

Transport Assessment

396389
May 2019

265 BURLINGTON ROAD
NEW MALDEN





Transport Assessment

265 Burlington Road, New Malden

May 2019

Mott MacDonald
Stoneham Place
Stoneham Lane
Southampton SO50 9NW
United Kingdom

T +44 (0)23 8062 8800
F +44 (0)23 8064 7251
mottmac.com

Redrow Homes Limited

Transport Assessment

265 Burlington Road, New Malden

May 2019

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
01	Nov 18	J. Kennedy	C. Romain	J. Crabb	Draft for client
02	Nov 18	J. Kennedy	C. Romain	J. Crabb	Updated for client
03	May 19	C. Romain	C. Romain	J. Crabb	Scheme amendments

--

Document reference: 396389 | 01 | A

Information class: Standard

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

1	Introduction	1
1.1	Background	1
1.2	Pre-Application Liaison	2
1.3	Structure	2
2	Site Background	3
2.1	Site Details	3
2.2	Development Proposals	4
2.3	Parking	5
2.4	Temporary Route during Construction - Tesco	6
2.5	Changes to the Layout of the Tesco Car Park	6
3	Policy Review	8
3.1	Background	8
3.2	Best Practice	8
3.3	National Policy Context	8
	National Planning Policy Framework (February 2019)	8
3.4	Regional Policy Context	9
	The London Plan (latest revision: March 2016)	9
	Mayor's Transport Strategy (March 2018)	9
3.5	Local Policy Context	10
	LB Merton Local Development Framework Core Planning Strategy (July 2011)	10
3.6	LB Merton: Sustainable Transport Strategy Local Implementation Plan (2011-2031)	10
4	Site Accessibility	12
4.1	Overview	12
4.2	Site Location & Accessibility	12
4.3	Services and Amenities	13
4.4	Walking and Cycling	13
4.5	Bus	14
4.6	London Overground / Rail	15
4.7	Taxi / On Demand Services	16
4.8	Car Club	16
4.9	Pedestrian, Cycle and Healthy Streets Audits	16
5	Baseline Conditions	18
5.1	Highway Network Operation	18
5.2	Road Safety Review	21

5.3	Parking Survey	22
6	Trip Generation	24
6.1	Existing Trip Generation	24
6.2	Proposed Trip Generation	24
7	Operational Analysis	27
7.1	Assessment Scenarios	27
7.2	Operational Assessment	27
7.3	Operational Analysis Findings Summary	30
8	Summary	33
	Appendix A – Transport Assessment Scoping Report	36
	Appendix B – TRICS Outputs	37
	Appendix C – Site Masterplan	38
	Appendix D – Site Access Stage 1 Road Safety Audit & Designer’s Response	39
	Appendix E – Swept Path Analysis	40
	Appendix F – Framework Delivery & Servicing Plan	41
	Appendix G – Framework Car Park Management Plan	42
	Appendix H – Bus Stop Audit	43
	Appendix I – PaCERS Report	44
	Appendix J – Junction Calibration Process	45
	Appendix K – Junction Performance Analysis Output Files	46
	Appendix L – Street Improvement Strategy	47

1 Introduction

1.1 Background

- 1.1.1 Mott MacDonald was commissioned by Redrow Homes Limited (hereafter referred to as 'Redrow') to prepare this Transport Assessment (TA) in support of their planning application to redevelop land at 265 Burlington Road, located in the West Barnes area of New Malden. The site more generally sits within the boundary of the London Borough of Merton.
- 1.1.2 The site is made up of three parcels of land. The northern parcel comprises a vacant 1980's office building arranged over two storeys with an interconnecting single storey office building at the rear and an interconnecting warehouse to the side totalling 3,880sqm. These commercial facilities are served by 100 existing on-site car parking spaces.
- 1.1.3 In addition, to the south and west of the commercial premises is further car parking associated with the adjacent Tesco store. Tesco is located immediately to the west of the proposed development site and includes car parking to the south of the store, as well as a small element of car parking comprising 98 spaces which will be redeveloped on the proposed site. Tesco has confirmed that it no longer requires these spaces which are located on the proposed site and will retain 577 spaces to serve the store on the adjacent site.
- 1.1.4 The site is served by a single access, which is formed of a priority all movement junction with Burlington Road on the eastern boundary, broadly in the centre of the site. This junction also facilitates pedestrian access to and from Tesco as well as acting as a secondary vehicular egress point from the store. The principal Tesco access junction is formed to the west and comprises a left-in left-out junction with Beverley Way which runs parallel to the A3 on the western boundary of the site.
- 1.1.5 It is proposed that the vehicular link between the two accesses will be retained as part of the development proposals, such that light vehicles associated with Tesco will still be able to exit the store onto Burlington Road once the development is complete. A temporary strategy during the construction phase will be put in place, further details of which are presented at **CHAPTER 2** of this report.
- 1.1.6 More generally, Burlington Road is a single lane carriageway that extends in a south-west direction and terminates at New Malden town centre. The site is located on an existing bus route, served by three services, and is approximately 750m north of Motspur Park rail station, 1.2km south-west of Raynes Park rail station and 1.5km east of New Malden rail station. A plan showing the location of the site is provided at **FIGURE 1.1**.
- 1.1.7 The proposed scheme comprises demolition of the existing buildings and erection of two blocks of development ranging in height between seven and 15 storeys and comprising 456 new homes, of which 114 will be one beds, 290 will be two beds and 52 will be three beds. 499sqm of B1(a) office space will be accommodated at ground floor level along with 220 car parking spaces, 830 cycle parking spaces, a realigned junction onto Burlington Road, hard and soft landscaping and associated residential facilities. The application also includes minor changes to the layout and configuration of the retained Tesco car park.
- 1.1.8 This Transport Assessment (TA), which accompanies the planning application for the proposed redevelopment, has been prepared by Mott MacDonald on behalf of Redrow and is accompanied by a Residential Travel Plan (TP), Framework Delivery & Servicing Plan (DSP) and Framework Car Park Management Plan (CPMP).

1.2 Pre-Application Liaison

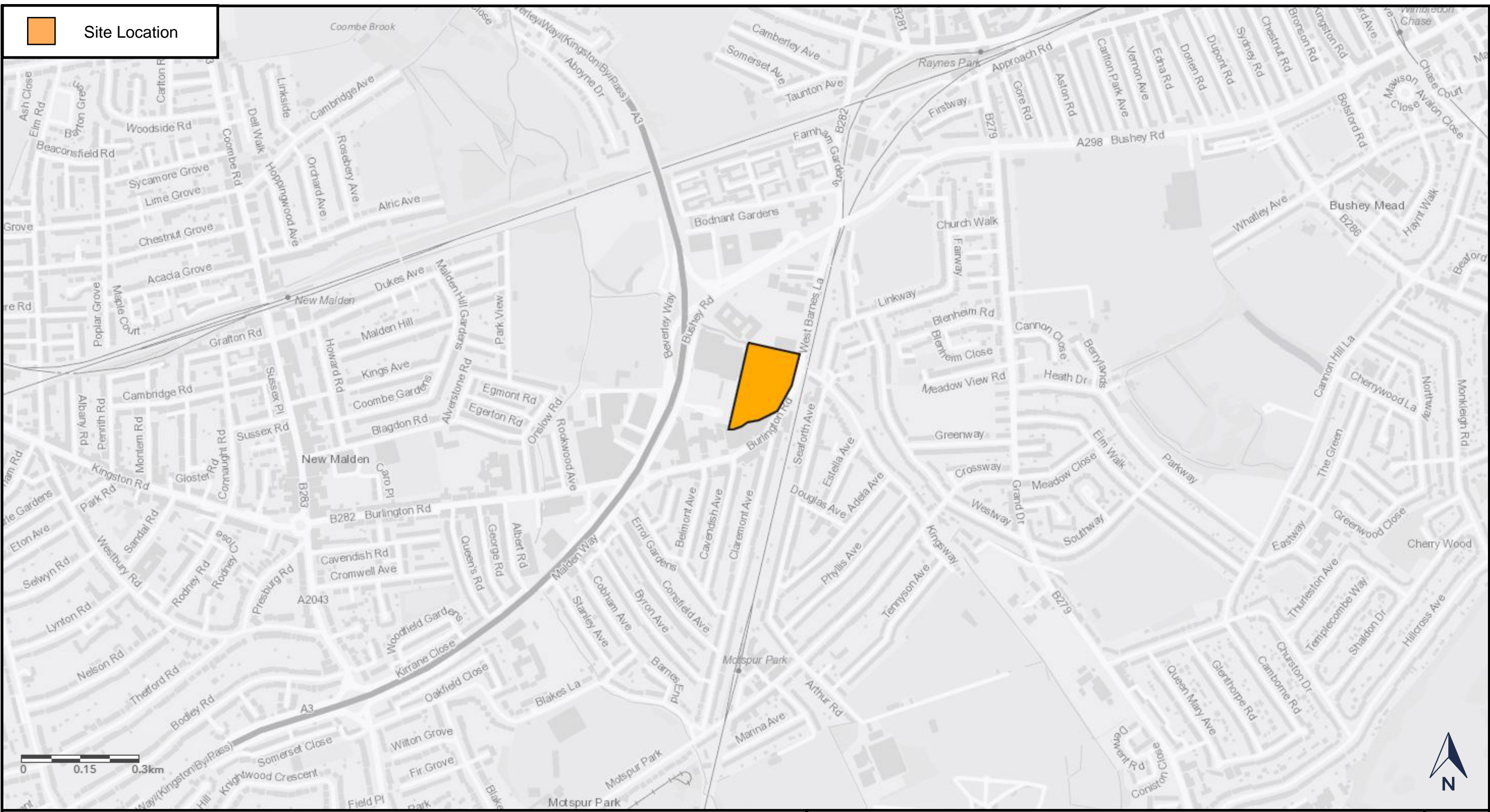
- 1.2.1 A Transport Assessment Scoping Report was prepared during August 2018 which set out the methodology and parameters which the TA would follow.
- 1.2.2 The document was submitted to officers of the London Borough of Merton (LBM) and Transport for London (TfL) and pre-application meetings were held with both authorities. Redrow has also liaised with officers of the Greater London Authority (GLA) throughout the application process.
- 1.2.3 The feedback received from the relevant authorities has fed into the preparation of this TA and the accompanying transport documents. Regular liaison with the officers of LBH and TfL has been maintained throughout the application process, which has included discussions of the scheme evolution and the assessment.
- 1.2.4 A copy of the agreed TA scoping report is provided at **APPENDIX A**. The TA has subsequently been prepared with regard to the pre-application discussions with both LBM and TfL and in accordance with the agreed scoping report. A draft TA and the associated findings were presented to LBM and their feedback is also incorporated into this version of the TA, where appropriate.

1.3 Structure

- 1.3.1 The remainder of the TA is structured as follows:
- **Chapter 2** summarises the development proposals;
 - **Chapter 3** provides a review of the relevant policy guidance;
 - **Chapter 4** outlines the accessibility of the site to sustainable transport modes and local facilities and amenities;
 - **Chapter 5** presents the baseline highway analysis, including road safety review;
 - **Chapter 6** sets out the trip generation and distribution analysis;
 - **Chapter 7** presents the operational analysis for the study area; and,
 - **Chapter 8** provides a summary of the report
- 1.3.2 The accompanying TP, DSP and CPMP reports are provided separately as part of the planning application submission and should be read in conjunction with this TA report.



Site Location



Location Plan

Figure 1.1

2 Site Background

2.1 Site Details

- 2.1.1 The site is located off Burlington Road, which forms the eastern boundary of the site, to the east of New Malden town centre. The site is bounded immediately to the west by a Tesco Superstore, by the Raynes Park High School to the north and varying levels of commercial activity to the south.
- 2.1.2 More generally, the A3 runs in a north-south direction to the west of the site and the A298 runs north-east, with Burlington Road running in a south-west direction. Low-rise, residential properties are situated to the east and south of the site.
- 2.1.3 Access to the site is taken from Burlington Road and as discussed, the junction provided at this location also provides for pedestrian access to the neighbouring Tesco, as well as acting as a secondary vehicular egress from the store for light vehicles. The principal vehicular access for Tesco is located to the west of the site off Beverley Way.
- 2.1.4 The development site boundary encompasses a vacant commercial office building totalling 3,880sqm plus 100 car parking spaces and a portion of the car park (totalling 98 spaces) that serves the Tesco store. The Tesco car park will therefore be reduced by 98 spaces to accommodate the redevelopment which Tesco has confirmed will not have an impact upon the operation of their store (leaving 577 spaces on the adjacent site for Tesco use).
- 2.1.5 The combination of existing land uses on site generates daily vehicular traffic, including large delivery vehicles that travel to / from the site. Although the existing office space is vacant, its re-use would generate further trips and would not require planning consent to be granted. In order to review the likely level of vehicular trip generation that would arise from the re-use of the existing office space, the TRICS trip generation database has been interrogated and the following vehicular trip rates have been derived:

TABLE 2.1: Existing Commercial Vehicular Trip Rates (per 100sqm)

Time Period	Arrivals	Departures	Combined
AM Peak Hour	0.601	0.097	0.698
PM Peak Hour	0.172	0.590	0.762

Source: TRICS

- 2.1.6 The trip rates have subsequently been applied to the existing floor area of the commercial space on site, which indicates that the site would be expected to generate in the order of 27 and 30 vehicular trips in the AM and PM peak hours respectively, as summarised below at **TABLE 2.2**.

TABLE 2.2: Existing Commercial Trip Generation (Vehicular)

Time Period	Arrivals	Departures	Combined
AM Peak Hour	23	4	27
PM Peak Hour	7	23	30

- 2.1.7 A copy of the associated TRICS output file is provided at **APPENDIX B**.

2.2 Development Proposals

2.2.1 The proposed development will comprise of 456 residential apartments plus approximately 499sqm of commercial floorspace. The residential apartments will comprise a mix of privately owned and affordable / rented dwellings shared between one, two and three bedroom homes. The schedule of accommodation is presented below at **TABLE 2.3** and a copy of the proposed site masterplan is provided at **APPENDIX C**.

TABLE 2.3: Proposed Accommodation Schedule

Number of Bedrooms	Number of Homes
1 Bedroom	114
2 Bedrooms	290
3 Bedrooms	52
Total	456

2.2.2 In terms of site access arrangements, a series of options were considered as part of the preparation of this planning application. Discussions with LBM identified that the highway authority would not support the creation of any new permanent junctions within Burlington Road to serve the site.

2.2.3 As such, the proposed development will retain the existing site access junction with Burlington Road. The position and footprint of this junction will not be significantly altered as a result of the development although new surfacing and treatments will be delivered, which will be carried through the development site and along the internal access road.

2.2.4 Footways will be provided on both sides of the access road which will run all the way through the site, retaining the connection with Tesco and allowing residents of the site and the local community to continue to walk to / from Tesco via the site. The proposed development will therefore provide a more attractive route and environment for pedestrians to use than is currently available.

