

APPENDIX 5.1: PRELIMINARY CONSTRUCTION MANAGEMENT PLAN



Construction Management Plan

North London Business Park, Brunswick Park Rd, London, N11 1GN

17th June 2021





Notice

This document and its contents have been prepared for the Client's information and are intended solely use in relation to discharging a planning condition required by London Borough of Barnet Council for North London Business Park, Brunswick Park Rd, London, N11 1GN

Planning Application number 15/07932/OUT and APP/N5090/W/17/3189843

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Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised
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Client signoff

Client	Comer Homes
Project	Redevelopment of the North London Business Park
Job number	TBC
Client signature Date	





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1.0 Planning History

Planning permission was previously granted for the proposed development of 1350 residential units, a new secondary school and further commercial and community floor space in February 2020 under Planning Application numbers 15/07932/OUT and APP/N5090/W/17/3189843.

This document has been produced to accompany a revised planning application to provide circa 2500 residential dwellings, and a new secondary school and associated landscaping.

Location: North London Business Park, Brunswick Park Rd, London, N11 1GN.

This Construction Management Plan has been prepared to the requirements of a planning condition from the previous consent:

That prior to the commencement of any works on the site, a construction management plan detailing the management of construction traffic, including deliveries and parking of site operative vehicles shall be submitted and approved in writing by the Local Planning Authority.

This plan therefore relates specifically to the construction phase of the new development. This plan will remain a live document and will be reviewed by Comer Homes on a bi-monthly basis throughout the life of the project.

The main aim of this report is to show that, as a result of the construction works, construction traffic should have no detrimental effect on the highways or the local community, if the proposed arrangements are developed and utilised for the construction phase.

The works will be phased into 5 construction areas to minimise the anticipated volume of construction traffic delivering and collecting.

The impact of queuing construction vehicles on the public highway is not anticipated for this site and the plan takes this into consideration.

With the exception of Site 1A (The School), this is a development that will be managed by Comer Homes, as Principal Contractor for the build, and senior site staff will manage the plan during the life of the project which will facilitate the safe access/egress of construction vehicles in and around the site.

Any concerns or complaints arising from our works will be dealt with promptly by Comer Homes' senior staff who will be always available for impromptu meetings to discuss any aspect of the plan or the works on site.

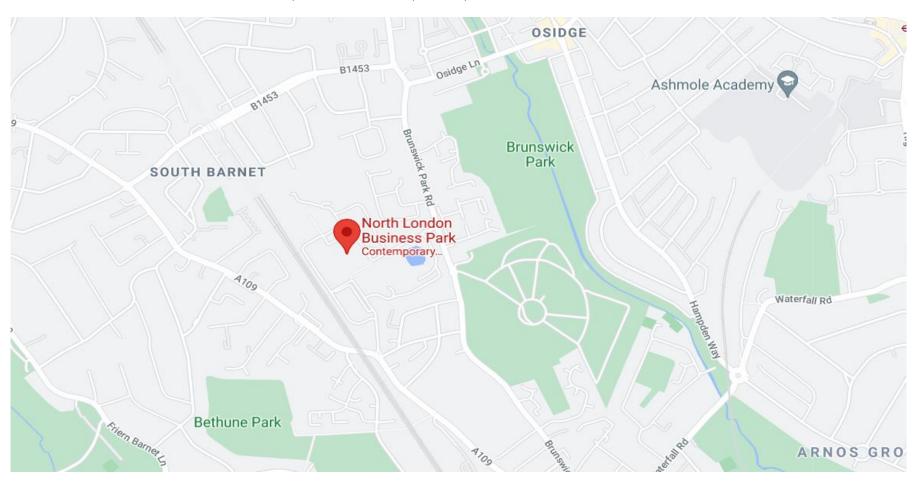
In this report, a vehicle routing strategy is considered, arterial routes to site highlighted and the methodology of managing and enforcing the construction logistics plan is outlined.





2.0 Project Summary

The site is at located at North London Business Park, Brunswick Park Rd, London, N11 1GN.







Existing Site:



North London Business Park is a 16-hectare campus-style office development located in New Southgate, located in landscaped grounds with a lake. Playing fields, sports pitches and parking are located on the North West boundary of the site which serve the St Andrew the Apostle Greek Orthodox School located to the South East.

Commercial real estate totals 382,000 square feet and units range from 250 to 80,000 square feet.

Construction traffic will access the site from the Brunswick Park Road entrance during phase 1 of the redevelopment, which consists of 450 residential units and a new secondary school.

A dedicated one way system is proposed which will allow construction site traffic to exit though the Oakleigh Road site entrance. This will be a shared access/egress with the general public and will be marshalled at all times by CITB qualified banksmen. (see logistics plan on page)



Brunswick Park Road entrance





3.0 Construction Phasing

Considerate Contractors Scheme

Comer Homes Group are registered with the Considerate Contractors Scheme and observe their Code of Considerate Practice to promote and achieve best practice onsite. The Scheme's Monitors visit the site regularly to assess the performance of registered sites against a checklist r of questions to establish what level a site is performing to. The Comer Homes Group site manager will be tasked to achieve a score of 40/50 to maintain an 'excellent' rating.



