by clipping the central reservation. As no other incidents were identified within the five-year period it is considered this junction doesn't have any inherent accident issues.

Minster Road/A299/Tothill Street roundabout

4.7.28 Ten accidents were recorded at this junction during the assessment timeframe and **Table 4.14** sets out the details of these accidents.

Table 4.14 Minster Road/A299/Tothill Street Roundabout

Ref	Date	Time	Severity	Type	Category
385	18/09/2014	18:50	Slight	Car/Car	Driver Error
408	07/02/2015	18:30	Slight	Car/Cycle	Driver Error
441	23/06/2015	15:00	Slight	Car/Cycle	Failure to give way at roundabout
502	01/11/2015	16:35	Slight	Car/Car	Failure to give way at roundabout
509	14/11/2015	17:55	Slight	Car	Driver Error
519	27/12/2015	18:40	Slight	Car/Motorbike	Driver Error
58	21/11/2016	22:30	Fatal	Car	Driver Error
72	08/12/2016	18:08	Slight	Car/Car/Car/Car	Driver Error
82	03/01/2017	20:10	Slight	Car/Car	Driver Error
114	03/04/2017	07:20	Slight	Goods/Car	Failure to give way at roundabout

4.7.29 One of accidents (408) involved occurred on the northbound Minster Road exit arm where a vehicle pulled out of the side road hit a cyclist who was on the shared cycle/pedestrian path crossing the road. Three of the incidents at this junction involved vehicles losing control (with all three occurring in wet conditions) and another three incidents being caused by vehicles failing to stop and shunting the vehicles in front in advance of the junction. The remaining three involved vehicles failing to give way upon entering the roundabout. Although a high number of incidents occurred at this junction as two occurred in poor visibility (fog), six occurred in wet conditions, the accidents did not occur in any 'hotspot' location within the junction, each can be attributed to driver error and there is no high number of accidents attributed to a single causation; it is considered this junction doesn't have any inherent accident problems.

A299/Canterbury Road West roundabout

4.7.30 Eleven accidents were recorded at this junction during the assessment timeframe and **Table 4.15** sets out the details of these accidents.

Table 4.15 Accidents Recorded at the A299/Canterbury Road West Roundabout

Ref	Date	Time	Severity	Type	Category
130	25/10/2012	09:40	Slight	Car/Car	Driver Error
111	08/09/2012	18:14	Slight	Car/Car/Car	Driver Error

Ref	Date	Time	Severity	Type	Category
224	26/09/2013	21:25	Slight	Car/Car	Driver Error
346	07/09/2014	06:50	Slight	Car	Visibility (Fog)
351	20/09/2014	06:53	Slight	Car	Visibility (Fog)
378	08/11/2014	09:20	Slight	Motorbike	Driver Error
423	07/04/2015	13:45	Slight	Goods/Car	Driver Error
2	03/07/2016	15:00	Slight	Motorbike/Car	Driver Error
94	22/01/2017	10:20	Slight	Car	Visibility (Fog)
95	22/01/2017	13:56	Serious	Car/Car/Car	Visibility (Fog)
111	28/03/2017	06:39	Slight	Car	Visibility (Fog)

4.7.31 Of the 11 accidents five were caused by poor visibility due to fog, four resulted in the vehicle striking the central reserve of the roundabout and the remaining one shunting the back of queuing traffic. The remaining incidents involved two accidents where the vehicle has shunted the vehicle in front, one accident involving a vehicle losing control on the roundabout, one accident involving a vehicle stopping whilst within the roundabout and being hit, one accident involving a vehicle hitting another while attempting an over taking manoeuvre just prior to the roundabout and one accident involving two vehicles (one goods) whilst travelling adjacent to each other within the roundabout. Although a high number of incidents occurred at this junction, as five can be attributed to weather conditions and the remaining incidents were largely unrelated driver error issues; it is considered this junction doesn't have any inherent accident problems.

Detailed junction safety assessment conclusion

4.7.32 Of the ten junctions reviewed three are considered to potentially have inherent accident problems with recommended changes summarised as follows:

- Spitfire Way/Alland Grange Lane: improving visibility (vegetation clearance) from the Alland Grange Lane arm of the junction;
- Spitfire Way/ B2050 Manston Road: review signage and road markings upon approaches and consider changes to the aspect of the NE Manston Road arm; and
- B5020 Manston Road/Manston Court Road: Improve visibility from the Manston Court Road arm.

4.7.33 The issues noted at this junction are addressed later in this TA within the developed mitigation schemes.

4.8 Base Traffic Flow Data

4.8.1 Traffic count surveys were commissioned in order to understand the existing traffic conditions within the study area. **Table 4.16** provides a summary of the traffic survey counts.

Table 4.16 Sources of Traffic Survey Information

Source	Survey Information
360TSL	Manual classified turning counts (MCC), automatic traffic counts (ATC) and queue surveys commissioned on links and at junctions anticipated to be effected by the proposals – March 2017

Source	Survey Information
PCC Traffic information consultancy	Additional MCC counts and ATC's as well as queue surveys were commissioned on links and at junctions anticipated to be affected by the proposals following discussions with KCC – October 2017
Highways England	Traffic data for the strategic road HE network has been extracted through the HE traffic data portal at http://webtris.highwaysengland.co.uk/

4.8.2 As set out in **Table 4.16,** 360TSL were commissioned to undertake a series of traffic counts and queue surveys. MCC traffic surveys were undertaken on Wednesday 1 March, Thursday 2 March and Thursday 9 March 2017 at the following junctions for the period 06:00 - 24:00:

- 1 – A256/Sandwich Road;
- 2 – A256 / A299/Cottingham Link Road;
- 3 – A299 / Canterbury Road W;
- 4 – A299 / B2190 (Minster Road)/B2190 (Tothill Street);
- 5 – B2190 / Minster Road;
- 6 – A253 (Canterbury Road) / A299 / Willetts Hill/ Seamark Road;
- 7 – A299 / A28 (Canterbury Road)/ Potten Street Road;
- 8 – A28 (Canterbury Road)/The Square (Station Road)
- 9 – B2050 (Park Lane) / Acol Hill / B2050 (Manston Road);
- 10 – B2050 (Manston Road) / Shottendane Road / Margate Hill;
- 11 – B2190 (Spitfire Way) / Columbus Avenue;
- 12 – B2050 (Manston Road) / Manston Road / B2190 (Spitfire Way);
- 13 – B2050 (Manston Road) / Manston Court Road;
- 14 – A28 (Canterbury Road) / B2052 (George V Avenue);
- 15 – B2052 (Heartsdown Road) / B2052 (Tivoli Road) / B2052 (College Road) / Nash Road / Empire Terrace / Manston Road (Coffin Corner);
- 16 – A254 (Ramsgate Road) / B2052 (College Road) / B2052 (Beatrice Road);
- 17 – A254 (Margate Road) / A254 (Ramsgate Road)/ Star Lane/ Poorhole Lane;
- 18 – Star Lane Link/Manston Court Road;
- 19 – A256 (New Haine Road) / New Cross Road;
- 20 – A256 (Hain Road) / B2050 (Manston Road);
- 21A – A256 (Haine Road) / Canterbury Road West/ A256; and
- 21B – A299 (Canterbury Road East) / A299 (Hengist Way) / Sandwich Road / A256 (Lord of the Manor Roundabout).