2.2.5 The internal access road will also continue to facilitate vehicular egress from Tesco through the site, onto Burlington Road. The access road has been designed to accommodate large vehicles associated with the servicing of the development, such as refuse, delivery and emergency vehicles. Large vehicles associated with Tesco will however, continue to access / egress the store via the main junction with Beverley Way only.

2.2.6 At the request of LBM, a Stage 1 Road Safety Audit of the site access junction has been carried out and a copy of that audit and the associated Designer's Response is enclosed at **APPENDIX D**. In summary, the following items were raised by the audit:

- The RSA has suggested that a right turn box for traffic entering the site could be considered for Burlington Road. The recommendation of the audit team has been accepted by the designer, however, it has been noted that the introduction of a right turn lane at this location would reduce the available storage space for vehicles heading north on Burlington Road wishing to turn right across the level crossing. Furthermore, the demand for turning right into the site is expected to be quite limited. The matter has subsequently been discussed with officers of LBM, who confirmed that the highway authority would not support the introduction of a turning facility which would take capacity away for northbound traffic. A right turn box has therefore not been incorporated into the proposed scheme

- The RSA identified that proposed landscaping in the vicinity of the site access junction could be an impedence to the desire line of pedestrians and also, that the proposed removal of the existing pedestrian refuge across the site access could make it more difficult for pedestrians to cross the site access road. The recommendations put forward through the RSA were therefore accepted by the designer and following further analysis, the proposed landscaping has been reviewed and the pedestrian refuge island is proposed to be retained

- 2.2.7 Loading bays will be provided on both sides of the internal access road to facilitate delivery and servicing trips. On refuse collection days, the site management team will relocate the refuse containers on the southern and northern parcels of the development site to holding stores positioned adjacent to the respective loading bays.
- 2.2.8 The refuse vehicle will enter the site from Burlington Road and service the southern portion of the site from the southern loading bay before turning around in the bellmouth of the access junction to the southern undercroft parking area which has been specifically sized to accommodate large vehicles such as the refuse vehicle.
- 2.2.9 The refuse vehicle will then move across to the loading bay on the northern side of the internal access road and service the northern portion of the site from this location before re-joining Burlington Road via the site access junction, in a forward gear. Swept path analysis has been carried out for large vehicles, including the refuse vehicle and fire tender and copies of these plans are provided at **APPENDIX E**.
- 2.2.10 In addition to and following liaison with LBM and TfL, a framework Delivery and Servicing Plan (DSP) has been prepared to accompany the planning application. A copy of the document is contained at **APPENDIX F** which sets out the proposed arrangements for delivery and service vehicles to access, serve and egress the site.
- 2.2.11 The internal highway network serving the site will be retained in private ownership.

2.3 Parking

- 2.3.1 Detailed discussions have been held with officers of LBM and TfL throughout the application process regarding the appropriate level of car parking that should be provided for the development. The resultant proposals take account of the accessibility of the site to sustainable transport modes as well as local services and amenities, and the overall strategy for the site.
- 2.3.2 Further details regarding the above are set out within this TA as well as in the accompanying Travel Plan (which is a stand-alone document) and Framework Car Park Management Plan (a copy of which is provided at **APPENDIX G**).
- 2.3.3 A total of 220 car parking spaces, including 9 which will be allocated for disabled users, will be provided for the development. This level of disabled provision equates to 4% of the total provision and exceeds the latest guidance set out within the new draft London Plan. The car park facilities offered at the site have also been designed, such that further spaces could be made available for disabled users in the future should there be sufficient demand, which again accords with the emerging guidance.
- 2.3.4 The total provision of 220 spaces is equivalent to a parking offer of approximately 50%, which has been agreed in principle with both LBM and TfL. Active and passive electric charging facilities will be provided in accordance with the current London Plan requirements.

- 2.3.5 Virtually all of the car parking will be provided within secure undercroft areas (north and south of the internal access road) and will be managed through the CPMP which will be implemented and overseen on Redrow's behalf by their site management team.
- 2.3.6 Five spaces will be provided at surface level, off the internal access road, toward the western end of the site. One of these spaces will be allocated to a car club vehicle and an option will be retained to allocate one further space for this purpose, should there be sufficient demand for this in the future. Further details regarding the car club are provided later in this TA and also in the TP.
- 2.3.7 The remaining surface spaces will be controlled by the site management team and / or concierge team, with the intention being that these spaces will be available for short duration visits associated with the commercial units and delivery / servicing activities (i.e. small parcels, pick-ups, care visitors etc).
- 2.3.8 Cycle parking will be provided in accordance with the London Plan guidelines, which will total 798 spaces across the development. These long-stay spaces will be provided in secure stores distributed throughout the site at both ground and first floor levels. In addition, one short-stay cycle parking space will be provided per 40 units, again in accordance with the London Plan, in communal areas of the site for visitors to use. The short stay provision will therefore be 12 spaces.
- 2.3.9 Six long stay cycle parking facilities will also be provided within the commercial units, for employees, plus 14 further short stay spaces for customers / visitors.

2.4 Temporary Route during Construction - Tesco

- 2.4.1 Should the proposed development be permitted, during the construction phase which will last for up to two years, it is anticipated that the route between Tesco and Burlington Road will need to be closed. This would be inconvenient for those that walk and cycle to/from Tesco from the largely residential areas to the east and south-east, as well as vehicle drivers who currently exit Tesco onto Burlington Road.
- 2.4.2 It is therefore proposed that an alternative temporary route will be provided during the construction phase of the development. Discussions have been held with LBM regarding this arrangement and subsequently a separate planning application has been prepared for a temporary pedestrian access and vehicular egress between Tesco and Burlington Road to be created.
- 2.4.3 The proposed route will be provided on land currently occupied by 247 Burlington Road, to the south of the site, which contains an existing vacant building.
- 2.4.4 There is an existing bus stop located at the front of 247 Burlington Road and it will be necessary to move the stop slightly to the north to facilitate the creation of the temporary egress junction with Burlington Road. This has been agreed with TfL and the owners of the bus stop, JC Decaux.
- 2.4.5 A s106 obligation has been volunteered as part of the application that commits to the cessation of use of the temporary road, as soon as the new road is made available for public use within the redeveloped site at 265 Burlington Road.
- 2.4.6 Further details of the temporary route are contained within the Mott MacDonald Transport Report which accompanies the associated planning application.

2.5 Changes to the Layout of the Tesco Car Park

- 2.5.1 Minor changes are required to the layout and configuration of the retained Tesco car park to accommodate the new development, improve facilities for customers and circulation around the

site. 577 customer car parking spaces will be retained. A list of the changes is provided below and are shown on the application drawings:

- Removal of individual tree planters;
- Re-lining of spaces to provide 2.4m x 4.8m car parking spaces;
- Relocation of the existing pedestrian crossing and new crossing point;
- Flush kerbs to all new areas;
- Relocation of existing trolley bays;
- Relocation of the existing black bollards at 2400mm centres;
- Relocation of existing signage;
- Relocation of existing lamp stands;
- Relocation of existing ANPR & trolley prevention systems;
- New service road for delivery vehicles and Dot Com vans with associated prohibitive signage;
- New turning bay for servicing area;
- Changes to the layout of the Dot Com vans loading area;
- Fence and 9m wide gate to service area; and,
- Relocation of the existing Click & Collect

3 Policy Review

3.1 Background

3.1.1 A review has been made of the context of the development proposals with regard to national, regional and local transport policy guidance. As such, the following documents have been considered with further detail provided below:

- National Planning Policy Framework (February 2019)
- The London Plan (latest revision: March 2016)
- Mayor's Transport Strategy (March 2018)
- LB Merton: Local Development Framework Core Planning Strategy (2011)
- LB Merton: Sustainable Transport Strategy Local Implementation Plan (LIP2) 2011-2031

3.2 Best Practice

3.2.1 The TA has been prepared in accordance with the Department for Communities and Local Government's (DCLG) 'Planning Practice Guidance' (March 2014) which replaces the earlier Department for Transport (DfT) 'Guidance on Transport Assessments' (March 2007).

3.2.2 The TA also has regard to TfL's 'Transport Assessment Best Practice Guidance' which is web based and was most recently updated in October 2014, at the time pre-application discussions were held and the scope of the TA was agreed.

3.3 National Policy Context

National Planning Policy Framework (February 2019)

3.3.1 In March 2012, the Department for Communities and Local Government (DCLG) produced its "National Planning Policy Framework", which replaced national policy for transport, as previously set out in the Planning Policy Guidance (PPGs) and Planning Policy Statements (PPSs), particularly PPG13. This was updated in July 2018 and then most recently in February 2019.

3.3.2 It is stated that when assessing sites for development, transport issues should be considered from the earliest stages of planning to ensure that:

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

3.3.3 Additionally, the NPPF states that developments should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

3.3.4 All developments that will generate significant traffic are required to provide a travel plan and transport assessment.

3.4 Regional Policy Context

The London Plan (latest revision: March 2016)

- 3.4.1 The London Plan represents the Mayor's spatial development strategy for London. The overarching vision of the London Plan is that up to 2031 and beyond, "London should excel among global cities - expanding opportunities for all its people and enterprises, achieving the highest environmental standards and quality of life and leading the world in its approach to tackling the urban challenges of the 21st Century".
- 3.4.2 This vision will be led by six objectives, one of which being "A city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling".
- 3.4.3 The Plan recognises the Mayor's commitment to encouraging walking and cycling as sustainable modes of transport, along with improvements in public transport.
- 3.4.4 Policy 6.1 (Strategic approach) of the London Plan states that the mayor will work with all relevant partners to encourage the closer integration of transport and development by (amongst others):
- *"encouraging patterns and nodes of development that reduce the need to travel, especially by car";*
 - *"supporting development that generates high levels of trips at locations with high levels of public transport accessibility and / or capacity"; and*
 - *"supporting measures that encourage shifts to more sustainable modes and appropriate demand management".*
- 3.4.5 Policy 6.3 (Assessing effects of development on transport capacity) of the London Plan states that:
- *"Development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level, are fully assessed. Development should not adversely affect safety on the transport network"; and*
 - *"Transport assessments will be required in accordance with TfL's Transport Assessment Best Practice Guidance for major planning applications".*

Mayor's Transport Strategy (March 2018)

- 3.4.6 The Mayor's Transport Strategy (MTS) is a statutory document that sets out the Mayor's transport vision and describes how Transport for London (TfL) and its partners will deliver the overall vision of the London Plan.
- 3.4.7 A set of key challenges are discussed within the MTS, with the more relevant transport challenges including:
- Active, inclusive and safe travel;
 - Improving air quality and the environment;
 - Improving safety, affordability and customer service; and
 - Improving public transport accessibility and inclusivity.

3.5 Local Policy Context

LB Merton Local Development Framework Core Planning Strategy (July 2011)

3.5.1 The Core Planning Strategy sets the overall framework for regeneration and development in Merton. The transport-related Strategic Objective put forward by the Core Planning Strategy is:

“To make Merton a well-connected place where walking, cycling and public transport are the modes of choice when planning all journeys”

3.5.2 Specific transport policies the Local Development Framework aims to address include:

- *Policy 18: Public Transport Use*
- *Policy 19: Parking, Servicing and Deliveries*
- *Policy 20: Active Transport*

3.5.3 The LB Merton Local Development Framework identifies a number of relevant measures to assist in the realisation of the transport objectives:

- a great majority of homes should be within 1.5km of a rail station with a 20-minute interval minimum off-peak service. This will be achieved through bus route and service improvements along with additional links within the borough's network;
- applications are supported where they demonstrate that the existing public transport levels sustain the public transport needs generated by a development or that satisfactory provision for increased capacity requirements has been arranged;
- the provision of cycle parking storage and the introduction of car sharing clubs reduce car use and provide good links to public transport services;
- encouraging developers to demonstrate that their proposals are adequately served by a variety of modes of transport and that the proposals do not have an adverse effect on transport within the vicinity of the site.

3.6 LB Merton: Sustainable Transport Strategy Local Implementation Plan (2011-2031)

3.6.1 The Merton Sustainable Transport Strategy and Local Implementation Plan has been designed to demonstrate how the borough can contribute to the Mayor of London's Transport Strategy and to deliver transport objectives of Merton's key policy and strategy documents including the Local Development Framework Core Strategy, the Community Plan and Climate Change Strategy.

3.6.2 This vision will be led by six goals in the framework:

1. Support economic development and population growth

“Balance capacity and demand for travel through increasing public transport capacity and / or reducing the need to travel.”

2. Enhance the life of all Londoners

“Facilitating an increase in walking and cycling.”

3. Improve the safety and security of all Londoners

“Reducing casualties on public transport networks”

4. Reduce transport's contribution to climate change and improve its resilience
"Maintaining the reliability of transport networks"
5. Improve transport opportunities for all Londoners
"Improving the physical accessibility of the transport system"
"Improving access to jobs and services"
6. Car Clubs
"As an outer London borough still heavily reliant on the private car, Merton supports car clubs as flexible alternatives to private car ownership"

4 Site Accessibility

4.1 Overview

This section of the TA describes the site's accessibility to sustainable transport modes, as well as nearby services and amenities. **FIGURE 4.1** illustrates the opportunities for sustainable transport within the local area and should be viewed in conjunction with this chapter.

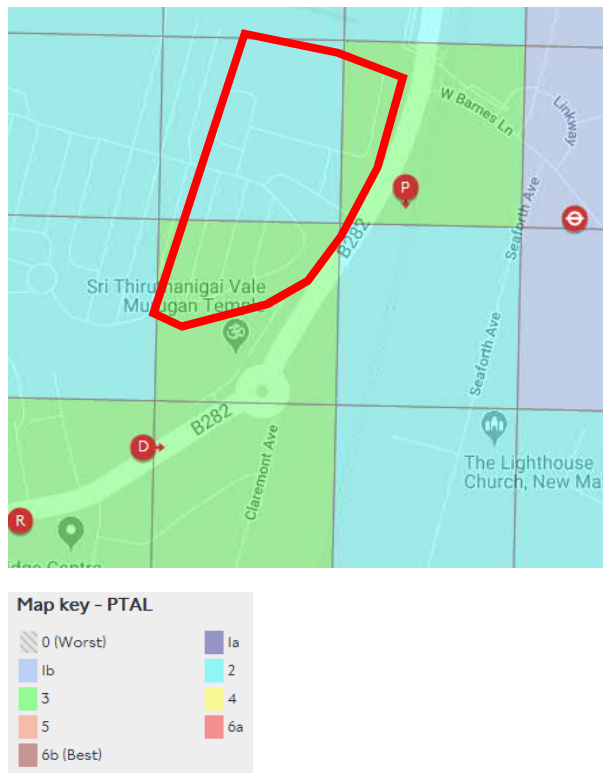
4.2 Site Location & Accessibility

4.2.1 The proposed development site is located approximately 750m north of Motspur Park rail station, 1.2km south-west of Raynes Park rail station and 1.5km east of New Malden rail station.