Site Working Hours

There will be no construction traffic, plant or noise impacting the surrounding area prior to the agreed start time.

All site deliveries and construction traffic movements will be carried out between the hours of:

Monday to Friday - 8.00am to 6.00pm Saturdays - 8.00am to 12.00pm Sundays and Bank Holidays NO working

The site shall be open from 07.30 with works proceeding at 08.00. No major works, entailing construction nuisance, noise or vibration shall commence before 08.00. Certain activities will need to take place outside these core times to enable safe working, minimum disruption to road users or restrictions placed by 3 parties such as utility companies or the Highway Authority.

Start-up and close-down periods of up to an hour before and after core working hours may be used for activities such as arrival of workforce and staff on site; maintenance and checking of plant and machinery; general refuelling; site inspections, and safety checks prior to commencing work; site meetings; and general site clean-up and departure.

Deliveries will only be allowed on a "just in time" basis and only accepted at the site between the hours of 10.00 – 14.00 to avoid peak traffic times and minimise the impact on the local residents and businesses.

Note: Comer homes will check the condition of vehicles arriving and leaving the site and ensure that the road is kept clear of debris as appropriate. All routes will be kept free from mud and detritus at all times by use of a mechanical road sweeper and a wheel wash will be located at the Oakleigh Road site entrance for departing construction traffic.





Construction Phasing

The redevelopment of the North London Business Park is currently divided into five phases which are shown on the plan below:



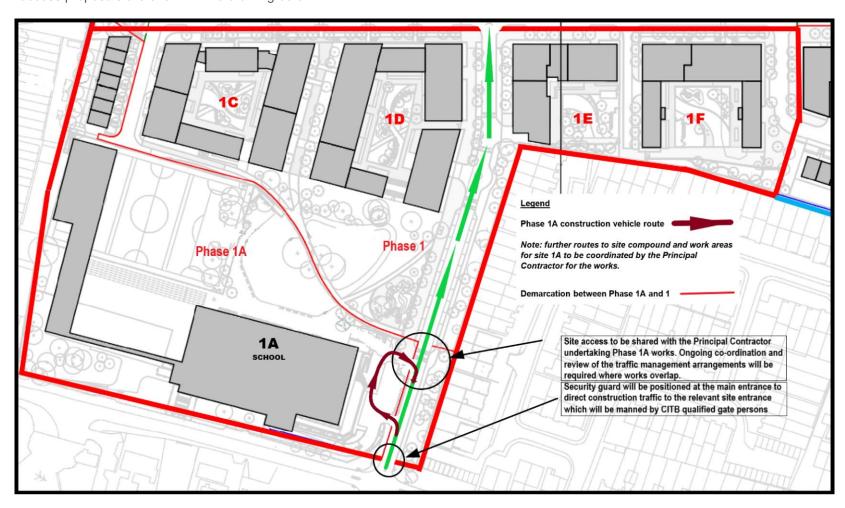
Note: Phasing of areas 3, 4 and 5 may be reviewed at a later date and if revised the logistics will be planned and managed accordingly.





The proposed Phase 1 works are split into two areas with the school being Phase 1A, and residential blocks 1C, 1D, 1E and 1F being Phase 1.

A Traffic management and plan for the school (phase 1A) is being developed by the Principal Contractor Bowman and Kirkman, who are undertaking these works and the information will be included within the planning submission and accompany the arrangements contained in this report. The site access proposals are shown in the drawing below.







The appropriate phasing of the works is central to the successful completion of the project and when planned accordingly will generally ensure the following:

- Less quantities of materials are required for each phase.
- Smaller deliveries require smaller vehicles which reduces the impact on the local road network,
- Planned deliveries can be brought to site on schedule at convenient times reducing the traffic impact.
- Reduction in the size and frequency of plant deliveries.
- Off-site storage at Comer's central facility permits timed and scheduled deliveries.
- Liaison with other contractors and business park users can be better coordinated to avoid congestion and road blockages.
- Robust phasing will reduce the quantity of waste removed and consequent traffic impact.

Loading, Unloading & Storage

There will be a requirement for deliveries throughout the construction phase. Waste removal from the site will also be considered and will be managed in a "just in time" basis as to minimise the likelihood of congestion.

Dedicated laydown and storage areas have been proposed for the phase one works and are shown on the provided logistics plan on page 15

Vehicles delivering materials and equipment to the site will access the from the entrance located in Brunswick Park Road. *Note: The Oakleigh Road entrance will be utilised by larger construction delivery vehicles using a strict booking system and pre-arranged times.*

Drivers when reaching the construction entrance gates, which will commonly be kept shut, will be directed to the relevant site entrance and offloading areas by the main gate security.