4.8.3 Following discussion with KCC, a series of additional MCC traffic counts was commissioned in October 2017 to widen the scope of assessment and this was undertaken by PCC Traffic Information Consultancy Limited. The counts were undertaken at the following junctions:

- 22 – B2052 (Tivoli Road)/ Tivoli Road/B2052 (Beatrice Road);
- 23 – B2050 Park Lane/ A28 (Canterbury Road);

- 24 – Star Lane/Nash Road;
- 25 – B2050 Manston Road/Tesco's Supermarket Access;
- 26 – B2050 (Manston Road)/B2014 (Newington Road);
- 27 – B2014 (Newington Road)/A255 (High Street); and
- 28 – A255 (High Street)/ A255 (Park Road)/Wilfred Road/Grange Road.

4.8.4 This junction turning count data has been supplemented by ATCs within the area to better understand the 7-day traffic conditions. The ATC data has been collected for a period of one week starting 07 March 2017 and for a 24-hour period per day (360TSL) The ATC locations are:

- ATC1 - A256 north of Sandwich;
- ATC2 – A299 near to Windermere Ave;
- ATC3 – Manston Road near to Princess Margaret Ave;
- ATC4 – A254 near Coxes Lane;
- ATC4A – A256 west of Northwood Road;
- ATC5 – A254 near Farley Road;
- ATC6 – A254 near Connaught Road;
- ATC7 – A28 near Westbrook Road;
- ATC8 – A28 near Domneva Road;
- ATC9 – A299 east of Grays;
- ATC10 – A28 Canterbury Road east of Sarre;
- ATC11 – A253 east of Sarre;
- ATC12 – A299 between Minster Road and Canterbury Road West; and
- ATC13 – B2190 Spitfire Way between Minster Road and Manston Road.

4.8.5 Following discussion with KCC, a series of additional ATC counts was undertaken in October 2017 to widen the scope of assessment at the following locations (PCC);

- ATC 14 – Minster Road (South of Acol);
- ATC 15 – B2050 Manston Road (North of Woodchurch Road);
- ATC 16 – Shottendane Road between Minster Road and Park Road;
- ATC 17 – Manston Road, north of junction with Bramble Lane;
- ATC 18 – Manston Road, south of junction with Vincent Road;
- ATC 19 – Manston Court Road, east of Valley Road;
- ATC 20 – Manston Court Road, south of the junction with Preston Road; and
- ATC 21 – B2050 Manston Road (East of Manston).

4.8.6 The locations of the relevant traffic counts set out are included in **Figure 4.11**.

4.8.7 In addition, traffic flow information for the strategic highways network (M2, A2 and A20) was extracted from the DfT online traffic count system. This data however only provides 24-hour Annual Average Daily Traffic (AADT) for links.

4.8.8 This information provides the base network flows for the local highways network. Full details of the traffic counts are provided as **Appendix C** to this assessment and the base year traffic flows for the AM peak, PM peak and the Airport Peak are shown in **Figures 4.12 to 4.14.**

4.9 Conclusion

4.9.1 This section has presented a review of the existing transport conditions in the vicinity of the site. The site is located adjacent to the A299 providing strategic connections towards London in the west and Dover in the South. Whilst there is limited pedestrian infrastructure within the vicinity of the site there are a number of cycle routes providing connections towards Westwood and Minster. A number of bus services currently run past the site that could be amended to serve the proposed development. A review of amenities identifies that a number of existing amenities are within reasonable cycling or public transport distances. It is therefore concluded that the site is accessible by a range of modes.

4.9.2 A review of the accident record in the vicinity of the site indicates that a large number of collisions have occurred across the extensive study area and period selected and that some junctions and links require further investigation within mitigation schemes proposed as part of this TA.

Margate

Birchington

Broadstairs

Ramsgate

Minster

Isle of Thanet

THANET DISTRICT

Key

Order Limits

0 km 1.5km

Scale 1:30,000 @ A3

Client

RSP

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Transport Assessment

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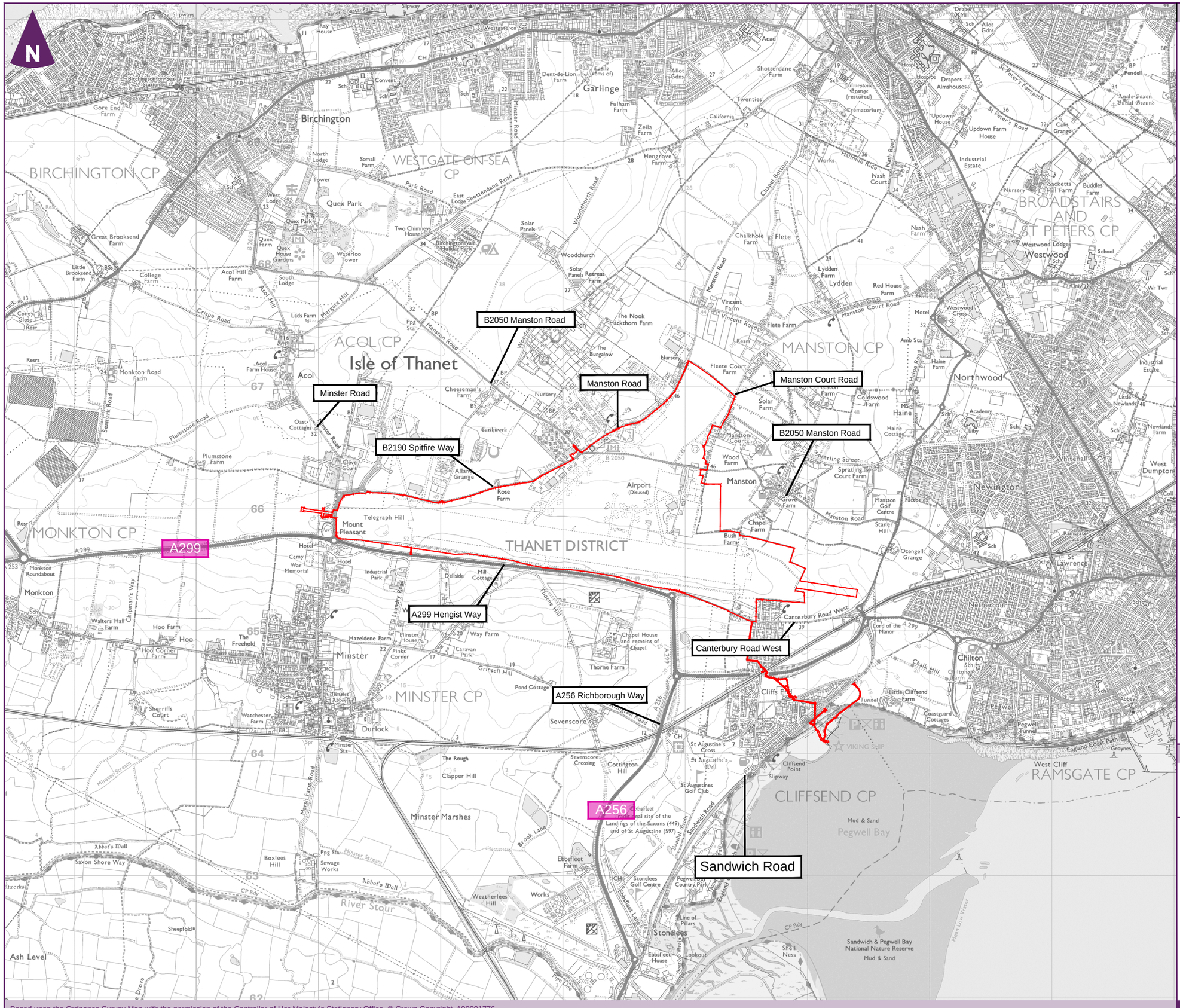
Figure 4.1
Site Location