4.2.2 The development site at Burlington Road falls in line with the LB Merton's Local Development Framework objective of building homes within 1.5km of a rail station with 20-minute minimum intervals during off-peak service.

4.2.3 The accessibility of the site has been appraised using TfL's online Public Transport Accessibility Level (PTAL) tool. This indicates that the majority of the site is PTAL 3 (average) which reflects the public transport corridor status of Burlington Road, which forms the eastern boundary of the site, as well as the proximity of the site to Motspur Park rail station. Raynes Park and New Malden stations are not considered however, as these fall slightly outside the 960m threshold considered by PTAL. As the tool uses a grid-based structure, the remaining western part of the site is shown as being PTAL 2 (poor), as shown below at **FIGURE 4.2**.

FIGURE 4.2: PTAL Site Assessment



Source: TfL WebCat

4.3 Services and Amenities

- 4.3.1 A 24-hour Tesco store is located directly adjacent to the site. It includes a food depot, pharmacy, optician's office, car wash, mobile phone services, currency exchange and ATMs. There is also a Tesco petrol filling station directly to the south of the Tesco store.
- 4.3.2 There is also a Lidl, Waitrose, Greggs, McDonald's, Costa Coffee, Barclays, Lloyds and Nat West Bank located on New Malden High Street approximately 1500m west of the site.
- 4.3.3 There are 10 schools located within 1500m walking distance of the site. Nine of the ten schools are located within 1km walking distance. The table below highlights the local schools and the distance from the site.

TABLE 4.1: Local Schools

Educational Institutions	Walking Distance from Site (metres)
Sacred Heart Catholic Primary School	300
Rayne's Park High School	450
West Wimbledon Primary School	700
King's College School	750
Burlington Infant and Nursery School	900
Burlington Junior School	900
Blossom House School	900
Evaline Day Nursery	1000
Coombe Boys School	1000
St. John Fisher RC Primary School	1400

Source: Mott MacDonald

- 4.3.4 Additionally, West Barnes Surgery and Grand Drive Surgery are located 600m and 900m from the site, respectively. There is a dental office located approximately 700m from the site. These medical facilities provide future site residents with multiple local health services that can be accessed without needing to travel by car.
- 4.3.5 A variety of local leisure sites are also nearby which support a wide range of public interest. The following table identifies some of these facilities and their distance from the development site.

TABLE 4.2: Local Recreation and Leisure Facilities

Leisure and Recreation Facilities	Walking Distance from Site (metres)
World of Golf	650
Raynes Park Lawn Tennis Club	700
Raynes Park Recreation Ground	1100
Motspur Park Football Club	1100
Fulham Football Club Training Grounds	1300
Malden Golf Club	2800

Source: Mott MacDonald

4.4 Walking and Cycling

- 4.4.1 All local roads in the vicinity of the site, including Burlington Road, West Barnes Lane, Beverley Way and Claremont Avenue are lit and include footways adjacent to the carriageway.
- 4.4.2 The nearest bus stops are within a two-minute walk of the site entrance, located on Burlington Road. The bus stops are accessible via the footways from the site on Burlington Road. Both

controlled and uncontrolled crossings points are provided for pedestrians. Tactile paving is provided at crossing points and recent improvements to the Shannon Corner roundabout help facilitate the movement of pedestrians and cyclists through the network.

4.4.3 There are some existing cycleways on the streets around the site. Advanced Stop Lines are provided at all signal-controlled junctions in the vicinity of the site. Cycle parking is available at all three railway stations in the study area and at key locations, like Tesco and at New Malden High School.

4.5 Bus

4.5.1 The closest bus stops to the site are located on Burlington Road; the nearest northbound stop is located to the north of the site, adjacent to Raynes Park High School and a further northbound stop is located to the south of the site, near Claremont Avenue. The nearest southbound stop is located directly opposite the site on Burlington Road and can be accessed via the existing signalised crossing immediately south of the site access junction. There is a further pair of stops located to the south, near to Shannon Corner, on Burlington Road.

4.5.2 There is a frequent bus service (approx. 7 per hour) that runs between Raynes Park rail station to New Malden High Street past the development site along Burlington Road. The stops located along Burlington Road are served by three existing services, which are the 131, K5 and N87.

4.5.3 **FIGURE 4.3** illustrates the location of the bus stops and routes available in the vicinity of the site. Further details of the available bus services is provided at **TABLE 4.3** and lists the closest bus stops for all routes serving the site.

TABLE 4.3: Bus Service Summary

Service	Route	Bus Stop	Weekday Frequency
131	Kingston – New Malden, Raynes Park, Wimbledon – Colliers Wood – Tooting Broadway	Burlington Road (northbound) West Barnes Level Crossing (E) Shannon Corner Burlington Road (C)	6 – 10 minutes
		Burlington Road (southbound) West Barnes Level Crossing (P) Shannon Corner / Cavendish Avenue (R) Trafalgar Court (N)	
K5	Ham- Kingston -Morden	Burlington Road (northbound) Shannon Corner/ Burlington Road (C)	30 minutes
		Burlington Road (southbound) West Barnes Level Crossing (P) Shannon Corner / Cavendish Avenue (R)	
N87	Kingston – Wimbledon - Aldwych	Burlington Road (northbound) West Barnes Level Crossing (E) Shannon Corner/ Burlington Road (C)	-
		Burlington Road (southbound) West Barnes Level Crossing (P) Shannon Corner / Cavendish Avenue (R) Trafalgar Court (N)	

4.5.4 To supplement this review of bus accessibility at the proposed development site, LBM also requested that bus stop audits be carried out for the stops nearest to the site. As such, the five

stops nearest to the site have been visited and reviewed in the context of TfL's 'Accessible Bus Stop Design Guidance' (2017).

4.5.5 The audit found that Stop D to the south of the site at Cavendish Avenue is an 'accessible bus stop'. The remaining four bus stops (C – Shannon Corner Burlington Road northbound, R – Shannon Corner Cavendish Road southbound, P – West Barnes Level Crossing southbound and E – West Barnes Level Crossing northbound) were identified as having road side features that may act as an impediment to passengers alighting at the accessible kerb. These features included the bus flag, a bin and a Vehicle Activated Sign (VAS).

4.5.6 Full details of the bus stop audits and a copy of the audit report is provided at **APPENDIX H**.

4.6 London Overground / Rail

4.6.1 The site is also located within walking distance of a range of local rail services provided at Motspur Park rail station with further rail access available to the north at Raynes Park station and to the west at New Malden rail station.

4.6.2 The following table summarises the location of these rail stations in relation to the proposed development site along with the walking distance and time required to reach each location.

TABLE 4.4: Local Rail Stations

Rail Station	Walking Distance (metres)	Walking Time (minutes)
Motspur Park Rail Station	750	10
Rayne's Park Rail Station	1200	15
New Malden Rail Station	1800	23

4.6.1 These rail stations provide direct connections to London Waterloo, Richmond and Chessington South and by extension a number of further destinations throughout UK. South Western Railway serves each of the three stations. **TABLE 4.5** summarises some of the main rail destinations and the associated journey times from each of the stations.

TABLE 4.5: Rail Service Summary

Rail Station	Main Destinations	Duration of journey
Motspur Park Rail Station	London Waterloo	25 minutes
	Dorking	28 minutes
	Guildford	52 minutes
	Chessington South	14 minutes
Raynes Park Rail Station	London Waterloo	23 minutes
	Dorking	31 minutes
	Chessington South	17 minutes
	Richmond	32 minutes
	Hampton Court	19 minutes
New Malden Rail Station	London Waterloo	24 minutes
	Richmond	29 minutes
	Hampton Court	14 minutes
	Shepperton	33 minutes

Source: Train line

4.6.2 There are 8 cycle parking spaces available at Motspur Park rail station with an additional 20 located at the adjacent public library. The rail station is accessed on foot, although is not step free and therefore not accessible to wheelchair users. There are 98 cycle parking spaces provided at Raynes Park rail station and 10 cycle parking spaces provided at New Malden rail station.

4.6.3 The bus stops at the development site provide connections to all three rail stations and are within a 2-minute walk of the site entrance.

4.6.4 In the future, the site is also expected to benefit from planned public transport improvements including the introduction of Crossrail 2 at both Raynes Park and New Malden stations. It is unlikely that the first of these services will be operational by the time that the development begins occupation but once completed, will enhance the connectivity of the area and allow users of the site further options for sustainable travel.

4.7 Taxi / On Demand Services

4.7.1 Taxi services are available throughout Merton Borough. A variety of operators provide private vehicle hire services ranging from taxis and private hire vehicles to airport transfers, mini cabs and chauffeur driven car hires. Car sharing services such as Uber provide alternatives to taxi cabs and are readily available near the site.

4.8 Car Club

4.8.1 Car clubs provide an alternative to owning or using a private car for travel, with each vehicle shared between car club members who choose to use it for specific times.

4.8.2 In this way, a car club provides the flexibility of having access to a private vehicle, without the associated costs and burdens of owning one (i.e. running costs, maintenance and insurance).

4.8.3 The car club Zipcar has several vehicles available for private hire throughout the Borough of Merton and Kingston upon Thames, with the closest vehicle being 850m walking distance from the site near Raynes Park rail station.

4.8.4 Redrow is currently exploring opportunities to provide site residents with access to a car club vehicle(s) on site and further information regarding this is provided in the accompanying Travel Plan.

4.9 Pedestrian, Cycle and Healthy Streets Audits

4.9.1 As part of the scoping of the TA it was agreed with LBM and TfL that walking and cycling audits between the site and key local attractors would be undertaken. Based on the location of the site and the proposed site layout, it was agreed that the main walking and cycling desire lines would be likely to comprise:

- Walking to/from the nearest bus stop pair on Burlington Road;
- Walking and cycling to/from Motspur Park rail station, via Burlington Road and Claremont Avenue;
- Walking to/from the adjacent Tesco store;
- Walking to/from the Raynes Park High School and Sports Hall to the north of the site; and,
- Walking and cycling to/from New Malden High Street along Burlington Road

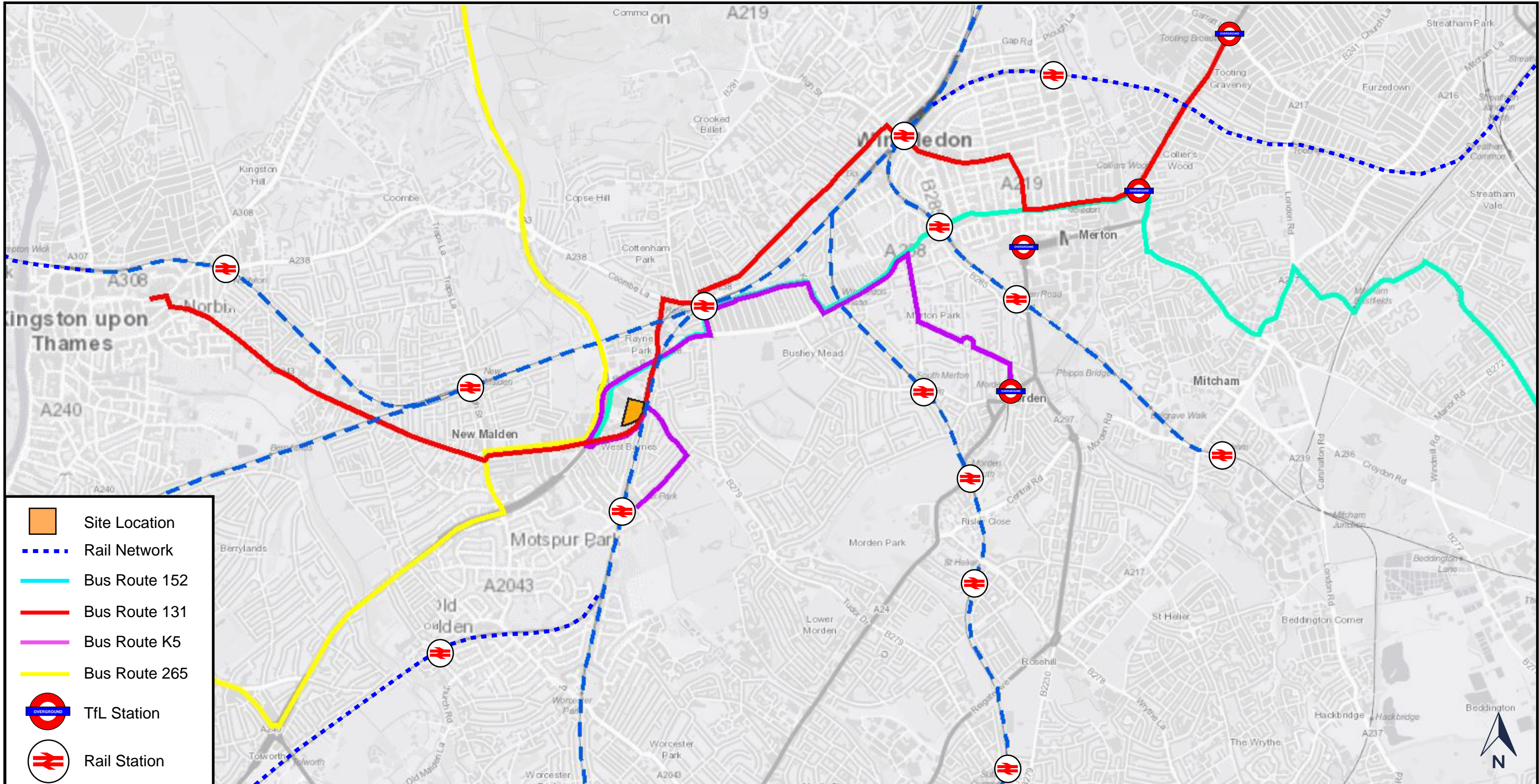
4.9.2 To undertake audits of these routes, the Mott MacDonald PaCERS (Pedestrian and Cycle Environment Review System) approach which has been approved by TfL was followed. This method allows the pedestrian and cycle environments to be assessed using the following tools and techniques:

- PERS (Pedestrian Environment Review System)
- CLoS (Cycle Level of Service) which replaces CERS (Cycle Environment Review System)