Please see logistics plan on page 15



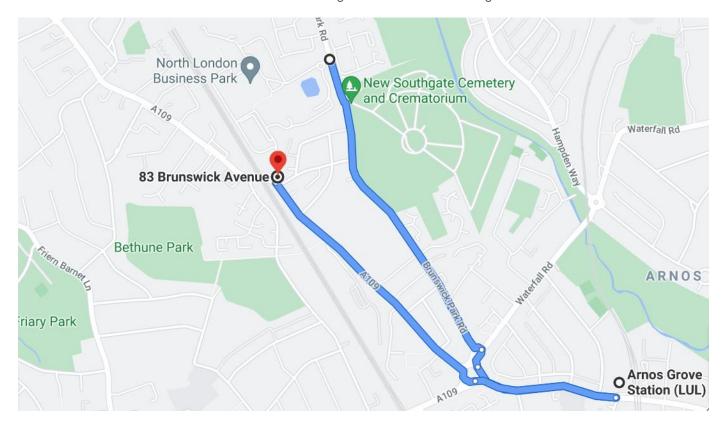


4.0 Construction Traffic Management Plan

The Site

The site is located at the North London Business Park, Brunswick Park Road, London, N11 1GN.

It has been determined that the immediate access road in Brunswick Park Road is suitable for standard size construction vehicles, and they will be instructed to travel to site via the A1110 Bowes Road and A109 Friern Barnet Road. However, for larger vehicles a pre-arranged booking time will be provided, and the vehicle will be instructed to access the site through the entrance in Oakleigh Road South/Brunswick Avenue.







The following arrangements will be considered when preparing the Traffic Management Plan

Providing separate entrances dedicated for pedestrians to safely segregate construction traffic at the project entrance.

Providing "pedestrians only" areas within the site and safe pedestrian routes to and from work locations.

Provide safe construction vehicle routes around the project.

Providing "construction vehicles only" areas where only designated personnel can enter. (laydown and loading areas etc.).

Providing trained security, logistics and traffic marshals.

Location of cabins, welfare etc.

Plan / drawing of access and egress to the project. (traffic and logistics plan to be displayed on site)

Implement one-way systems to avoid reversing and turning construction vehicles

Where one-way systems cannot be achieved suitable turning areas will be provided.

Specify areas where the project will need to provide traffic control. (Will be required during the future phases to protect live public areas from construction traffic).

Detail and enforce strict speed limits / height and width restrictions.

Parking restrictions.

Other local traffic characteristics: vehicular, cyclists and pedestrian flow.

Mobilising / demobilising of plant.

Deliveries to project / loading / storage areas.

Signage.

Temporary hoarding lighting.

Impact of other contractors undertaking works (co-ordination of shared areas)





Contractor Parking

The site is well served by public transport with bus services and tube stations in close proximity (Arnos Grove 1.1m) and this will be made clear through the site travel plan to all contractors at appointment.

An area of hard standing providing parking will be made available for contractors who bring tools and small plant onto site in the course of their works. Comer Homes encourage the engagement of local contractors and suppliers where possible to minimise journey times, vehicle movements and congestion. Contractors will be required to park onsite. Any sub-contractor found to be parked illegally, ignoring Comer Homes site rules or the requirements of the traffic management plan will be removed from site.

Plant, Activities and Materials

Delivery drivers will be directed to the Traffic Manager by the site entrance security personnel. The Traffic Manager will contact the relevant Comer Homes Supervisor by radio or mobile phone, who will then take delivery or direct the Traffic Manager accordingly. Deliveries will be directed to the compound area for offloading.

All deliveries to be notified in advance where possible using the site booking system. This will therefore prevent any build-up of traffic at the entrance to the site, thus keeping the public highway clear.

Demolitions: There will be some demolition of the existing buildings in each phase. The demolition arisings not recycled will be distributed on the site and are not anticipated to leave the site thereby discounting additional traffic disturbance.

Landscaping: The groundwork phases of this project will require some medium sized earth moving plant and equipment and muckaway.

Construction Plant: Plant and equipment will be required on site in the early stages as is the normal for a construction site. Key items are expected to be but not limited to the following:

Site cabins, Mobile crane, Piling rig, 360° excavators, Concrete lorries, skips, Mechanical concrete pump, MEWPs (mobile elevated working platforms) of various capacity, Compressor, Generator.

None of these are expected to cause undue congestion because the Comer logistics methodology will be in place. Vehicles leaving site will have the wheels washed on site and all wastewater will be captured/filtered so not to impact public drainage systems

Deliveries requiring unloading by means of either the onsite craneage, mobile crane, telehandler or 360° excavator, will be notified in advance to avoid congestion whilst waiting to be unloaded. A booking system will be utilised, if thought necessary, to ensure efficient offloading in busy periods, and to enable suitable storage areas.