March 2018

38199-Lon487.dwg guya



Key

Order Limits

0 km 1.5km

Scale 1:30,000 @ A3

Client

RSP

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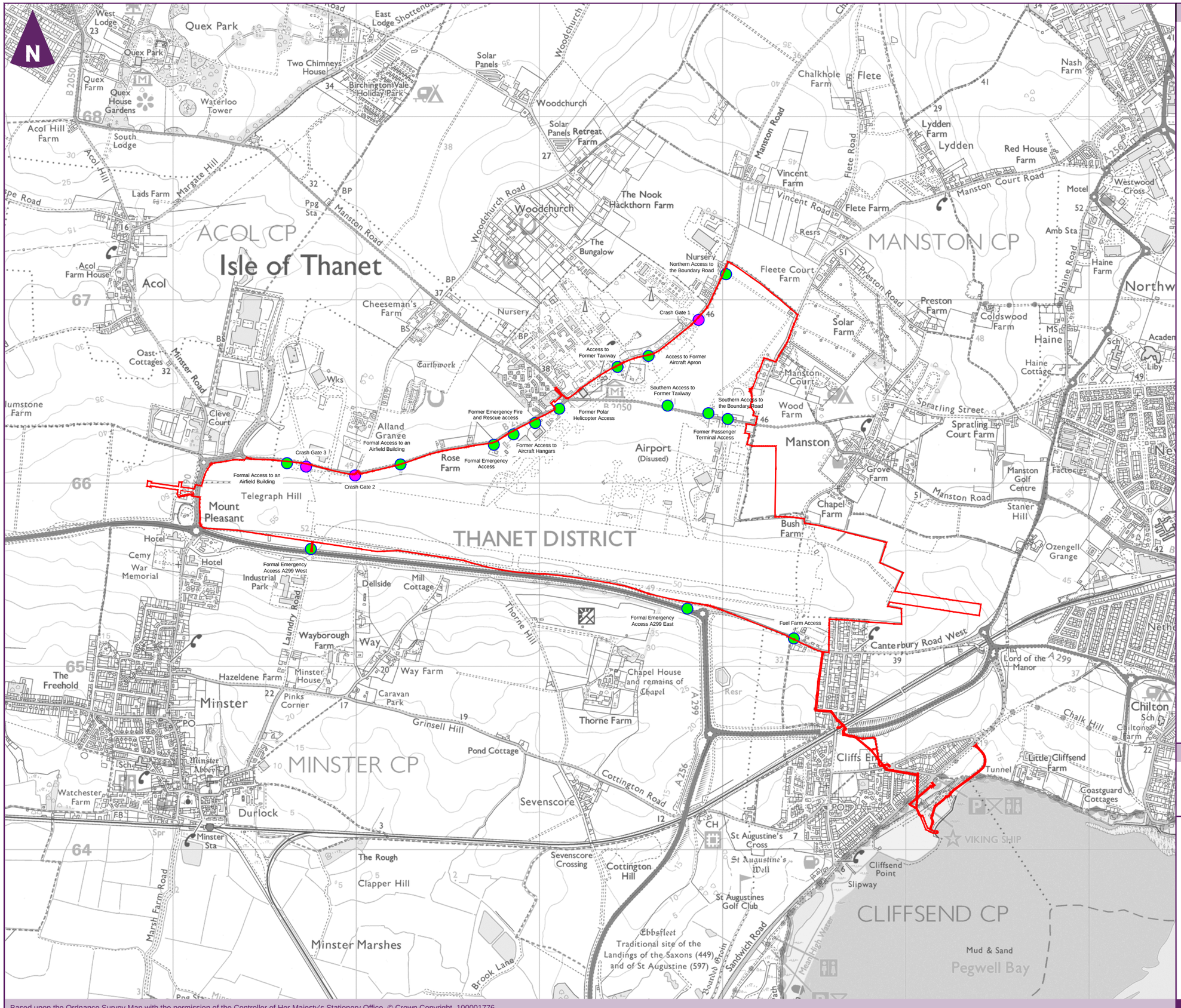
Figure 4.2
Development and Local Highway Network