4.9.3 A brief summary of the findings of the audit, by study link, is provided below:

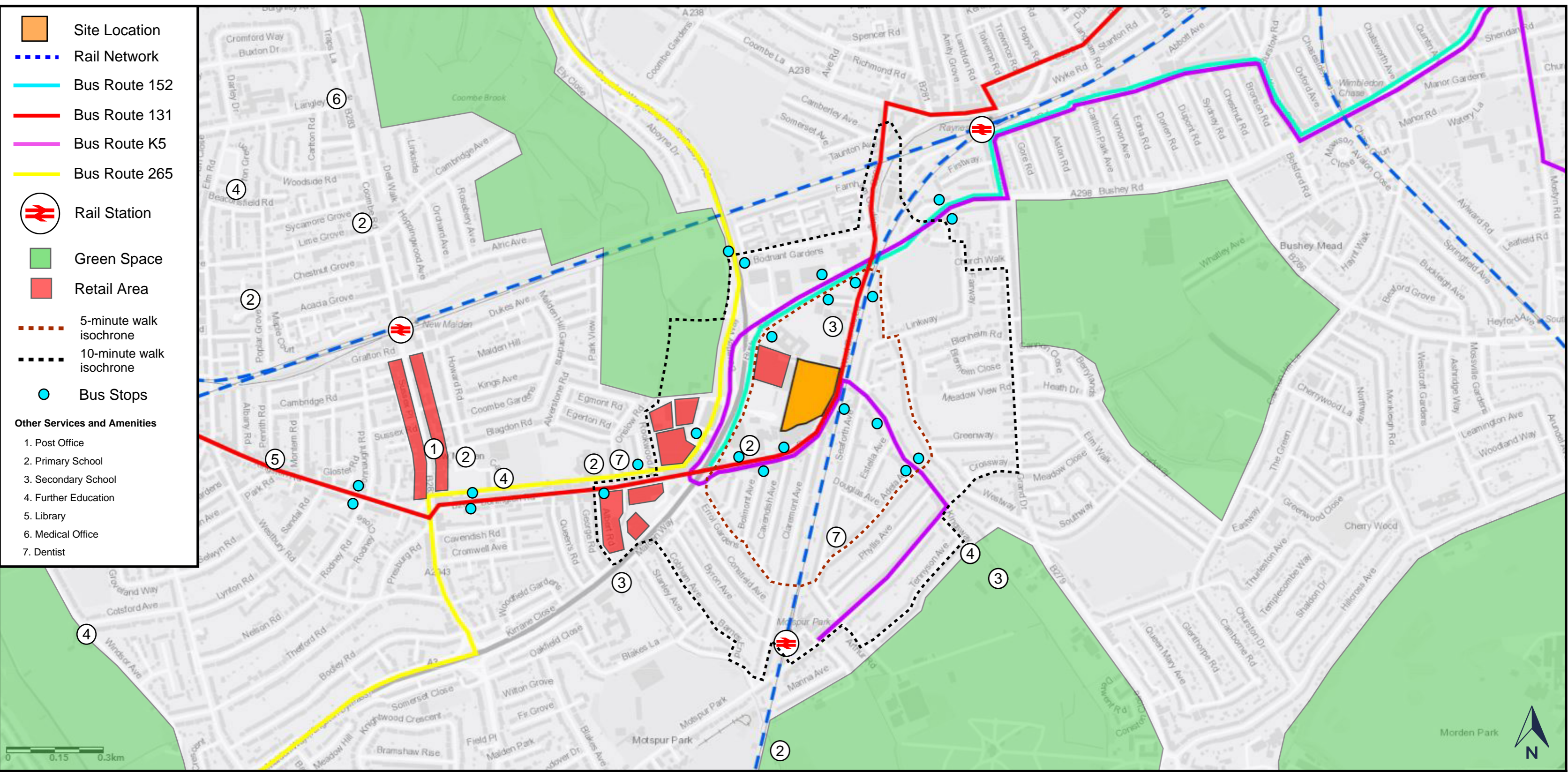
- Burlington Road – received a mix score through the audit process, reflecting the juxtaposition created by sustainable transport provision, including bus stops, footways, advisory cycle lanes and dropped kerbs at crossing points, alongside a limited sense of place, with strong traffic presence and some restrictions to permeability
- West Barnes Lane – received an ‘improved’ score, which reflects a number of measures which are present in this area including raised tables at crossings, trees and greenery. Cycle provision was limited however and parked cars were observed along this route
- Claremont Avenue – this is the main link for pedestrians and cyclists travelling between the site and the nearest rail station at Motspur Park. The audit found that Claremont Avenue is a reasonably quiet residential street, which is conducive to short journeys on foot or cycle. Wayfinding was observed to be quite poor however, and it may be that several journeys are needed prior to the route becoming familiar with those residents that are new to the area
- New Malden High Street – acts as the nearest ‘high street’ or commercial centre for the site. This area was observed to comprise a well designed, high quality environment for all users. Amenity is increased through the installation of street trees and rest areas, including benches

4.9.4 A fully copy of the PaCERS audit report is provided at **APPENDIX I**.



Regional Public Transport

Figure 4.1



5 Baseline Conditions

5.1 Highway Network Operation

- 5.1.1 This section of the TA presents a review of the baseline highway conditions in the vicinity of the proposed development site and is based around a 'study area' of local junctions which was agreed with LBM and TfL at the scoping stage of the assessment.
- 5.1.2 As such, it was agreed that the study area for the TA would comprise:
- The proposed site access junction with Burlington Road;
 - Burlington Road / Claremont Avenue roundabout to the south of the site;
 - Burlington Road / West Barnes Lane junction to the north of the site; and,
 - Shannon Corner roundabout to the southwest of the site
- 5.1.3 In addition to the above, the Tesco access junction with Beverley Way to the west of the site has also been surveyed. The operation of this junction has not been reviewed within the TA however, as traffic movements to/from Tesco are not expected to alter as a result of the proposed development. A plan showing the study area is provided at **FIGURE 5.1**.
- 5.1.4 As part of the pre-application discussions, LBM and TfL confirmed that there are no planned changes during the study period of this TA to the transport networks, including improvement works, which are relevant to the proposed development site.
- 5.1.5 Traffic surveys were conducted at each of the study junctions referred to above on Thursday 20th September 2018. The surveys were carried out by an independent specialist survey company covering the 12-hour period between 07:00-19:00 and recorded the observed turning movements at each location by vehicle classification.
- 5.1.6 As part of the data gathering tasks, it was identified that scheduled gas works were being undertaken on Grand Drive between July and December 2018 meaning that the traffic surveys could not be undertaken during a period when the works would not be in place. The works included a lane closure on Grand Drive meaning that some localised traffic redistribution may have been occurring at the time of the surveys, as a result of the road works. It was therefore agreed with LBM that this matter would be reviewed following the survey work and that follow-up sensitivity surveys could be undertaken in the New Year, as required.
- 5.1.7 This matter was subsequently reviewed at the beginning of 2019, however, this identified that the gas works have moved across to the northern section of Burlington Road and are scheduled to run between January and June 2019. Follow-up survey work has therefore not been undertaken.
- 5.1.8 Upon review of the data, the AM peak hour was confirmed as occurring between 08:00-09:00 and the PM peak hour between 17:00-18:00. The 2018 Observed turning movements for the AM and PM peak hours are subsequently presented at **FIGURES 5.2** and **5.3** respectively.
- 5.1.9 The 2018 Observed turning movements have subsequently been analysed using industry standard software Junctions 9 for uncontrolled junctions and LinSig 3 for signalised junctions, to review their existing operational performance. The results of this analysis are presented below, by junction.

Site Access / Burlington Road

- 5.1.10 This junction comprises a three-arm uncontrolled priority junction between Burlington Road and the Site Access (which currently serves the existing uses of the site and the Tesco egress).
- 5.1.11 All observed trips associated with the existing site and Tesco have been included in the junction modelling at this location. For reference, the average number of vehicles exiting Tesco via the Burlington Road egress per hour, was 91, with 44 recorded in the AM peak and 123 in the PM peak.
- 5.1.12 The 2018 Observed performance results for this junction are summarised below at **TABLE 5.1**.

TABLE 5.1: 2018 Observed Operational Performance: Site Access / Burlington Road

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (northbound)	0.31	0.4	0.34	0.5
Burlington Rd (southbound)	0.10	0.2	0.15	0.4
Site Access	0.09	0.1	0.24	0.3

- 5.1.13 The operational analysis presented above indicates that this junction currently operates within the recommended capacity threshold (85%) in both the AM and PM peak hours. Queuing is limited and is less than 1 pcu (passenger car units) on any approach, during either peak.
- 5.1.14 It should be noted that as queuing at this junction has been observed on site to be minimal, which is reflected by the Junctions 9 model, that no further calibration of the model has been undertaken.

Burlington Road / Claremont Avenue

- 5.1.15 This junction comprises a three-arm uncontrolled roundabout junction between Burlington Road and Claremont Avenue.
- 5.1.16 The 2018 Observed performance results are summarised below at **TABLE 5.2**.

TABLE 5.2: 2018 Observed Operational Performance: Burlington Road / Claremont Avenue

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (southbound)	0.84	4.7	0.92	9.4
Claremont Avenue	0.83	4.1	0.41	0.7
Burlington Rd (northbound)	0.71	2.3	0.91	8.0

- 5.1.17 The operational analysis presented above indicates that this junction currently operates within the recommended capacity threshold (85%) in the AM peak, but in excess of this level, although within the theoretical threshold (100%) in the PM peak. Queuing is mainly reported on the Burlington Road (southbound) approach in the PM peak.
- 5.1.18 The model for this junction has been built using Junctions 9 and has been calibrated using intercept and slope corrections to ensure that the results are reflective of the conditions observed on the ground. Details of this process, including the initial input data and results, adjustments and revised results are presented at **APPENDIX J** for information. The final set of results for the 2018 Observed scenario are as per those presented at **TABLE 5.2**.

Burlington Road / West Barnes Lane

- 5.1.19 This junction comprises a three-arm uncontrolled priority junction between Burlington Road and West Barnes Lane. There is a right turn ban from West Barnes Lane East to West Barnes Lane North and there is a level crossing immediately to the east of the junction on West Barnes Lane East. A footbridge with ramps for cyclists and users with mobility impairments is provided over the level crossing.
- 5.1.20 In order to reflect the interaction of the level crossing with the operation of the junction, the performance analysis has been undertaken using LinSig and the observed level crossing downtime has been used to inform the 'signal cycle times' for the junction. The observed and modelled queues have then been compared, as part of the model building process.
- 5.1.21 The 2018 Observed performance results are summarised below at **TABLE 5.3**.

TABLE 5.3: 2018 Observed Operational Performance: Burlington Road / West Barnes Lane

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
West Barnes Lane	63.4	35.1	38.4	23.8
Burlington Rd Left (southbound)	24.8	3.4	60.5	10.6
Burlington Rd Ahead (southbound)	20.1	0.1	33.7	0.3
Burlington Rd Ahead (northbound)	25.8	0.2	17.7	0.1
Burlington Rd Right (northbound)	20.8	10.0	48.3	33.2
PRC (%)	41.9		48.8	
Cycle time (secs)	371		406	

- 5.1.22 The operational analysis presented above indicates that this junction currently operates within the recommended capacity threshold (90%) in both the AM and PM peak hours. Due to the presence of the level crossing at this junction however, it is less informative to review and compare capacity values such as the RFC, DoS or PRC, as is typically considered when reviewing junction performance.
- 5.1.23 Queuing at the junction therefore provides the main benchmark for the operational performance and in particular, will be considered in the comparison of the 2021 future year scenarios (presented at **CHAPTER 7**).

Shannon Corner

- 5.1.24 This junction comprises a four-arm grade-separated signalised roundabout between Burlington Road (east-west), Beverley Way (north – which also serves the main Tesco left-in left-out access on the southbound approach) and Malden Way (south). Signalised pedestrian crossings are provided on the approaches to the junction.
- 5.1.25 Initial discussions with TfL indicated that the authority may have a LinSig model for this junction, however, this was not confirmed during the initial preparation of this TA. To inform this TA, a new model has therefore been developed and key input criteria including saturation flows and queues have been recorded on site. The model has then been optimised using a fixed cycle time of 60 seconds.
- 5.1.26 The applicant is aware of TfL's LMAP (LinSig Model Audit Process) and is happy to work with the authority and provide further details of the modelling as part of the review of the planning application, as appropriate. A copy of the 2018 Observed model file has been shared with TfL and discussions regarding the modelling process are on-going.

5.1.27 The 2018 Observed performance results are summarised below at **TABLE 5.4**.

TABLE 5.4: 2018 Observed Operational Performance: Shannon Corner

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
Beverley Way	56.9	5.5	70.2	7.2
Burlington Road EB	28.2	0.2	42.5	0.7
Burlington Road WB	54.0	2.1	46.7	1.5
Malden Way	36.2	1.9	55.7	3.3
A3 NB Off Left	55.7	4.7	68.3	7.6
PRC (%)	20.5		12.1	
Cycletime (secs)	60		60	

5.1.28 The operational analysis presented for this junction indicates that the junction currently operates within the recommended capacity threshold (90%) in the AM and PM peak hours respectively.

5.1.29 The Junctions 9 and LinSig 3 output files are provided at **APPENDIX K**.

5.2 Road Safety Review

5.2.1 Personal Injury Accident (PIA) data has been obtained from TfL for the most recently available three year period up to the end of December 2017. A plot of the reported accidents is presented at **FIGURE 5.4**.

5.2.2 The PIA data identifies that a total of 51 accidents have been reported in the study area around the Burlington Road site in the three-year study period. These accidents have been subdivided by severity, with 44 classified as 'slight' accidents and 7 classified as 'serious' (see **TABLE 5.5**). There were no fatal accidents.

Table 5.5: Local Accident Data

Junction/Link	Slight	Serious	Fatal
Kingston Bypass/Burlington Road	8	2	0
West Barnes Lane	12	2	0
Bushey Road	9	2	0
Kingston Bypass	8	1	0
Burlington Road	3	0	0
Kingston Bypass/Bushey Road	3	0	0
Beverley Road/Burlington Road	1	0	0
Total	44	7	0

Source: TfL

5.2.3 The serious severity incidents were generally distributed across the study area, rather than being concentrated at any particular cluster points. Of the incidents reported, two occurred on Bushey Road, one involving a motorcyclist losing control of the vehicle and another where a pedestrian attempted to cross the road without using a formal crossing point and was struck by a vehicle.

5.2.4 One serious incident occurred on Burlington Road near to Beverley Way when a vehicle struck the rear of a stationary motorcycle. Two serious incidents occurred in the vicinity of the Shannon Corner junction, one as a result of a driver losing control of the vehicle due to a medical episode and the other when a vehicle struck a pedestrian whilst exiting the petrol filling station.

- 5.2.5 One serious incident was reported at the junction of Burlington Road / West Barnes Lane when a cyclist was struck from behind by a vehicle and the other occurred at the level crossing when a vehicle sped through the crossing during the gate closure procedure striking waiting pedestrians.
- 5.2.6 Of the slight severity accidents, 8 involved cyclists, the majority of which are attributed to drivers / riders failing to look at junctions or motorists passing too close to cyclists. A further 7 slight accidents involved pedestrians, with none of these occurring at a formal crossing point. The rest involved motor vehicles, with the majority consisting of rear end shunts associated with inattentiveness, accidents attributed to a failure to look at junctions and one incident involving a driver falling asleep at the wheel.
- 5.2.7 There appears to be no clear pattern to the above incidents in the vicinity of the proposed development and no accidents that can be directly attributed to highway design or layout.