Site Access and Site setup

The site boundary hoarding and 2no gates will be installed to an approved temporary works design and will secure the site boundary from unauthorised access. It will consist of 2.4m high timber hoarding and double gated site entrances. Security huts will be positioned at each site entrance which will be manned at all times when in operation.

"Construction vehicles only" site access

The existing double gates will be included in the hoarding line at the Brunswick Park Road site entrance which will have security and lead into the shared roadway serving Phases 1A and 1. Upon entry the security guard will direct the driver to the required site entrance.

Strict speed limits will be in force at all times.

Phase 1A (School site) will access and egress from the Brunswick Park Road entrance for the duration of the works under the supervision of trained traffic marshals.

Phase 1 will access from the same Brunswick Road entrance and will then proceed on a one way system through the site and exit through manned double gates located on the North boundary. Traffic will then turn left and out of the site and through the shared public area and onto Oakleigh Road.

The Oakleigh Road site entrance and a section of the access road will be shared with the general public during the works. One way systems and traffic controls around the public site have been developed and dedicated traffic marshals will be positioned at key points along the shared routes to ensure the safety of the public at all times. Please see public realm traffic plan on page 18

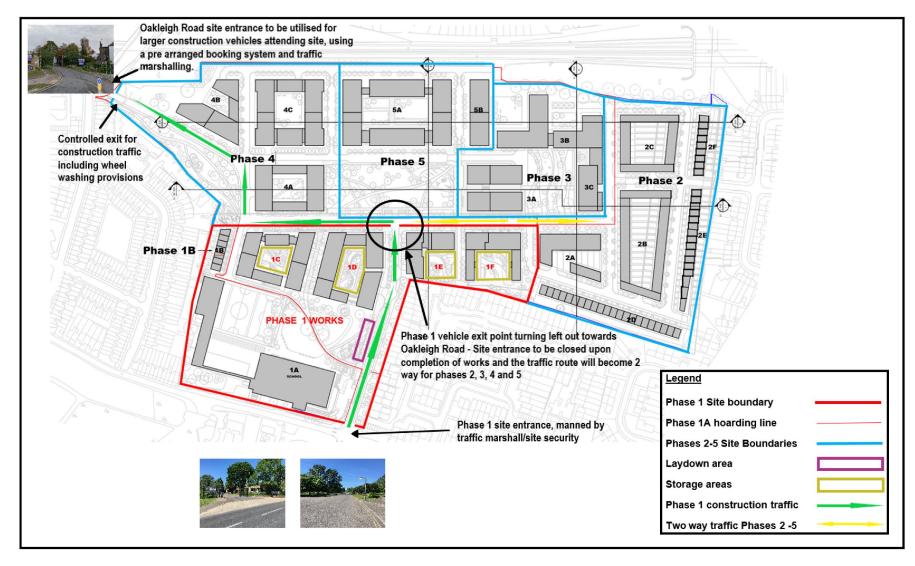
The site entrances have been assessed and will be able to accept all vehicle categories however, there may be a number of abnormal loads that will need to access the site via Oakleigh Road. These deliveries will be pre booked and undertaken out of peak hours and with 3no traffic marshals banking the vehicles to the site laydown areas where they will be unloaded and stored.

Upon completion and handover of the Phase 1 works, the site hoarding and gates in the North boundary will be closed and the haul road will become two way traffic which during phases 2 – 5 will be shared with the "live" public areas and suitable traffic controls, crossings and traffic calming measures will be put in place to protect the public. (Please plan on page 18)

Please see the site plan on page 15 below, indicating traffic routes and site logistics proposals for the Phase 1 works.







Note: These proposals are for provisional planning and information. The arrangements contained within this statement will be reviewed on a regular basis and updated as the project progresses, or the phasing arrangements/site layouts are altered.





"Pedestrians only" Site Access and Public Protection

Pedestrian access will be controlled via a single point of entry at the Brunswick Park Road entrance leading to the welfare area (location to be confirmed). Access will be permitted via a facial recognition turnstile system for all operatives and visitors to sign in, enter and exit the site directly from the secure site compound. All pedestrian and vehicle routes will have appropriate signage and will be clearly designated in accordance with the HSE HSG144:2009 "The Safe Use of Vehicles on Construction Sites" guidance.

Initial welfare setup

Temporary internal fencing will be installed around the site compound area to segregate the office and welfare arrangements for site and allow the permanent welfare setup to be installed. Establishment of site pedestrian and vehicle routes will occur at this stage. (Location TBC)

Main Welfare setup

Internal hoarding will be installed around the main welfare cabins to segregate the welfare area from the construction area. Site pedestrian and vehicle routes will be fully implemented at this stage to ensure the segregation of pedestrians and vehicles. Crossing points to construction areas will be in place. (Locations TBC)

Measures to protect workforce and public

Protecting the workforce and the public is paramount therefore, permanent traffic marshals will be employed to manage and oversee all vehicle movements to and from site, including all plant and vehicle movements within the public areas. There will also be a suitable number of relief traffic marshal to cover all breaks sufficiently.