March 2018

38199-Lon488.dwg guya



Key

- Order Limits
- Existing Access Locations
- Existing Crash Gate Locations

Client

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Transport Assessment

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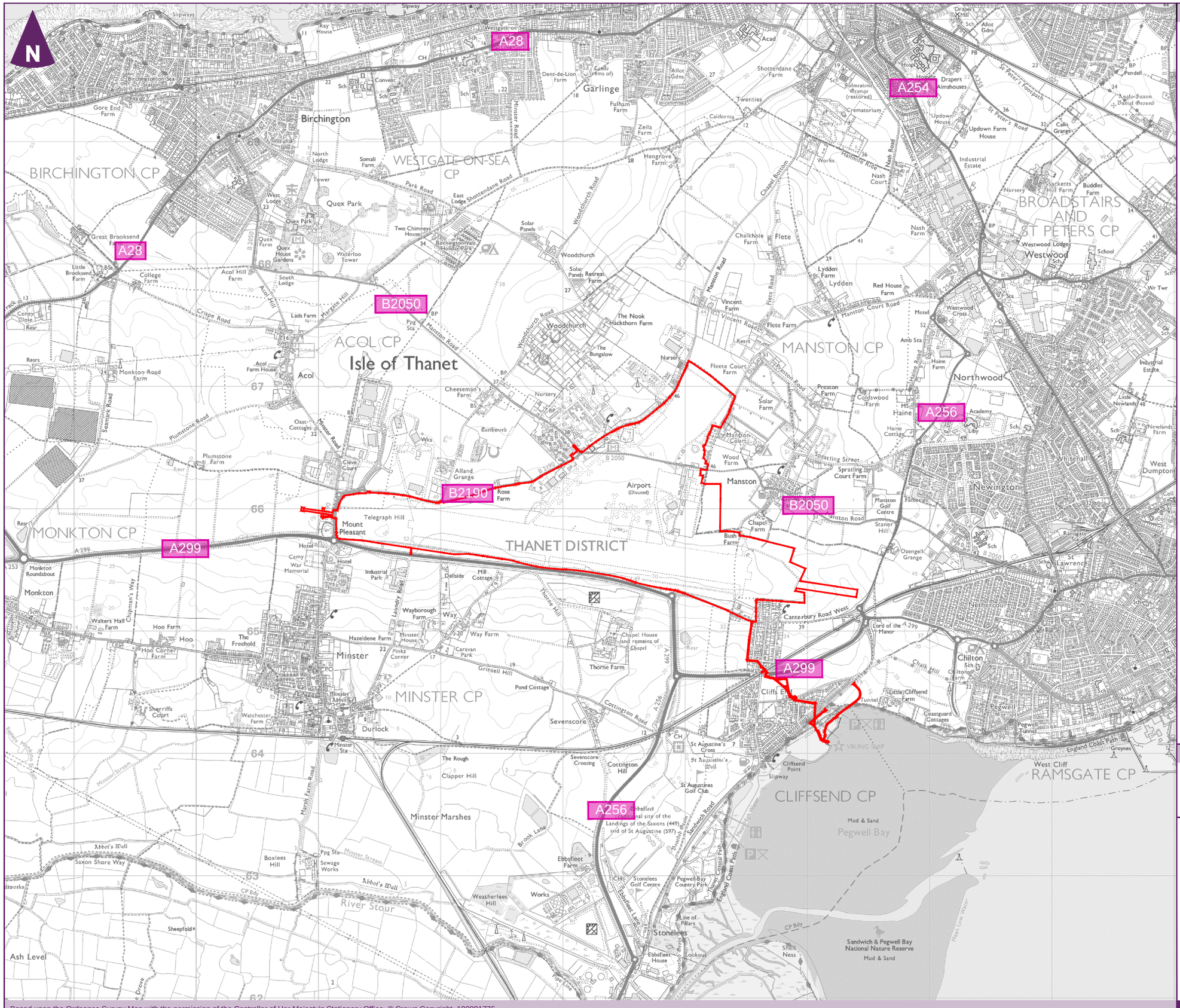
Figure 4.3
Existing Access Locations

March 2018

38199-Lon489.dwg guya



Key

- Order Limits
- 2km isochrone
- Public footpath
- Public bridleway
- Long distance footpath
- Footway
- Signal controlled crossing

0 m — 1000 m

Scale 1:20,000 @ A3

Client

RSP

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Transport Assessment

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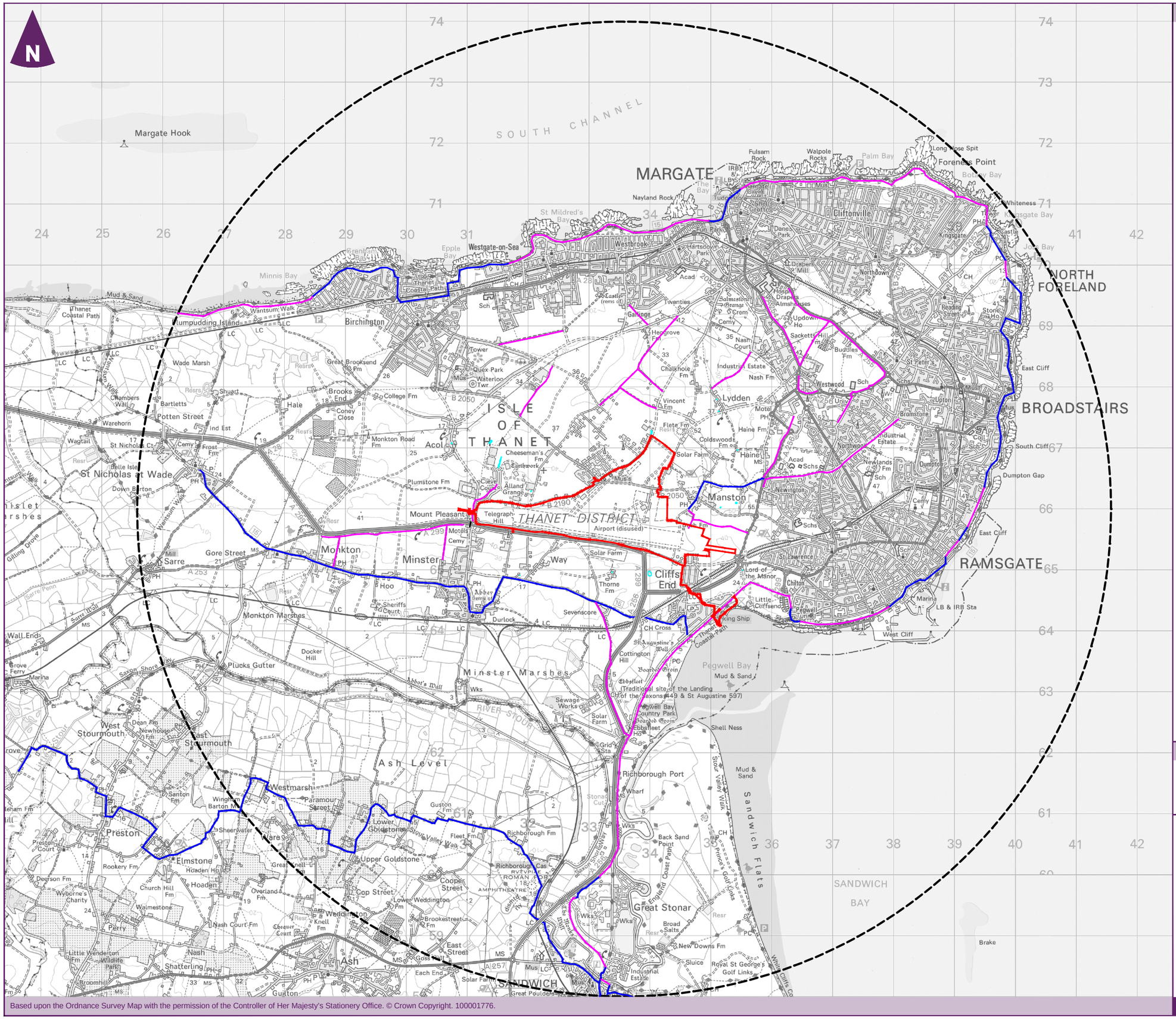
Figure 4.5
Existing pedestrian infrastructure and isochrone

March 2018

38199-Lon491.dwg guya



Key

- Order Limits
- 8km isochrone
- Traffic free cycle route
- On-road cycle route

Client

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Figure 4.6
Existing cyclist infrastructure and isochrone