5.3 Parking Survey

- 5.3.1 In order to understand the existing utilisation of on-street parking, and therefore the 'parking stress' of the available resource within the vicinity of the site, it was agreed with LBM that parking surveys would be carried out in accordance with the Lambeth Council methodology.
- 5.3.2 As such, parking surveys were carried out by an independent specialist survey company on two weekdays, between the hours of 00:30 and 05:30. All roads within a 200m walk of the site, up to the subsequent end of the road or junction with another road were surveyed and the survey area was discussed and agreed in advance with LBM. The survey area is illustrated below at **FIGURE 5.5**.

FIGURE 5.5: Parking Survey Study Area



5.3.3 The surveys identified a total on-street parking capacity of 439 spaces, made up of 4 designated disabled bays, 102 parallel bays and 333 unrestricted / unclassified bays. The observed occupancy of the parking spaces, by road, are presented below at **TABLE 5.6** for the two survey days.

TABLE 5.6: Observed On-Street Parking Demand V Capacity

Road / Link	Capacity	Observed Occupancy Weds 11/10/18		Observed Occupancy Thurs 12/10/18	
	Spaces	Spaces	%	Spaces	%
Burlington Road (B282)	9	1	11.1	3	33.3
West Barnes Lane (B282)	22	14	63.6	14	63.6
Belmont Avenue	4	5	125.0	5	125.0
Cavendish Avenue	74	57	77.0	56	75.7
Claremont Avenue	83	83	100.0	81	97.6
Douglas Avenue	16	12	75.0	12	75.0
Estella Avenue	71	67	94.4	61	85.9
Linkway	53	22	41.5	24	45.3
Seaforth Avenue	95	86	90.5	81	85.3
West Barnes Lane	12	9	75.0	7	58.3
Total	439	356	81.1	344	78.4

5.3.4 The results of the parking surveys identified that 356 and 344 of the 439 available car parking spaces were occupied on the two survey days, respectively. Looking at the survey results in detail indicates that:

- One vehicle parked informally on Belmont Avenue on both survey days, resulting in this road being occupied by more parked vehicles than there are formal spaces;
- Parking demand is highest on Claremont Avenue (and Belmont Avenue, although noting that only 4 formal spaces are available at this location);
- Estella Avenue and Seaforth Avenue also experience high levels of parking demand; and,
- There is a reasonable amount of spare capacity available on West Barnes Lane (B282), Cavendish Avenue, Douglas Avenue, Linkway and West Barnes Lane

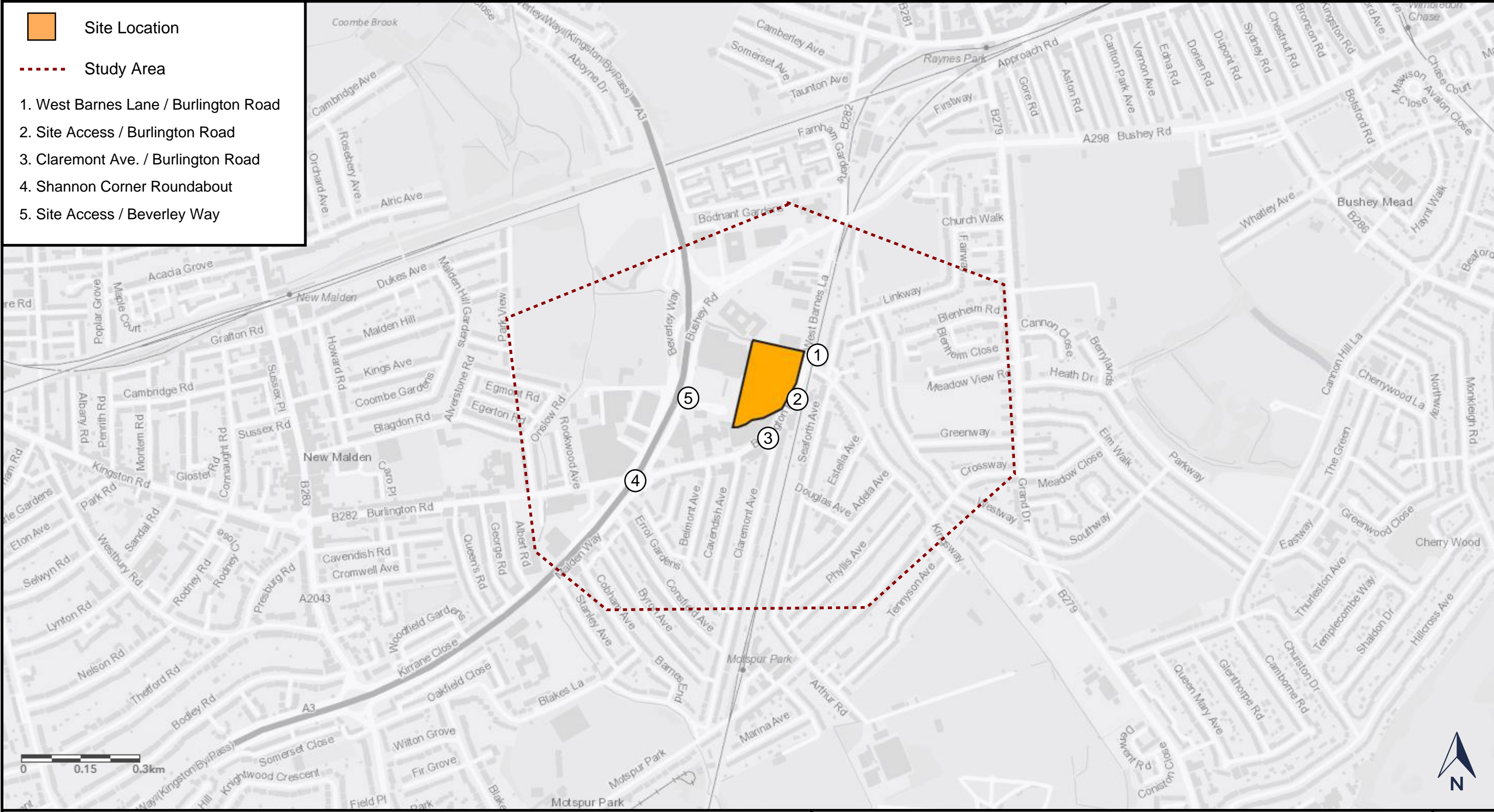
5.3.5 It is generally accepted that a parking occupancy level of 90% or more represents an area of 'parking stress'. In the vicinity of the 265 Burlington Road site, the surveys identified that the observed parking demand is between 78.4% and 81.1% which is below the 90% threshold and therefore indicates that there is spare on-street parking capacity available in the vicinity of the site.

5.3.6 It should be noted that the proposed level of parking for the development is intended to be able to cater for the demand associated with the residents of the new homes and the above survey data is therefore presented only for information.

Site Location

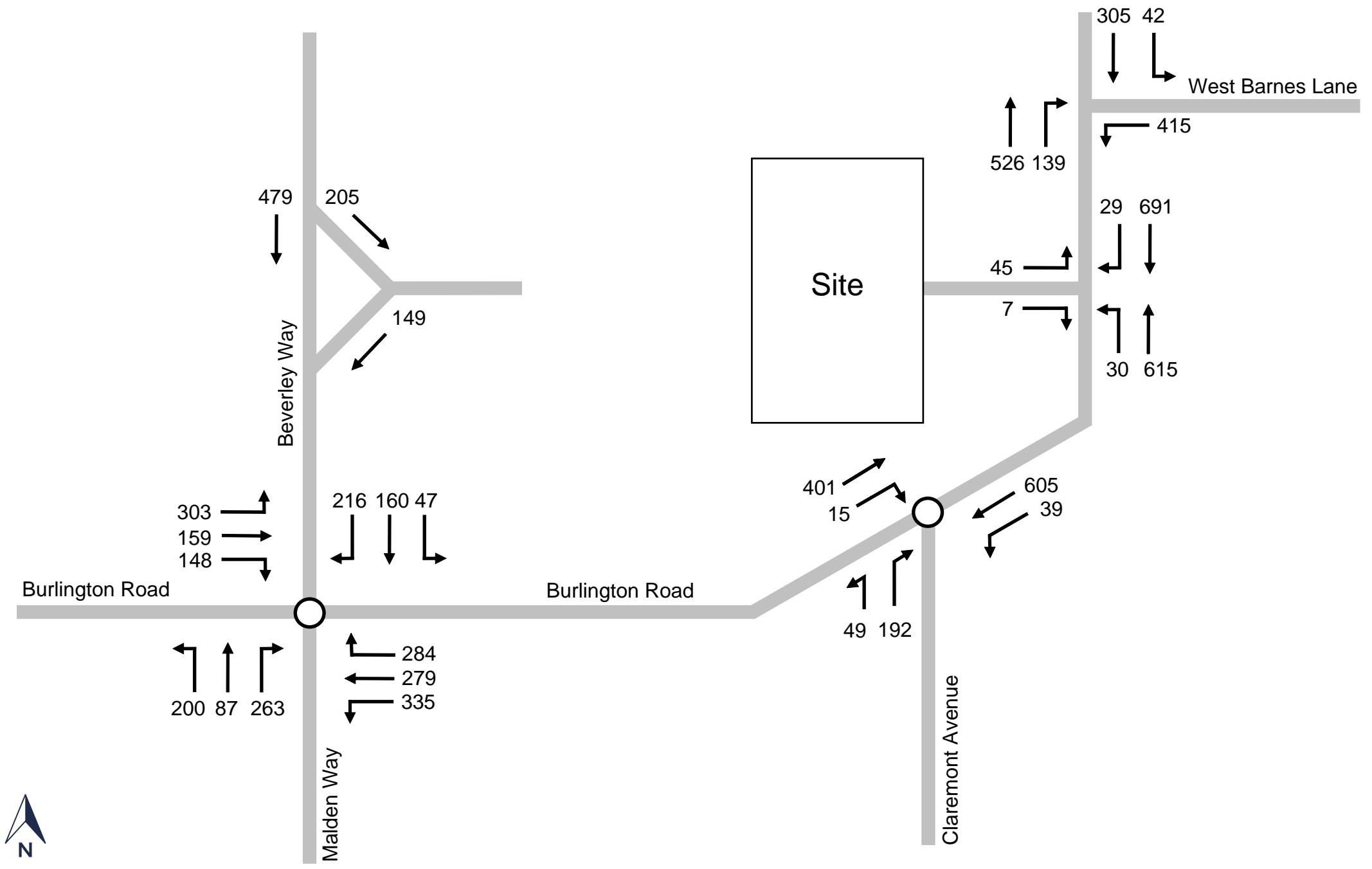
Study Area

- 1. West Barnes Lane / Burlington Road
- 2. Site Access / Burlington Road
- 3. Claremont Ave. / Burlington Road
- 4. Shannon Corner Roundabout
- 5. Site Access / Beverley Way