Vehicles will utilise the access route via Brunswick Park Road (or Oakleigh Road for pre-arranged abnormal loads), where they will access via the existing security gates and will be met by the gate security guard. Delivery drivers will be directed to the relevant site access gate, where they will be met by the traffic marshals who will log in the delivery, check documentation and brief drivers. The vehicles will enter site under the supervision of a trained traffic marshal who will bank them to the required offloading location. Strict speed limits will be adhered to at all times

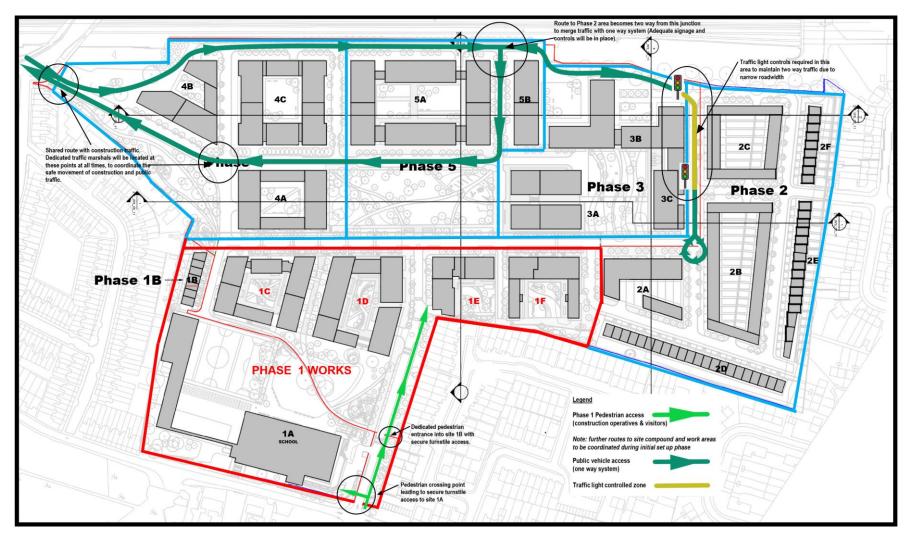
Security assessment and arrangements

The security needs are considered for the project at the planning stage and reviewed throughout the contract. Special attention is made to deter access by children and to protect the members of the public at all times. All visitors will be directed to the project office from where access into the construction area will be controlled and supervised.





Pedestrian access plan and traffic controls







Traffic Management Summary

Strategy

Demolition arisings will be reused on site

Minimises vehicle traffic volumes.

Construction phasing Reduce frequency of deliveries, minimise impact on surrounding area

Dedicated traffic marshals/security guards in key areas at all times

Significantly reduces risk to public pedestrians and vehicles

Off-site storage at Comer's central facility

Reduce the likelihood of site congestion, planned and timed deliveries

Design to minimise large structural items

Smaller plant required for construction

Design to minimise waste Reduction in heavy vehicles leaving site

Reuse of site materials Reduction in vehicles leaving site

Local contractors and suppliers will be used where possible to Minimise journey times, vehicle movements and congestion.





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APPENDIX 6.1: TRANSPORT ASSESSMENT



TRANSPORT ASSESSMENT

GRID REF: 528027E, 193454N

PROPOSED DEVELOPMENT AT THE NORTH LONDON BUSINESS PARK

NEW SOUTHGATE, BARNET, LONDON

prepared for COMER HOMES GROUP

AUGUST 2021

REFERENCE: ST3013/TA-2108 North London Business Park

REVISION: Rev 0



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This report has been prepared for the Client for their sole and specific use. No professional liability or warranty shall be extended to other parties in connection with this report without the explicit written agreement of Stomor Ltd and payment of the appropriate fee.

Drawings contained in this report are based upon information available at the time of production and serve to assess the access requirements of the proposed development. The information produced by Stomor Ltd for this report should not be used as detailed design for construction purposes.

Should the Client wish to pass copies of this report to others for information, the entire report should be copied.