March 2018

38199-Lon492.dwg guya

Key

- Order Limits
- Bus stop
- Route 11
- Route 38
- Route 38(A)
- Route 9 (9X)
- Route 87/88

0 m 1500 m

Scale 1:30,000 @ A3

Client

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Figure 4.7
Existing bus infrastructure and routes

March 2018 38199-Lon493.dwg guya

Key

- Order Limits
- Doctor
- Dentist
- Pre-school / nursery
- Primary, Secondary School and College
- Food retail
- Public House
- Leisure centre
- Library

0 km 1.5 km

Scale 1:25,000 @ A3

Client

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PIER
Transport Assessment

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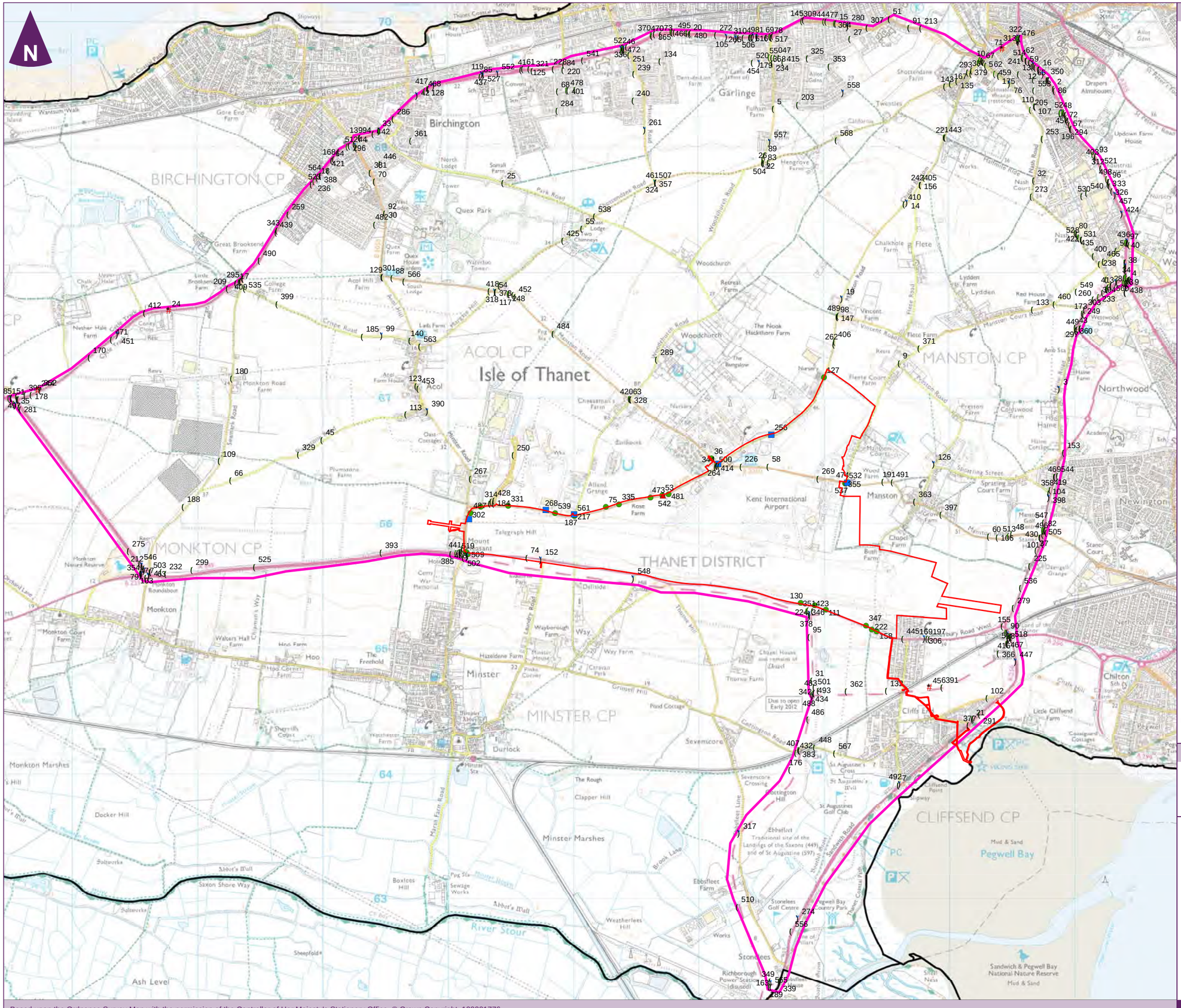
Figure 4.8
Plan of local services and their accessibility

March 2018

38199-Lon494.dwg guya



Key

- Order Limits
- Search area

Accident location:

- Fatal
- Serious
- Slight

0 km 2 km

Scale 1:30,000 @ A3

Client

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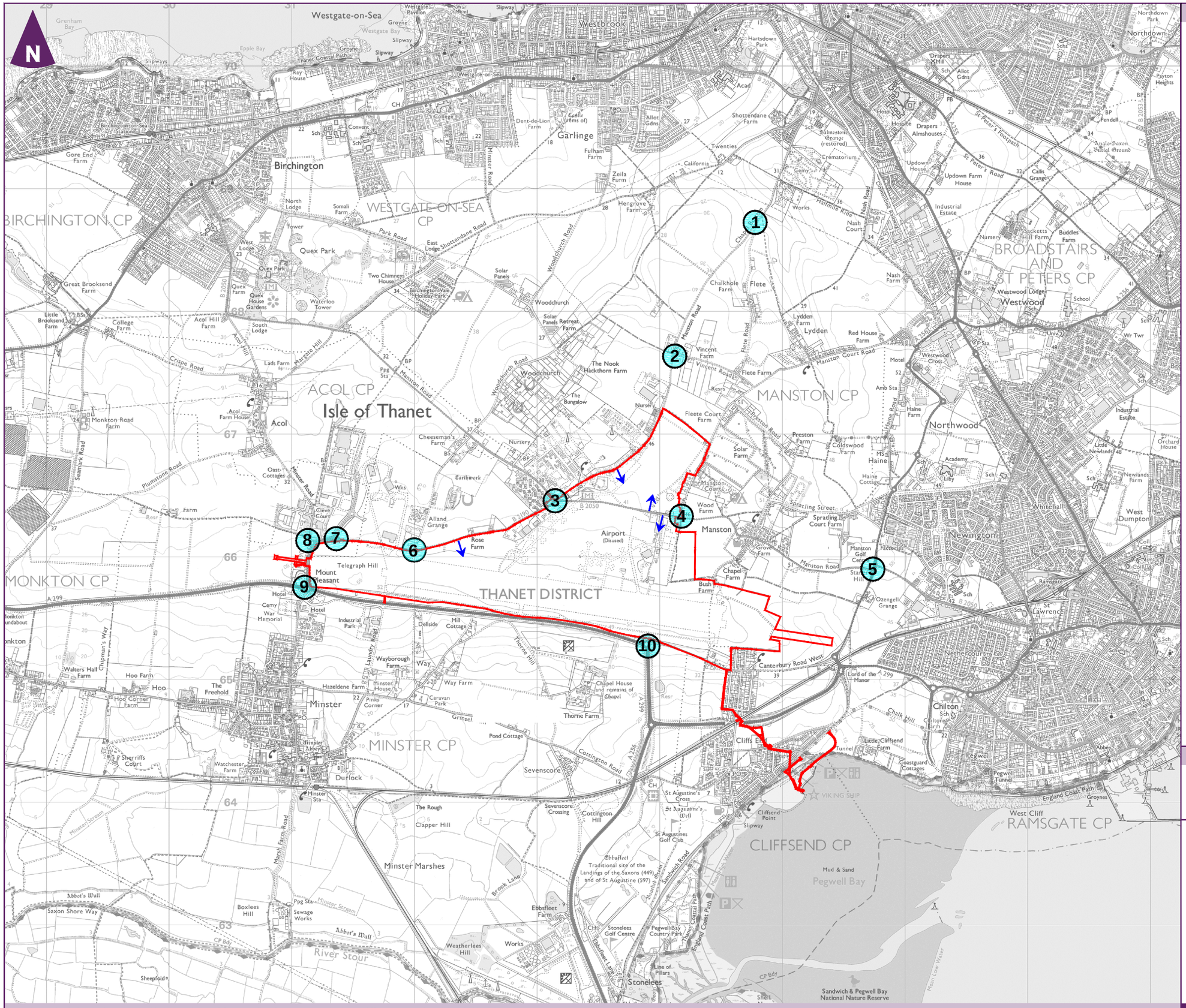
Figure 4.9
Accident assessment area and accident locations