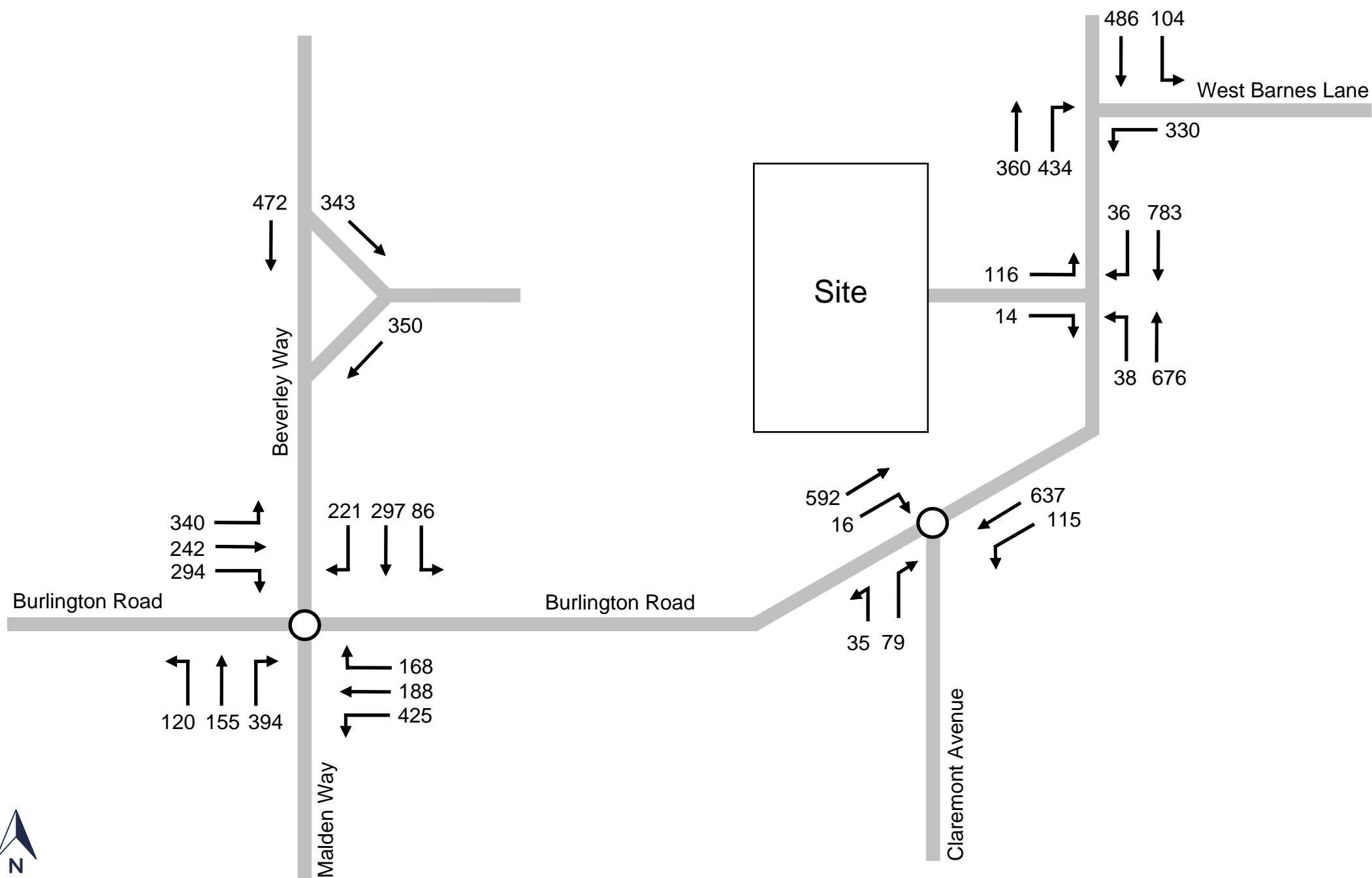
TA Study Area

Figure 5.1



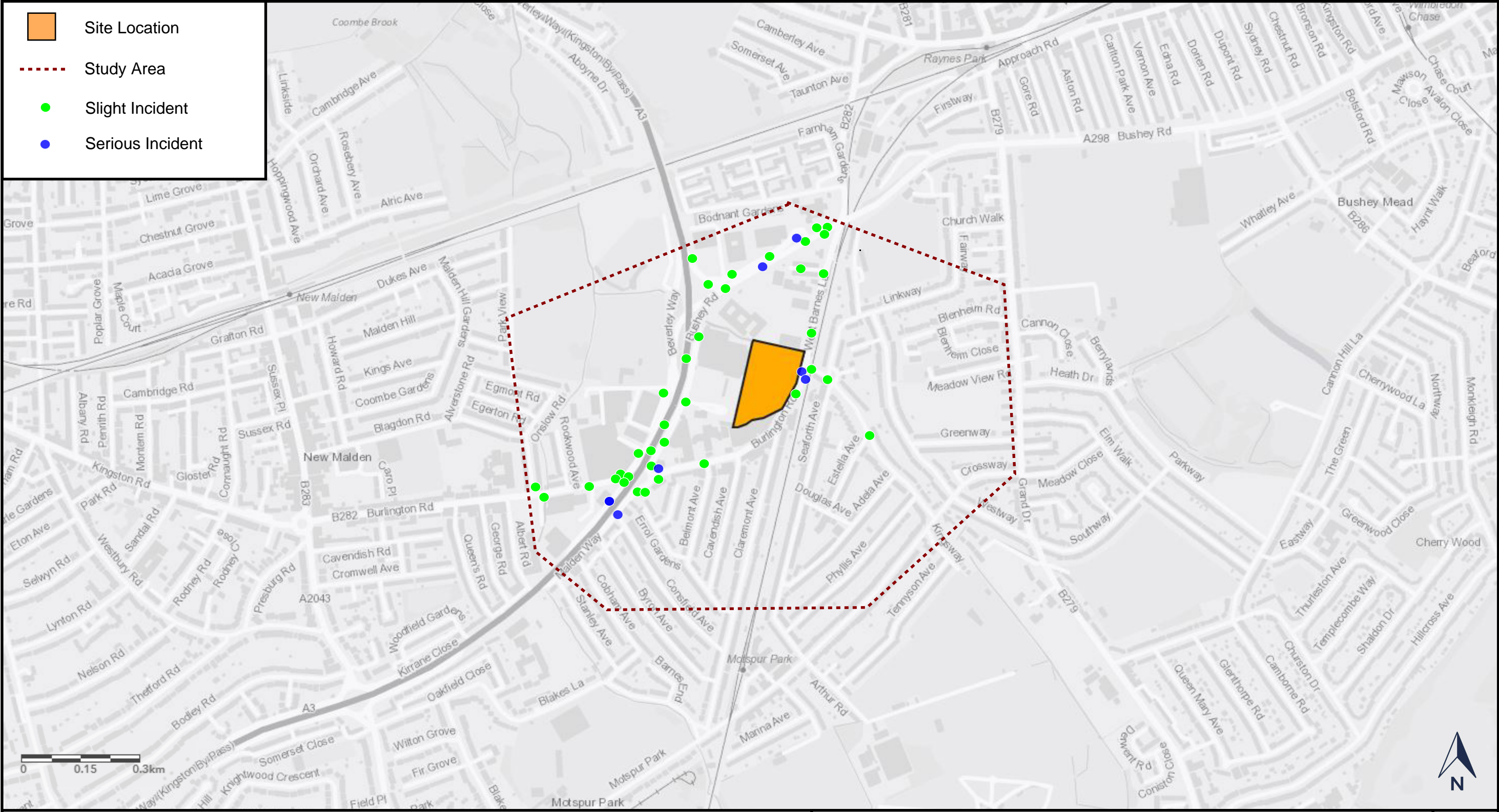
2018 Observed AM Peak

Figure 5.2



2018 Observed PM Peak

Figure 5.3



6 Trip Generation

6.1 Existing Trip Generation

- 6.1.1 As discussed at **CHAPTER 2** of this Transport Assessment, the proposed development site currently comprises an existing commercial use on the northern portion of the site which includes associated car parking, as well as further car parking associated with the existing Tesco store to the south.
- 6.1.2 In respect of the latter, Tesco has confirmed that it no longer requires the 98 spaces which will be replaced by the development proposals and therefore, no account of the trips made in relation to these spaces has been made within this assessment as it is assumed that the vehicles that may use these spaces at the moment will redistribute to other spaces within the Tesco car park.
- 6.1.3 In terms of the existing commercial use, whilst this is currently vacant, discussions with Redrow and their planning consultant has determined that this facility could be brought back into use without the requirement to obtain planning permission. As such, the use should be treated as a committed development.
- 6.1.4 As presented at **CHAPTER 2**, based upon a review of the TRICS database the northern portion of the site which houses an existing office use would be expected to generate in the order of 27 and 30 vehicular trips in the AM and PM peak hours respectively. These trips will therefore be included in the 'Do Minimum' (without development) scenario such that the net impact of the development proposals can be appraised by the 'Do Something' (with development) scenario. Further details of the assessment scenarios are presented at **CHAPTER 7**.

6.2 Proposed Trip Generation

- 6.2.1 This section of the TA presents the forecast multi-modal trip generation for the proposed development setting out the number of predicted trips which will be made to and from the site during the AM and PM peak hours, by the following modes:
- Walking;
 - Cycling;
 - Bus;
 - Underground / Rail, and;
 - Motor Vehicles
- 6.2.2 The approach to estimating the trip generation associated with the proposed development presented in the TA Scoping Report was based around the application of vehicular trip rates, derived from TRICS, to the proposed accommodation schedule. Once the vehicular trips had been established, a mode share derived from Census (2011) data would then be applied to estimate the proportionate trips expected to be made by other modes.
- 6.2.3 On this basis, proposed trip rates to be applied to privately owned and affordable / rented dwellings were presented in the scoping report. For reference, application of these rates to the final accommodation schedule would result in 55 (AM) and 52 (PM) vehicular trips being expected to be generated by the proposed dwellings. Whilst these trip levels were considered to be acceptable to LBM and TfL, it was requested that total person trip rates be derived from TRICS and mode share data be applied to this instead. This approach has therefore been followed and further details are presented below:

Residential Trip Generation

- 6.2.4 Total person trip generation rates have been derived from TRICS for both privately owned and affordable / rented apartments on sites of a similar size (less than 500 dwellings) and with a similar level of accessibility (PTAL 2-5) to the proposed site. The resultant trip rates are presented below at **TABLES 6.1** and **6.2** and copies of the associated TRICS output files are provided at **APPENDIX B**.

TABLE 6.1: Residential (Private) Total Person Trip Rates, per Dwelling

Peak Hour	Arrivals	Departures	Total
AM Peak Hour	0.067	0.386	0.453
PM Peak Hour	0.270	0.136	0.406

TABLE 6.2: Residential (Affordable / Rented) Total Person Trip Rates, per Dwelling

Peak Hour	Arrivals	Departures	Total
AM Peak Hour	0.126	0.689	0.815
PM Peak Hour	0.367	0.221	0.588

- 6.2.5 The trip rates have been applied to the proposed development schedule of 456 dwellings. It should be noted that the application proposes to deliver a tenure split of 65% private and 35% affordable / rented accommodation, determined by habitable rooms as set out within the Mayor of London's 'Homes for Londoners' SPG. For the purposes of this TA, the tenure split is however based on unit numbers, which is 68% private and 32% affordable / rented. Further details of the tenure and viability matters are presented in the accompanying Planning Statement.
- 6.2.6 Application of the above trip rates to the proposed development schedule indicates that the site will be expected to generate a total of 259 (AM) and 213 (PM) trips.
- 6.2.7 These forecast trip levels have been applied to the mode share derived from Census (2011) data for the ward in which the site is located. A summary of this information is presented below at **TABLE 6.3**.

TABLE 6.3: Residential Trips by Mode

Mode	Share	AM Peak			PM Peak		
		Arrivals	Departures	Total	Arrivals	Departures	Total
Walking	7%	3	15	18	10	5	15
Cycling	4%	2	9	11	5	3	8
Bus	8%	3	17	20	11	6	17
Underground/ Rail	51%	19	112	131	70	38	108
Motor Vehicles	30%	12	67	79	42	23	65
Total	100%	39	220	259	138	75	213

- 6.2.8 The analysis presented above indicates that the proposed residential dwellings will be expected to generate 79 (AM) and 65 (PM) vehicle trips, which is similar to although in excess of the vehicular trip levels presented initially in the TA Scoping Report.

Commercial Trip Generation

- 6.2.9 In addition to the residential trips, it was also agreed through the scoping work that an estimation of commercial trips to and from the site would be included in the assessment.

6.2.10 The proposed commercial floorspace will be limited to 499sqm and furthermore, will be distributed across multiple units. As such, it is anticipated that these units will serve the new residents of the site and those passing-by the site, meaning that vehicular trips associated with this element of the development are likely to be related only to delivery and service activities.

6.2.11 The same office based trip rates applied to the existing land use have therefore been revisited. These rates indicate that a commercial use of the nature and scale proposed would not be expected to generate any large vehicle trips (by OGV or equivalent) during the peak hours. The number of light vehicle trips which could include vans and other lighter delivery vehicles is summarised below at **TABLE 6.4**.

TABLE 6.4: Commercial Vehicular Trips

Peak Hour	Arrivals	Departures	Total
AM Peak Hour	3	1	4
PM Peak Hour	1	3	4

6.2.12 When combined with the proposed residential trips, the development is therefore predicted to generate 83 (AM) and 69 (PM) vehicular trips. When allowing for the level of trip generation which is already consented, the 'new' trips would be equivalent to 56 (i.e. 83 – 27) and 39 (i.e. 69 – 30) in the peak hours respectively. The impact of the planning application in relative terms is therefore expected to equate to less than one additional vehicular trip being generated per minute in either peak hour.

6.2.13 To consider the effect of these trips on the local highway network, the trips have been distributed across the local highway network using Census (2011) journey to work data. To derive this distribution, the study area has been grouped into areas, as summarised below at **TABLE 6.5**.

TABLE 6.5: Census 2011 Journey to Work Car Driver Trip Distribution

Route	Percentage
West Barnes Lane (north)	14.5%
West Barnes Lane (east)	2.9%
Claremont Avenue	0.3%
A3 Malden Way (south)	45.1%
Burlington Road (west)	8.7%
A3 Beverley Way (north)	28.6%

6.2.14 The distribution has then been applied to the proposed development traffic and this is considered further, at **CHAPTER 7**, in respect of the forecast operational performance of the study junctions.

Construction Trips

6.2.15 Details of the anticipated construction programme, working hours, staff numbers, HGV numbers, routing and potential management measures are presented separately in the Construction Logistics Plan which is a stand-alone report submitted as part of the wider planning application package.

7 Operational Analysis

7.1 Assessment Scenarios

- 7.1.1 In order to consider the operation of the highway network forming the study area in the future, two assessment scenarios have been prepared to represent the forecast situation ‘without’ and ‘with’ the proposed development in 2021, when the development is expected to become operational (i.e. occupied by the future residents).
- 7.1.2 The ‘without’ development scenario is referred to as the Do Minimum case and assumes that the existing use of the site is retained and occupied (as per the trip forecasts presented in **CHAPTER 2**). Estimated traffic growth, which has been derived from TEMPRO and adjusted by NTM, has been applied to the observed traffic flows to represent the likely future year background traffic volumes in 2021.
- 7.1.3 Liaison with LBM determined that there are no committed developments located in the vicinity of the site. Officers of Royal Borough Kingston upon Thames (RBKuT) have also been contacted as the site is located within the vicinity of the borough boundary. No committed developments have been identified in this regard.
- 7.1.4 A comparative ‘with’ development scenario, referred to as the Do Something case, has then been prepared, to allow the potential net impact of the development to be appraised. In this scenario, the potential traffic flows associated with the current use of the development site have been subtracted from the Do Minimum scenario and replaced with the proposed development traffic (as discussed in **CHAPTER 6**).
- 7.1.5 The forecast turning movements for the 2021 Do Minimum and Do Something scenarios are illustrated at **FIGURES 7.1 - 7.4**.

7.2 Operational Assessment

- 7.2.1 The operational assessments discussed at **CHAPTER 5** for the 2018 Observed scenario have been re-run to inform this section of the TA, to allow the future year Do Minimum and Do Something scenarios to be appraised.
- 7.2.2 The performance of each of the study junctions in the 2021 Do Minimum and Do Something scenarios is therefore presented below, by junction.

Site Access / Burlington Road

- 7.2.3 The 2021 Do Minimum and Do Something performance results for this junction are summarised below at **TABLES 7.1** and **7.2**.

TABLE 7.1: 2021 Do Minimum Operational Performance: Site Access / Burlington Road

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (northbound)	0.32	0.5	0.36	0.5
Burlington Rd (southbound)	0.16	0.5	0.18	0.6
Site Access	0.10	0.1	0.30	0.4

TABLE 7.2: 2021 Do Something Operational Performance: Site Access / Burlington Road

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (northbound)	0.33	0.5	0.37	0.6
Burlington Rd (southbound)	0.12	0.3	0.21	0.7
Site Access	0.26	0.3	0.28	0.4

7.2.4 The operational analysis presented above indicates that this junction is expected to continue to operate within the recommended capacity threshold (85%) in both the AM and PM peak hours, in the future year scenarios. Queuing remains limited and is generally less than 1 pcu (passenger car unit) on any approach, during either peak, meaning that the perceptible operation of this junction should be very similar to as it is currently.

Burlington Road / Claremont Avenue

7.2.5 The 2021 Do Minimum and Do Something performance results for this junction are summarised below at TABLES 7.3 and 7.4.

TABLE 7.3: 2021 Do Minimum Operational Performance: Burlington Road / Claremont Avenue

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (southbound)	0.87	5.8	0.96	13.1
Claremont Avenue	0.92	6.7	0.44	0.8
Burlington Rd (northbound)	0.75	2.3	0.95	11.1

TABLE 7.4: 2021 Do Something Operational Performance: Burlington Road / Claremont Avenue

Arm	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue
Burlington Rd (southbound)	0.93	10.2	0.98	16.8
Claremont Avenue	1.04	12.4	0.46	0.8
Burlington Rd (northbound)	0.75	2.9	1.00	18.1

7.2.6 The performance of this junction is expected to deteriorate in the 2021 future year scenarios. The maximum RFCs are predicted to exceed the recommended threshold (85%) in the 2021 without development (Do Minimum) scenario, in both peak hours.

7.2.7 In the 2021 Do Something scenario, the maximum RFCs are predicted to increase to 1.04 and 1.00 in the AM and PM peak hours respectively. In these cases, associated queuing is predicted to increase to 12.4 pcus in the AM peak on Claremont Avenue (an increase of 5.7 pcus compared to the Do Minimum scenario) and 18.1 pcus in the PM peak on the Burlington Road northbound approach (an increase of 7.0 pcus compared to the Do Minimum scenario).