Revision	Author	Checked by	Issue Date
0	PC	NJM	08/04/21
1	PC	NJM	08/25/21

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Note: Traffic count data files provided separately if requested

TRICS Outputs

Refuse Swept Path Analysis

Car Parking Swept Path Analysis

1. Introduction

1.1. <u>Background Information</u>

- 1.1.1. Stomor Ltd. has been commissioned by Comer Homes Group to prepare a Transport Assessment (TA) in support of a Hybrid Planning Application for the regeneration of the North London Business Park to provide a mixed-use development of up to 2,428 dwellings, 2,353sq.m of workspace, 3,835 sqm flexible non-residential floorspace, which could be used for community use, medical use, retail, offices, cafes etc. and a new 5FE school building with an anticipated 1,050-pupil capacity.
- 1.1.2. The site measures 16.37 hectares (ha), of which approximately 13ha comprises areas of disused open space and car parking. The site is bounded by the East Coast Mainline railway along the entire western boundary, with residential development and Brunswick Park Road adjacent to the eastern boundary. Further details of the site location are shown in the parameter plans produced by Plus Architecture contained in **Appendix A**.
- 1.1.3. The site benefits from planning permission for redevelopment. The original application was submitted in hybrid form and planning permission was granted at appeal in February 2020 for:

"the phased comprehensive redevelopment of the North London Business Park to deliver a residential led mixed-use development. The detailed element comprises 360 residential units in five blocks reaching eight storeys, the provision of a 5 Form Entry Secondary School, a gymnasium, a multi-use sports pitch and associated changing facilities, and improvements to open space and transport infrastructure, including improvements to the access from Brunswick Park Road, and; the outline element comprises up to 990 additional residential units in buildings ranging from two to nine storeys, up to 5,177 sqm of non-residential floor space (Use Classes A1-A4, B1 and D1) and 2.54haof public open space. Associated site preparation/enabling works, transport infrastructure and junction works, landscaping and car parking."

(London Borough of Barnet reference 15/07932/OUT and PINS reference APP/N5090/W/17/3189843)

1.1.4. In 2015, a TA was prepared by Awcock Ward Partnership (AWP) for 1,200 dwellings, alongside the community, commercial and educational land uses. Further to the 2015 TA, a TA Addendum was prepared by AWP in March 2017 to consider the transport implications of a proposed uplift in the residential development from 1,250 to 1,350 dwellings.

1.1.5. The revised 2021 development proposals are for the following:

"Hybrid planning application for the phased comprehensive redevelopment of the North London Business Park to deliver a residential-led mixed use development. The detailed element comprises 466 residential units in five blocks reaching 9 storeys, the provision of a 5 form entry secondary school, a gymnasium, a multi-use sports pitch and associated changing facilities and improvements to open space and transport infrastructure, including improvements to the access from Brunswick Park Road and; the outline element comprises up to 1,998 additional residential units in buildings ranging from three to twelve storeys, up to 5,331 sqm of non-residential floor space (use Class E) and 20,250sqm of open space. Associated site preparation/enabling work, transport infrastructure and junction work, landscaping and car parking."

1.2. Transport Assessment Scoping

- 1.2.1. Scoping discussions for the proposals set out in this TA were held with both the London Borough of Barnet (LBB) and Transport for London (TfL) in April/May 2021. A summary of the key points raised from these scoping discussions is set out below:
 - Given the passage of time since the previous TA, the initial 2015 traffic count data was not considered to be acceptable. Therefore, TfL requested that new traffic count data should be obtained for the junctions within the study area to inform the baseline;
 - Only the development above and beyond the extant 1,350 dwellings and 3,125sq. m of commercial space permitted in 2020 will need to be assessed within the revised TA. Therefore, a total of 1,150 dwellings need to be assessed within this revised TA;
 - An assessment of the impact of the proposed development on the London Underground network will need to be undertaken;
 - Data for the future year assessments would need to be derived using TfL's model;
 - Car parking provision within the proposed development should accord with the standards set out in the London Plan; and
 - A comprehensive Active Travel Assessment is required to be undertaken.
- 1.2.2. Further details pertaining to the scoping exercise are contained in **Appendix B** for reference.
- 1.2.3. With regard to the secondary school, it has been concluded that the proposals for the school relate to a re-location only, and subsequently no additional traffic will be

- generated by the school proposal. In light of this, no assessment of the secondary school development has been included within this assessment.
- 1.2.4. This TA has been prepared to assess the travel demand and impact of the proposed development until full occupancy. The development will be taken forward in a series of development phases.
- 1.2.5. The content of the previous 2015 TA has been used to inform this document.

2. Existing Conditions

2.1. Existing Site Information

- 2.1.1. The site is bounded by the East Coast Mainline railway along the entire western boundary. The eastern boundary is abutted by Properties on Brunswick Park Gardens to the north east and Brunswick Park Road to the south east. New Southgate Cemetery is located to the south east of the site. To the north are properties on Weirdale Road, Ashbourne Avenue, Linden Road and Pine Road. To the south are properties on Brunswick Crescent and Haynes Close.
- 2.1.2. The A109, Oakleigh Road North abuts the south eastern corner of the site.
- 2.1.3. Properties to the north and south are predominantly residential, typically characterised by 2/3 storey suburban detached, semi-detached and terraced housing.
- 2.1.4. The site provides circa 38,000 sq. m of office, temporary educational and community floorspace developed in a campus style with approximately 1,300 car parking spaces and is currently let to a variety of occupiers falling broadly with former use class B1.
- 2.1.5. The site varies significantly in topography with a steep gradient comprising a level difference of 24m across the site from the northern boundary to its lowest point at Brunswick Park Road.