Key

Order Limits

1 Assessed junction

1 Manston Road/Flete Road
2 Manston Road/Vincent Road
3 B2050 Manston Road/Spifire Way
4 B2050 Manston Road/Manston Court Road
5 B2050 Manston Road/A256 Haine Road
6 Spitfire Way/Alland Grange Road
7 Spitfire Way/Columbus Avenue
8 Columbus Avenue/Minster Road
9 Minster Road/A299/Tothill Street
10 A299/Canterbury Road West Roundabout

Access points

0 m 1.5 km

Scale 1:30,000 @ A3

Client

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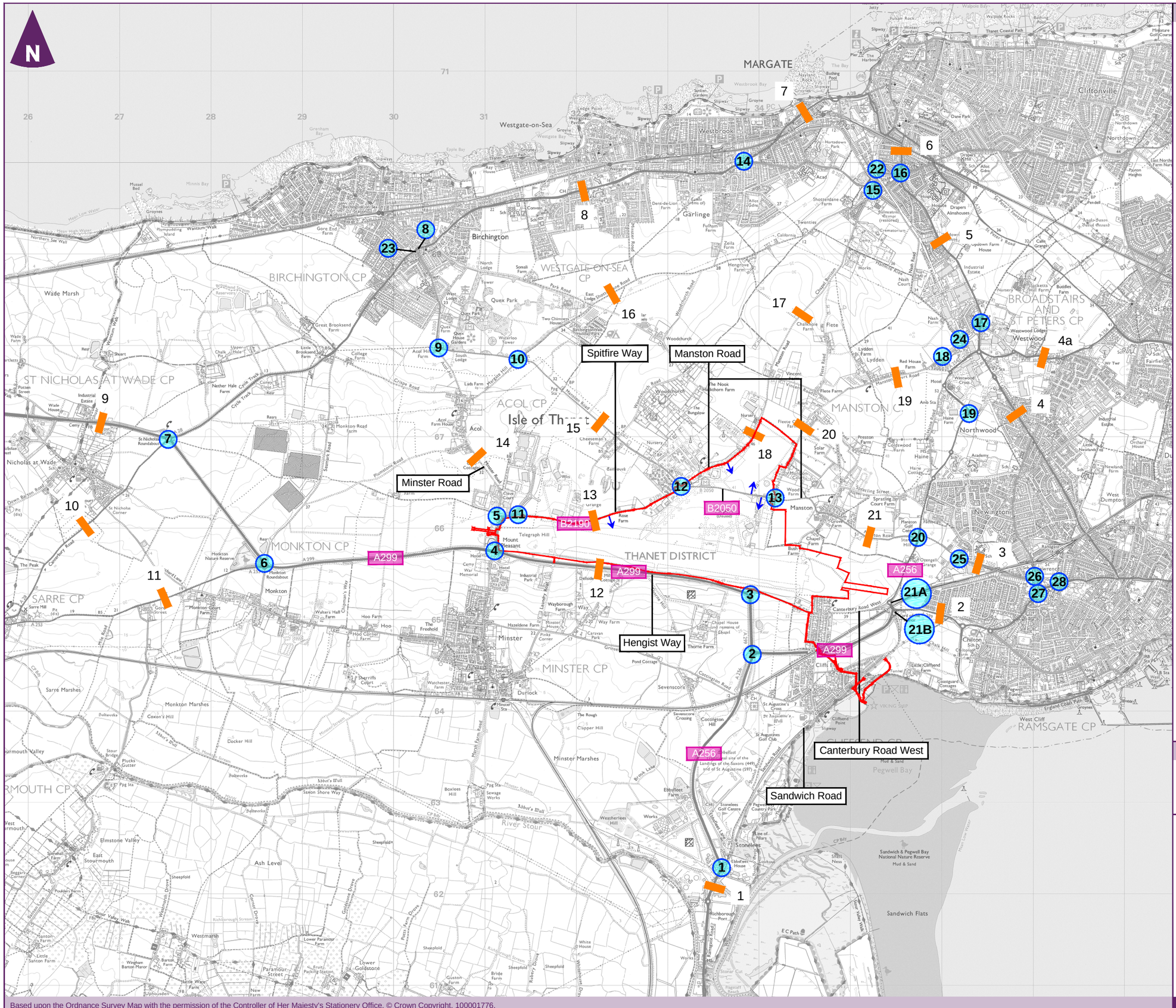
Figure 4.10
Junctions selected for detailed accident assessment