Burlington Road / West Barnes Lane

7.2.8 The 2021 Do Minimum and Do Something performance results for this junction are summarised below at TABLES 7.5 and 7.6.

TABLE 7.5: 2021 Do Minimum Operational Performance: Burlington Road / West Barnes Lane

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
West Barnes Lane	66.6	37.5	39.8	24.9
Burlington Rd Left (southbound)	25.6	3.5	65.5	11.4
Burlington Rd Ahead (southbound)	21.1	0.1	35.0	0.3
Burlington Rd Ahead (northbound)	26.8	0.2	18.8	0.1
Burlington Rd Right (northbound)	21.7	10.5	51.2	35.8
PRC (%)	35.1		37.5	
Cycletime (secs)	371		406	

TABLE 7.6: 2021 Do Something Operational Performance: Burlington Road / West Barnes Lane

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
West Barnes Lane	65.7	36.9	39.8	24.9
Burlington Rd Left (southbound)	25.6	3.5	64.3	11.3
Burlington Rd Ahead (southbound)	20.9	0.1	35.3	0.3
Burlington Rd Ahead (northbound)	27.2	0.2	18.5	0.1
Burlington Rd Right (northbound)	21.8	10.5	49.9	34.7
PRC (%)	37.1		40.0	
Cycletime (secs)	371		406	

7.2.9 For both future year scenarios, the cycletimes have been retained from the 2018 Observed model for consistency. As noted at **CHAPTER 5**, the RFC / DoS and PRC values are less informative when considering the performance of this junction, due to the influence of the level crossing on the overall operation.

7.2.10 As such, the main reference point is the forecast queues and in this case, the Do Minimum and Do Something results are very similar with only modest changes predicted (all of which are less than one pcu). Whilst it is recognised that this junction / level crossing acts as a constraint on the local highway network, the impact of the proposals at this location is expected to be negligible.

7.2.11 A key reason for this is that it is expected that the majority of trips to be undertaken by car associated with the proposed development will be to / from the south, linking with the A3 at Shannon Corner.

Shannon Corner

7.2.12 The 2021 Do Minimum and Do Something performance results for this junction are summarised below at **TABLES 7.7** and **7.8**.

TABLE 7.7: 2021 Do Minimum Operational Performance: Shannon Corner

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
Beverley Way	58.8	5.8	78.4	8.5
Burlington Road EB	29.6	0.2	44.0	0.5
Burlington Road WB	55.9	2.2	48.3	1.6
Malden Way	38.1	1.9	55.8	3.2
A3 NB Off Left	54.4	4.7	67.9	7.7
PRC (%)	15.3		5.0	
Cycletime (secs)	60		60	

TABLE 7.8: 2021 Do Something Operational Performance: Shannon Corner

Arm	AM Peak		PM Peak	
	DoS (%)	Queue (MMQ)	DoS (%)	Queue (MMQ)
Beverley Way	58.8	5.8	78.4	8.5
Burlington Road EB	29.8	0.3	46.0	0.5
Burlington Road WB	59.2	2.4	49.4	1.6
Malden Way	38.8	1.9	56.4	3.2
A3 NB Off Left	54.6	4.7	67.6	7.9
PRC (%)	10.5		2.7	
Cycletime (secs)	60		60	

7.2.13 For both future year scenarios, the cycletimes have been retained from the 2018 Observed model and then optimised using the facility provided within the LinSig software.

7.2.14 The operational analysis indicates that this junction is expected to continue to operate within the recommended capacity threshold (90%) in both the AM and PM peak hours, in the future year scenarios. Queuing is consistent between the 2021 Do Minimum and Do Something scenarios, with changes of less than one pcu in all cases.

7.2.15 The Junctions 9 and LinSig 3 output files are provided at **APPENDIX K**.

7.3 Operational Analysis Findings Summary

7.3.1 To compare the results of the operational analysis, the outputs reported above have been summarised according to RAG (red - amber - green) classifications, based on the assessment results for the worst performing arm at each junction. The criteria for the different modelling software is as follows:

TABLE 7.9: RAG Assessment Criteria (by worst performing arm)

Junction Form / Model Type	Green	Amber	Red
Signals / LinSig (Degree of Saturation)	≤90%	91%-100%	>100%
Roundabout / Junctions 9 (Ratio of Flow to Capacity)	≤0.85	0.86-1.00	>1.00
Priority / Junctions 9 (Ratio of Flow to Capacity)	≤0.85	0.86-1.00	>1.00

7.3.2 **TABLE 7.10** has then been prepared to summarise the RAG classifications for each of the study junctions, for the 2021 Do Minimum and Do Something scenarios, as follows:

TABLE 7.10: Future Year (2021) Modelling Results Summary

Study Junction	2021 Do Minimum		2021 Do Something	
	AM Peak	PM Peak	AM Peak	PM Peak
Site Access / Burlington Rd	Green	Green	Green	Green
Burlington Rd / Claremont Avenue	Amber	Amber	Red	Amber
Burlington Rd / West Barnes Ln	Green	Green	Green	Green
Shannon Corner	Green	Green	Green	Green

7.3.3 The analysis identifies that the proposed development is not expected to alter the performance classification of any of the study junctions, with the exception of Burlington Road / Claremont Avenue. As discussed above, queuing at this junction is predicted to increase to 12.4 pcus in the AM peak on Claremont Avenue (an increase of 5.7 pcus compared to the Do Minimum scenario) and 18.1 pcus in the PM peak on the Burlington Road northbound approach (an increase of 7.0 pcus compared to the Do Minimum scenario).

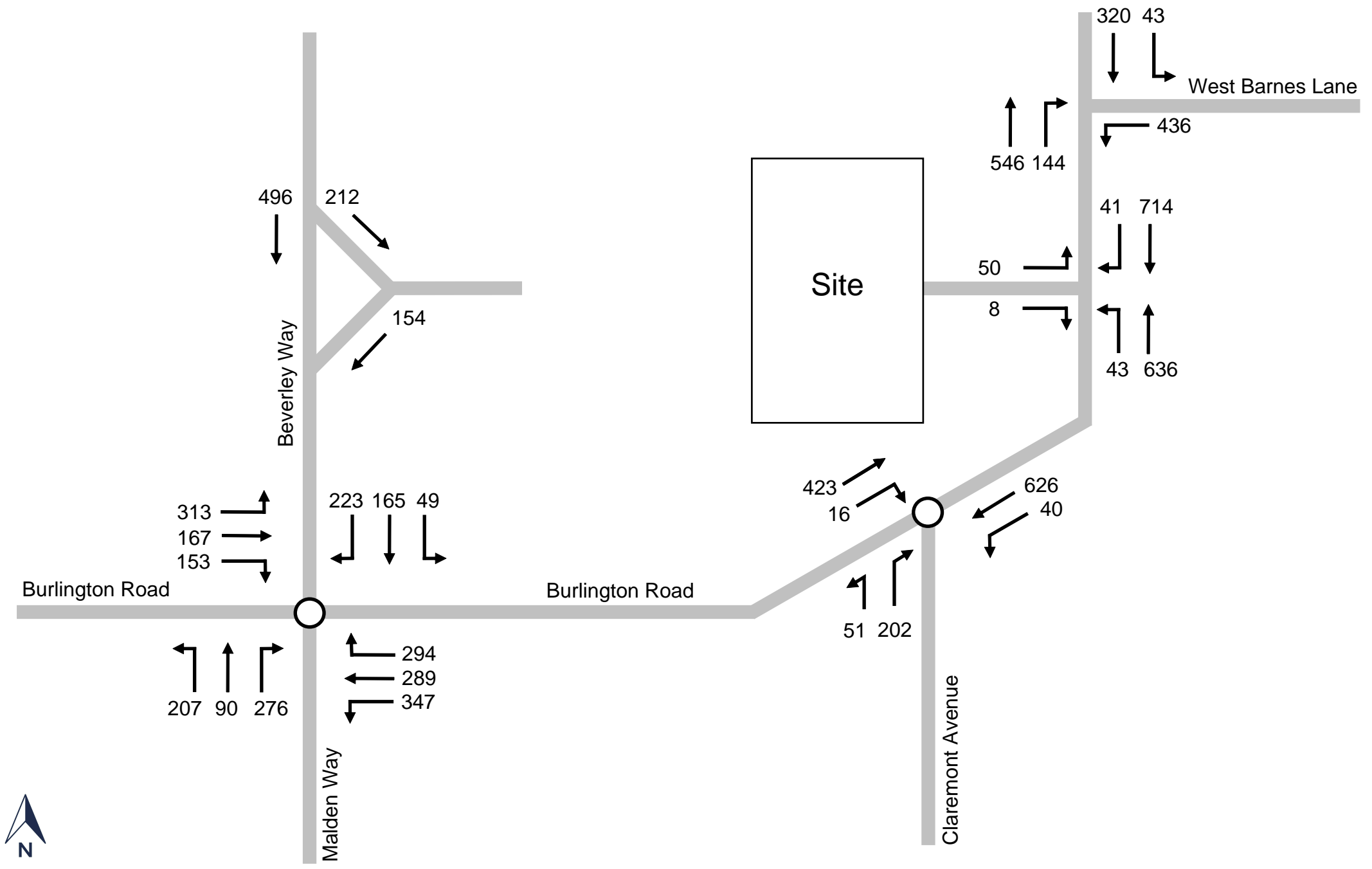
7.3.4 A meeting was held with officers of LBM to discuss the findings of the TA, including the forecast impact of the proposed development upon the operation of the junction between Burlington Road and Claremont Avenue. The discussions identified that the authority did not wish to see amendments made to the roundabout but that instead, opportunities to improve the pedestrian and urban environment at this junction and along the route between this junction and the site would be supported.

7.3.5 Redrow's project team, including their consultant Exterior Architecture, have subsequently prepared a public realm strategy which includes a series of potential street improvements. The proposed improvements are intended to enhance the pleasantness of journeys in this area and will include the following:

- Planting of street trees along the west side of Burlington Road
- Introduction of public seating opportunities
- Provision of publicly accessible cycle parking stands
- Introduction of a pedestrian crossing on the northern side of the Burlington Road / Claremont Avenue junction, facilitated through the provision of drop kerbs, tactile paving, warning signs and a coloured surface treatment which will emphasise the desire line to / from Motspur Park station
- Signage to help wayfinding to / from Motspur Park station
- Improvements to 'the lane' which comprises an existing Public Right of Way (PRoW) along the southern boundary of the proposed development site. The improvements will include measures to discourage vehicle parking at the junction of the PRoW with Burlington Road, planting, seating and visual amenity which in part will be enhanced by the surveillance of the lane which will be achieved through the delivery of the new homes

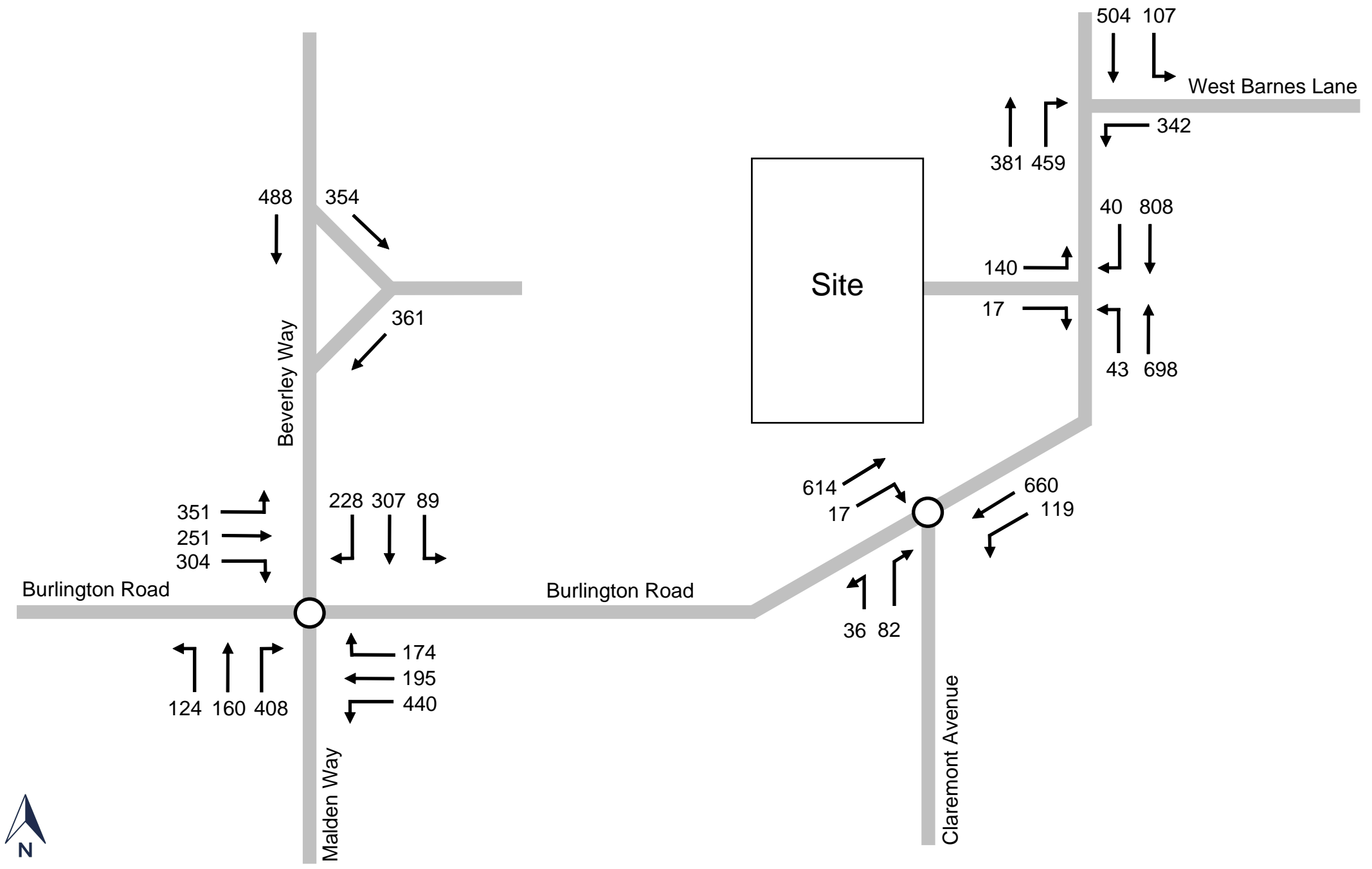
7.3.6 Upon review of the proposed strategy by LBM, it is anticipated that a financial contribution will be offered by Redrow towards these improvements, which the authority can then implement through the s106.