2.2. Local Highway Network

- 2.2.1. The site has two existing access points, one to the south onto the A109 Oakleigh Road North and one to the east onto Brunswick Park Road.
- 2.2.2. There is also a redundant, unused access point to the northern boundary which would provide access to Ashbourne Avenue, were it not currently fenced off. Ashbourne Avenue leads onto the B5143 Russell Lane, which comprises a mix of residential properties and neighbourhood retail frontage.
- 2.2.3. Access to the existing employment is provided via both existing accesses into the site. The A109 Oakleigh Road North access takes the form of a priority junction at the southern extent of the redevelopment site. There is a zebra crossing immediately to the north west of this access and there is space for a vehicle to wait to turn into the site between the zig-zag line markings associated with this crossing, out of the line of traffic. There is also an existing auxiliary lane directly from Brunswick Avenue to the North London Business Park access road.

- 2.2.4. The access road in this location has a width of approximately 7.8m. A footway leads into the redevelopment site on the western side of the access road, gated at the site entrance. This footway has a width of 2m adjacent to Oakleigh Road North, increasing to 3m further into the site.
- 2.2.5. The existing access from Brunswick Park Road takes the form of a crossroads arrangement on the eastern edge of the redevelopment site. Goldrill Drive is located opposite the site access, and both form minor arms to Brunswick Park Road. An existing zebra crossing is located approximately 20m to the north of the junction.
- 2.2.6. The site access road at this location is approximately 8.5m in width. There are footways on either side of the carriageway approximately 2m in width and gated at the site entrance. Approximately 23m from Brunswick Park Road, the site access has a three-arm roundabout with priority given to vehicles travelling into the site from Brunswick Park Road over vehicles on the circulatory.
- 2.2.7. Further afield, the A109 Oakleigh Road South continues towards Friern Barnet, to the south of the redevelopment site. To the north of the site access the A109 Oakleigh Road North continues on towards Whetstone Village neighbourhood centre.
- 2.2.8. Brunswick Park Road provides a north-south link between the B1453, Osidge Lane and the A1003, Waterfall Road situated between Friern Barnet and Arnos Grove. Osidge Lane connects to Brunswick Park Road and provides an approximate 500m eastwards link to the neighbourhood centre at Hampden Square in Osidge.
- 2.2.9. Parking on Brunswick Park Road takes the form of on carriageway informal parking and kerb mounted parking bays. Additionally, a free off-highway parking area is provided approximately 55m south of the junction of Brunswick Park Road and Brunswick Avenue.
- 2.2.10. Ashbourne Avenue continues south-north from the northern site boundary to Russell Lane. A highway stub exists to the site boundary, and it is understood that this was previously used for pedestrian access to the development site but is now closed. A track runs between the site boundary and the rear of properties on Weirdale Avenue, providing access to garages and rear gardens. This track is accessed via the Ashbourne Avenue southern stub and from Russell Lane to the north west. The Ashbourne Avenue connection between the site and Russell Lane is approximately 230m in length and the road features footway and street lighting on both sides of the carriageway.
- 2.2.11. Russell Lane from east to west and provides a link between the mini roundabout at Oakleigh Road North/Pollard Road and the mini roundabout at Brunswick Park

- Road/Church Hill Road. The directional lanes on the central section of Russell Lane are divided by a green area, creating an urban dual carriageway.
- 2.2.12. Brunswick Avenue provides a link between Oakleigh Road South and Brunswick Park Road, approximately 10m to the south of the existing A109 Oakleigh Road North site access.
- 2.2.13. The highway network in the vicinity of the site is subject to a 30mph speed limit. There are no 'red routes' (TLRN) in the vicinity of the site.
- 2.3. Policy Overview National Policy
- 2.3.1. National policy is set out in the National Planning Policy Framework dated (February 2019). Section 4 of the National Planning Policy Framework sets out policies for promoting sustainable transport, recognising that different policies and measures will be required in different communities, and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.
- 2.3.2. The following assessment identifies the potential impact of the proposed development in transport terms, it demonstrates how opportunities for using existing infrastructure can be used, how technology might contribute towards managing travel demand (i.e. via home working) and how opportunities for promoting sustainable modes of travel have been positively promoted as a realistic alternative to using private motor vehicles.
- 2.4. Policy Overview Local Policy

Barnet Draft Local Plan (January 2020)

- 2.4.1. The Council is reviewing and updating the Borough's Local Plan, and at the time of writing is currently out to public consultation (under the Draft Regulation 19). The Local Plan sets out a vision for how Barnet will change as a place over the next 15 years. The emerging Plan will, when it replaces the existing 2012 Local Plan, provide the main basis upon which future planning applications will be determined.
- 2.4.2. The following objectives are identified within the Barnet Draft Local Plan:
 - To deliver growth to meet housing aspirations and needs;
 - To improve orbital connectivity and sustainable travel options including cycling and walking; and

- To ensure new development is high quality, sustainable, and capable of adaption to meet the needs of residents over their lifetime.
- 2.4.3. The Draft Local Plan identifies the need for 46,000 new homes to be delivered until 2036 to accommodate the planned growth in Barnet. Furthermore, the Local Plan seeks efficient use of previously developed land to address Barnet's housing needs:

'Policies BSS01 and GSS01 aims to make the best use of previously developed land which can be planned at higher densities...'