March 2018

38199-Lon496.dwg guya



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Key

Order Limits

MCC junctions

1 A256/Sandwich Road
2 A256/A299/Cottingham Link Road
3 A299/Canterbury Road West
4 A299/B2190 (Minster Road)/B2190 (Tothill Street)
5 B2190/Minster Road
6 A253 (Canterbury Road)/A299/Willetts Hill/Seamark Road
7 A299/A28 (Canterbury Road)/ Potten Street Road
8 A28 Canterbury Road/ The Square (The Station Road)
9 B2050 (Park lane)/Acol Hill/ B2050 (Manston Road)
10 B2050 (Manston Road)/Shottendane Road/Margate Hill
11 B2190 (Spitfire Way)/Columbus Avenue
12 B2050 (Manston Road)/Shottendane Road/B2190 (Spitfire Way)
13 B2050 (Manston Road)/Manston Court Road
14 A28 (Canterbury Road)/B2052 (George V Avenue)
15 B2052 Hartsdown Road/B2052 (Tivoli Road)/B2052 (College Road)/Nash Road/Empire Terrace/MarstonRoad (Coffin Corner)
16 A254 (Ramsgate Road)/B2052 (College Road)/B2052 (Beatrice Road)
17 A254 (Margate road)/A254 (Ramsgate Road)/Star Lane/Poorhole Lane
18 Star Lane Link/Manston court Road
19 A256 New Haine Road/New Cross Road
20 A256 (Haine Road)/B2050 (Manston Road)
21A A256 Haine Road/Canterbury Road West/A256
21B A299(Canterbury Road East)/A299 (Hengist Way)/Sandwich Road/A256 Lord of the Manor Roundabout
22 B2052 (Tivoli Road)/Tivoli Road/B2052 (Beatrice Road)
23 B2052 Park Lane/A28 (Canterbury Road)
24 Star Lane/Nash Road
25 B2050 Manston Road/Tesco Supermarket Access
26 B2050 (Manston Road)/B2014 (Newington Road)
27 B2014 (Newington Road)/A255 (High Street)
28 A255 (High Street)/A255 (Park Road)/Wilfred Road/Grange Road

Access points

ATC Count locations

0 m 1000 m 2000 m

Scale 1:40000 @ A3

Client

RSP

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Transport Assessment

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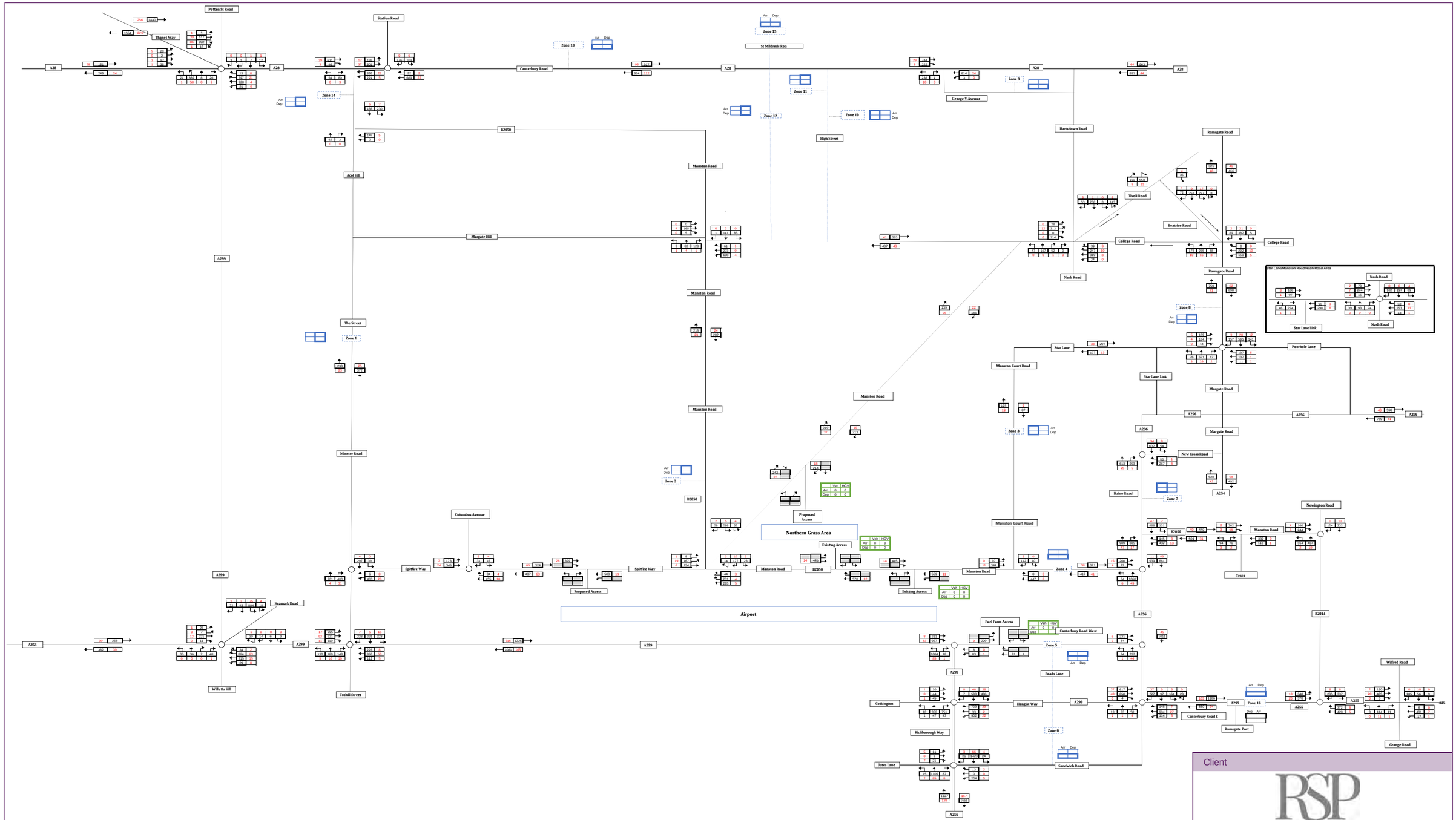
Figure 4.11
Traffic Count Locations