- 7.3.7 A copy of the Exterior Architecture 'Street Improvement Strategy' document accompanies this TA at **APPENDIX L**.
- 7.3.8 Other than mentioned above, LBM and TfL have confirmed that there are no planned changes to the transport networks which are relevant to the site, during the study period. The site access junction will be improved as part of the development proposals and a strategy has been put forward for the Burlington Road / Claremont Avenue junction and the route between this junction and the site. It has been agreed with LBM that improvements are not required at the West Barnes Lane or Shannon Corner junctions.



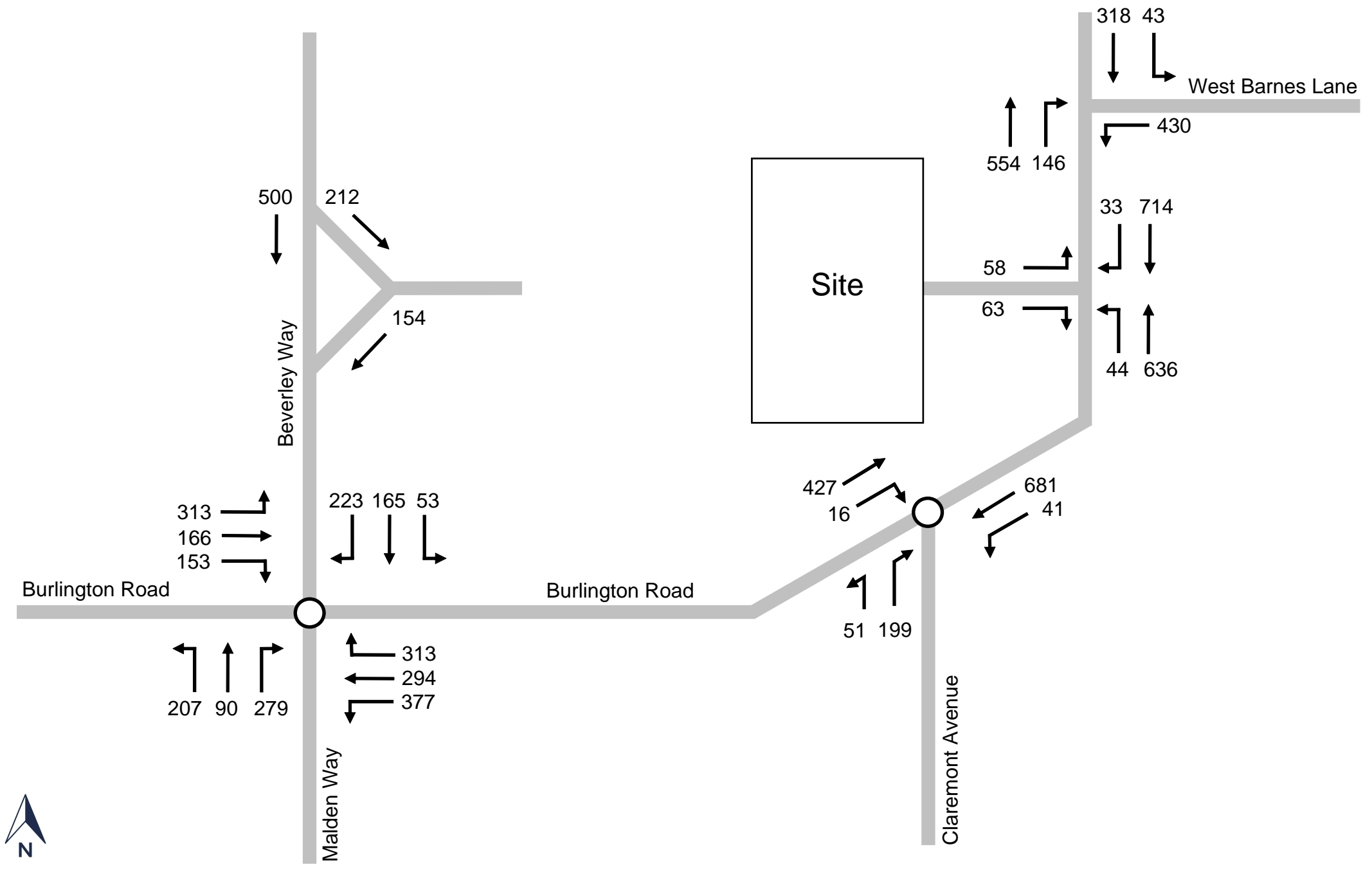
2021 Do Minimum AM Peak

Figure 7.1



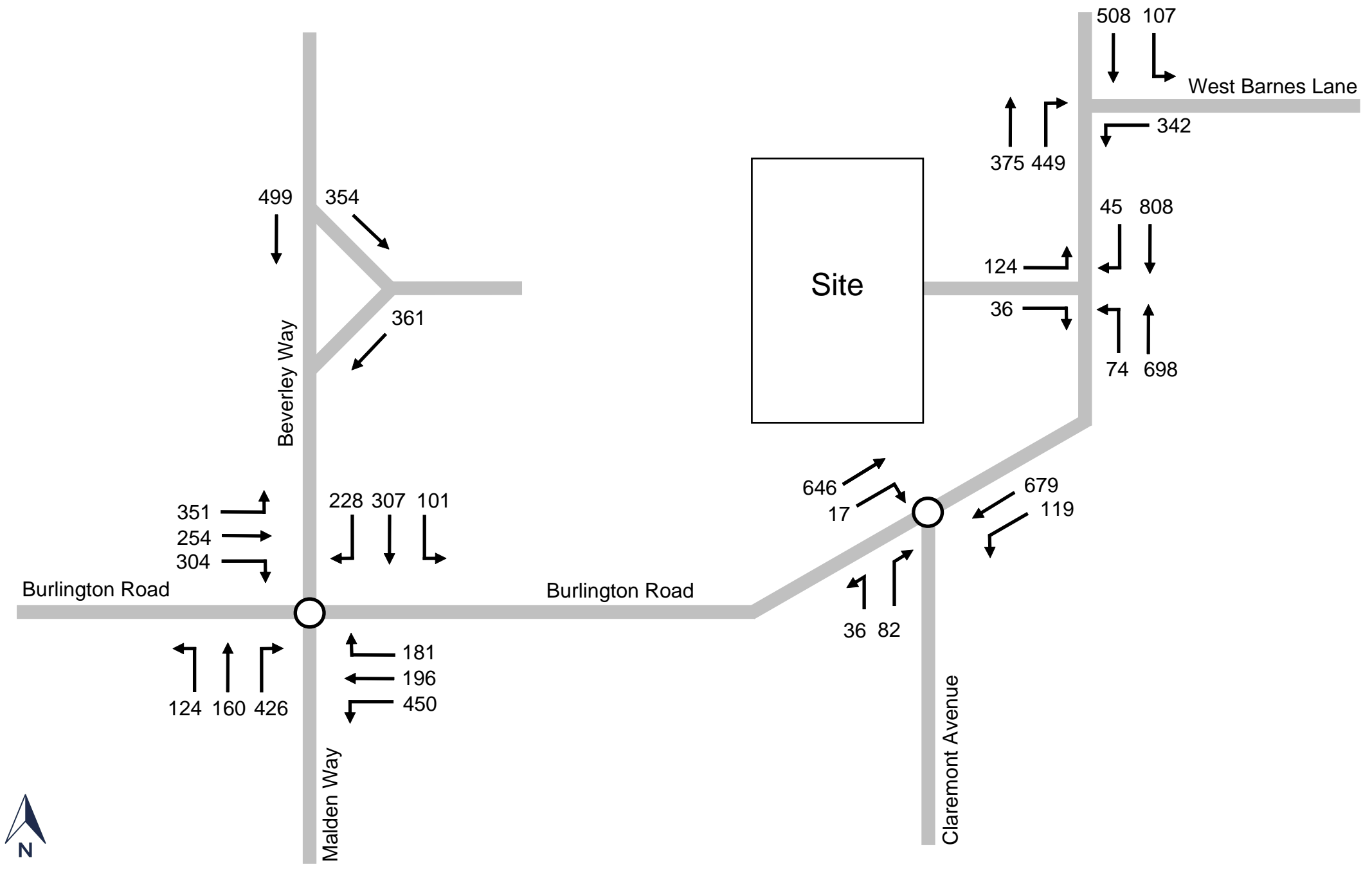
2021 Do Minimum PM Peak

Figure 7.2



2021 Do Something AM Peak

Figure 7.3



2021 Do Something PM Peak

Figure 7.4

8 Summary

- 8.1.1 This Transport Assessment has been prepared on behalf of Redrow in support of their planning application to redevelop their site at 265 Burlington Road, located in the West Barnes area of New Malden, in the London Borough of Merton.
- 8.1.2 The TA has been prepared following detailed pre-application discussions with officers of LBM and TfL and the report is accompanied by a Residential Travel Plan (TP), Framework Delivery & Servicing Plan (DSP) and Framework Car Park Management Plan (CPMP).
- 8.1.3 The site is made up of three parcels of land. The northern parcel comprises a vacant 1980's office building arranged over two storeys with an interconnecting single storey office building at the rear and an interconnecting warehouse to the side totalling 3,880sqm. These commercial facilities are served by 100 existing on-site car parking spaces.
- 8.1.4 In addition, to the south and west of the commercial premises is further car parking associated with the adjacent Tesco store. Tesco is located immediately to the west of the proposed development site and includes car parking to the south of the store, as well as a small element of car parking comprising 98 spaces which will be redeveloped on the proposed site. Tesco has confirmed that it no longer requires these spaces which are located on the proposed site and will retain 577 spaces to serve the store on the adjacent site.
- 8.1.5 The proposed scheme comprises demolition of the existing buildings and erection of two blocks of development ranging in height between seven and 15 storeys and comprising 456 new homes, of which 114 will be one beds, 290 will be two beds and 52 will be three beds. 499sqm of B1(a) office space will be accommodated at ground floor level along with 220 car parking spaces, 830 cycle parking spaces, a realigned junction onto Burlington Road, hard and soft landscaping and associated residential facilities. The application also includes minor changes to the layout and configuration of the retained Tesco car park.
- 8.1.6 The proposed development will retain the existing site access junction with Burlington Road. The position and footprint of this junction will not be altered significantly as a result of the development although new surfacing and treatments will be delivered, which will be carried through the development site and along the internal access road.
- 8.1.7 Footways will be provided on both sides of the access road which will run all the way through the site, retaining the connection with Tesco and allowing residents of the site and the local community to continue to walk to / from Tesco via the site. The internal access road will also continue to facilitate vehicular egress from Tesco through the site, onto Burlington Road.
- 8.1.8 During the construction phase, which will last for up to two years, it is anticipated that the route between Tesco and Burlington Road will need to be closed. It is therefore proposed that an alternative temporary route will be provided during the construction phase of the development. Discussions have been held with LBM regarding this arrangement and subsequently a separate planning application has been prepared for a temporary pedestrian access and vehicular egress between Tesco and Burlington Road to be created.
- 8.1.9 The site benefits from its location on an existing bus route, served by three services, and is approximately 750m north of Motspur Park rail station, 1.2km south-west of Raynes Park rail station and 1.5km east of New Malden rail station. There is an existing high mode share for rail / underground travel in the area, which reflects the location of the site and presence of these rail stations.

- 8.1.10 A total of 220 car parking spaces, including 9 which will be allocated for disabled users, with the option that further spaces could be made available for disabled users in the future, will be provided. The total level of parking provision is equivalent to a parking offer of approximately 50% (i.e. 0.50 spaces per dwelling), which has been agreed in principle with both LBM and TfL. Active and passive electric charging facilities will be provided in accordance with the current London Plan requirements.
- 8.1.11 Five parking spaces will be provided at surface level, off the internal access road, toward the western end of the site. One of these spaces will be allocated to a car club vehicle and an option will be retained to allocate one further space for this purpose, should there be sufficient demand for this in the future. The remaining surface spaces will be controlled by the site management and / or concierge team, with the intention being that these spaces will be available for short duration visits associated with the commercial units and delivery / servicing activities. Cycle parking will be provided in accordance with the London Plan.
- 8.1.12 Parking surveys undertaken in the vicinity of the site identified that the observed parking demand is between 78.4% and 81.1% which is below the 90% 'parking stress' threshold and therefore indicates that there is spare on-street parking capacity available in the vicinity of the site. It should be noted that the proposed level of parking for the development is intended to be able to cater for the demand associated with the residents of the new homes and the parking survey data has therefore been presented only for information.
- 8.1.13 The trip generation analysis presented herein indicates that the proposed residential dwellings will be expected to generate 79 (AM) and 65 (PM) vehicle trips, with the proposed commercial uses generating a further four vehicle trips, per peak hour. It should be noted that the existing office use would be expected to generate in the order of 27 and 30 vehicular trips in the AM and PM peak hours respectively, should the permitted use of the site be brought back into operation. For reference, the net trip generation of the proposals would therefore be 56 (AM) and 39 (PM) vehicles respectively, which equates to less than one additional vehicular trip being generated per minute in either peak hour.
- 8.1.14 It is broadly expected that 70% of trips associated with the site will be made by sustainable modes, with underground / rail being the main sustainable mode (51% of all trips, equivalent to 131 and 108 trips in the AM and PM peak hours) and bus as the second most popular sustainable mode (8% of all trips, equivalent to 20 and 17 trips in the AM and PM peak hours). The Travel Plan seeks to further promote sustainable travel options.
- 8.1.15 The operational performance analysis of the study junctions has identified that the network in this area is busy, with RFC / DoS values in the region of 85 – 90% in the 2018 Observed scenario. Allowing for forecast growth in traffic volumes, it is predicted that the RFC / DoS and therefore queue levels will increase in the future.
- 8.1.16 For the Burlington Road study junctions, the proposed development is expected to have a limited impact at the site access, West Barnes Lane (level crossing) and Shannon Corner junctions which is expected to be imperceptible in the context of daily fluctuations in traffic levels. Other than the proposed amendments to the site access junction, it has therefore been agreed with LBM that improvements to these junctions are not required in connection with the development proposals.
- 8.1.17 The anticipated distribution of traffic associated with the site is expected to give rise to a change in performance of the Claremont Avenue junction however, with RFC values reaching (AM) and slightly exceeding (PM) the theoretical threshold. In liaison with LBM, it has been agreed that a financial contribution will be offered by Redrow towards pedestrian and urban realm improvements between this junction and the site, which the authority can then implement through the s106.

- 8.1.18 The purpose of these improvements will be to enhance the urban environment and pleasantness of journeys in this area, through landscaping, wayfinding, improved crossing and waiting / resting facilities and surveillance. These improvements will also help to prioritise the desire line to / from Motspur Park station, which is the nearest station to the site.
- 8.1.19 Overall, the proposed redevelopment will radically improve the existing site. The transport impact of the proposed scheme has been shown to be limited and a comprehensive travel plan package is put forward, which focuses on sustainable trip making and the promotion of trips by walking, cycling and public transport in addition to the proposed public realm improvements.
- 8.1.20 It is therefore considered that the package put forward should be supported by a positive transport recommendation.