March 2018

38199-Lon497.dwg guya



228 Total Vehicles

4 HGV

Growth Rates	
LGV	0
HGV	0

Client

RSP

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Transport Assessment

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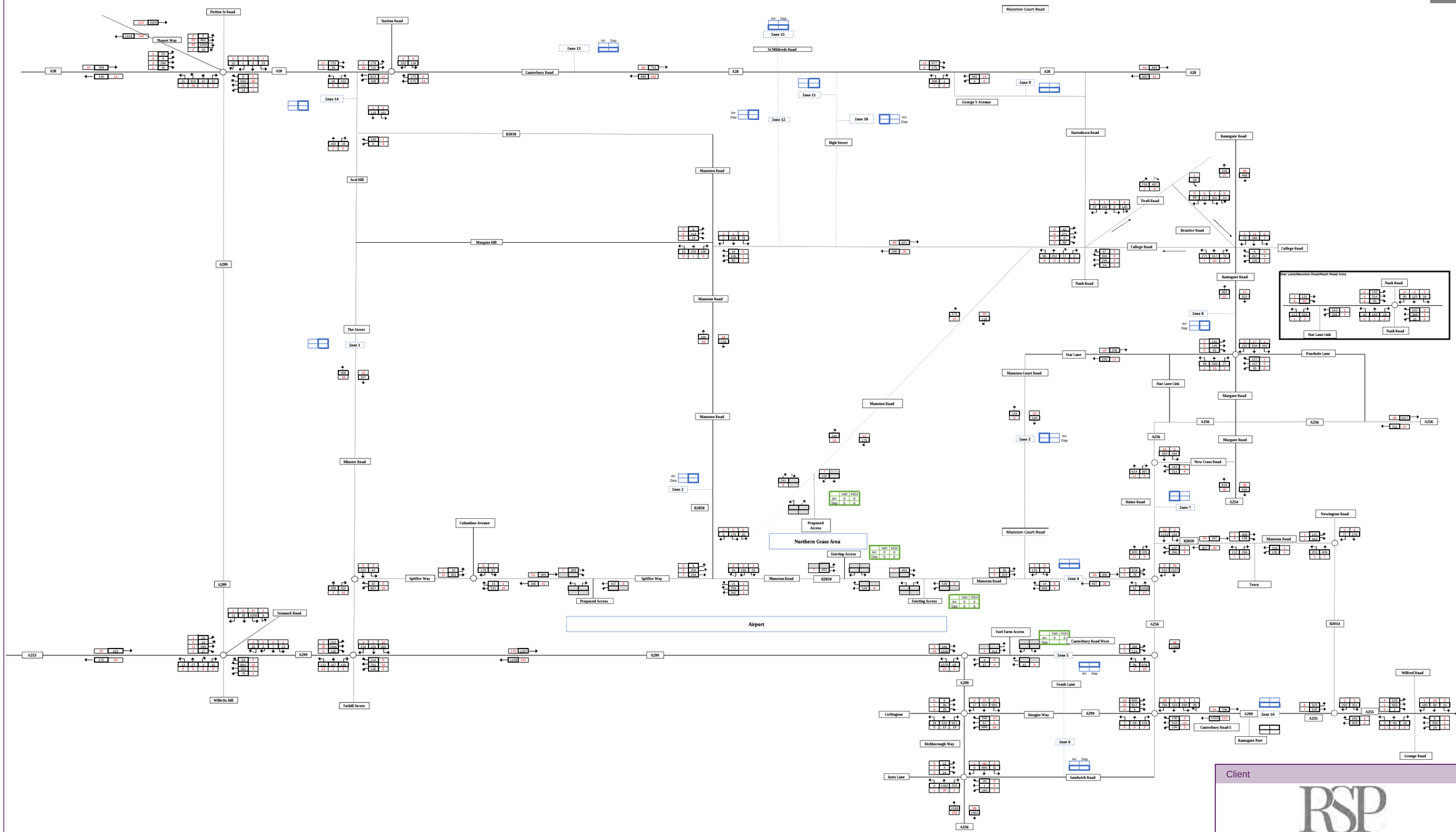
Figure 4.12
Network plot baseline traffic flows
AM peak



110 Total Vehicles

7 HGV

Growth Rates	
LGV	0
HGV	0

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Environmental Statement

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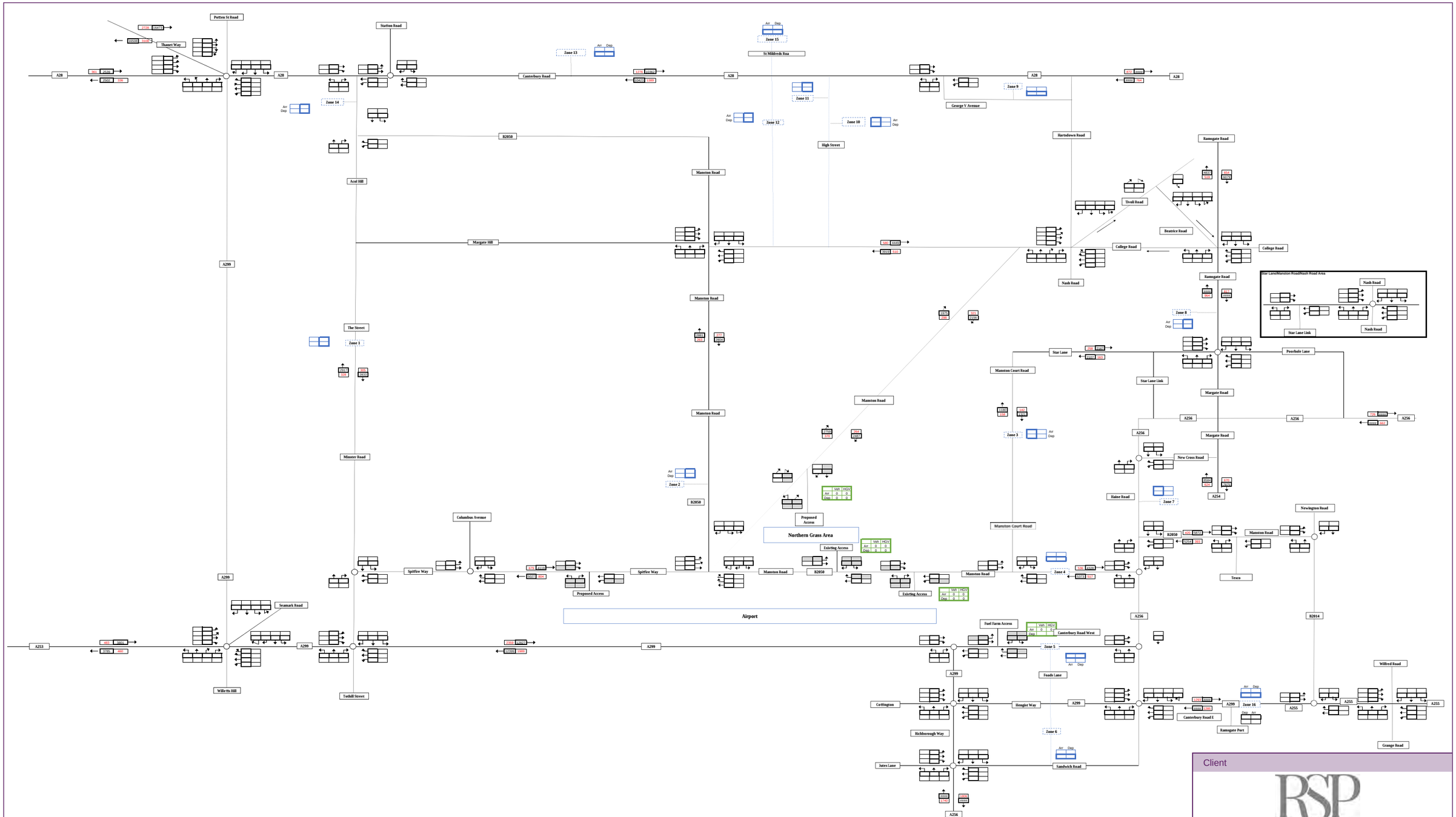
Figure 4.13
Network plot baseline traffic flows
PM peak



Client

RSP

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Transport Assessment

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Figure 4.14
Network plot baseline traffic flows 24 hour