2.4.4. With regards to walking and cycling, the Local Plan states:

'Walking and cycling are transport modes that the Council is keen to promote due to the many benefits they provide ranging from reducing the use of private cars with consequent improvements for air quality to a more active and healthy population that increased walking and cycling leads to in terms of the health benefits to the individuals from derived from partaking in exercise.'

- 2.4.5. In relation to vehicle parking, for non-residential uses the Council supports the application of London Plan car parking standards. For residential uses the Council advocates an approach which is more reflective of local circumstances. The accessibility of individual locations will be taken into consideration, based on:
 - The overall public transport accessibility level (PTAL);
 - Orbital PTAL;
 - Parking stress including the level of on-street parking control;
 - Population density and parking ownership of surrounding areas;
 - Location (i.e. is it in a town centre);
 - Ease of access by cycling and walking; and
 - Other relevant planning or highways considerations, such as to whether the proposal is a conversion of an existing use.
- 2.4.6. The Draft Local Plan aims to increase the rate of change in terms of car use, which includes support for active travel and public transport opportunities, as well as promoting innovative ways to enable long term modal shift.

<u>Draft Barnet Long Term Transport Strategy 2020 – 2041 (December 2019)</u>

- 2.4.7. The Strategy sets a direction for change to offer greater choices for travel, encourage more active lifestyles which will increase the health and well-being of Barnet's residents and improve air quality. The Strategy also sets out a number of proposed schemes for each type of travel along with activities to help change behaviour and encourage positive changes to the way we currently travel.
- 2.4.8. The following key objectives are identified within the Strategy:
 - 'Objective 1: Barnet's transport network contributes to the creation of better places to live, work and visit, allows local businesses to thrive sustainably, and is flexible, adapting to future opportunities presented by technology and change in travel patterns;
 - Objective 2: Transport in Barnet keeps the borough moving, enabling people and goods to move within and through the borough efficiently using high quality orbital and radial links;
 - Objective 3: The transport system is as accessible as possible regardless. of age, ability and income, and the negative impacts of transport are minimised;
 - Objective 4: Transport contributes positively to the health of the borough, by prioritising active travel and ensuring continued improvement in air quality; and
 - Objective 5: The road network and transport system in Barnet is safe and residents and visitors feel safe across all transport modes.'

The London Plan 2021

- 2.4.9. The London Plan 2021 is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for sustainable growth.
- 2.4.10. Policy GG2 Making the best use of land states that:

'To create successful sustainable mixed-use places that make the best use of land, those involved in planning and development must:

 enable the development of brownfield land, particularly in Opportunity Areas, on surplus public sector land, and sites within and on the edge of town centres, as well as utilising small sites

- prioritise sites which are well-connected by existing or planned public transport
- proactively explore the potential to intensify the use of land to support additional homes and workspaces, promoting higher density development, particularly in locations that are well-connected to jobs, services, infrastructure and amenities by public transport, walking and cycling
- plan for good local walking, cycling and public transport connections to support
 a strategic target of 80 per cent of all journeys using sustainable travel, enabling
 car-free lifestyles that allow an efficient use of land, as well as using new and
 enhanced public transport links to unlock growth.'
- 2.4.11. With reference to housing, The London Plan acknowledges that brownfield sites are crucial to deliver new homes. Furthermore, it is stated that 'Boroughs should proactively use brownfield registers and permission in principle to increase planning certainty for those wishing to build new homes.'
- 2.4.12. Policy D8 Public Realm states that development proposals should:
 - 'maximise the contribution that the public realm makes to encourage active travel and ensure its design discourages travel by car and excessive on street parking, which can obstruct people's safe enjoyment of the space. This includes design that reduces the impact of traffic noise and encourages appropriate vehicle speeds; and
 - ensure the priority modes of travel for the area should be identified and catered for, as appropriate. Desire lines for people walking and cycling should be a particular focus, including the placement of street crossings, which should be regular, convenient and accessible; and
 - ensure that any on-street parking is designed so that it is not dominant or continuous, and that there is space for green infrastructure as well as cycle parking in the carriageway. Parking should not obstruct pedestrian lines.'
- 2.4.13. Policy T2 Healthy Streets sets out that development should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling.
- 2.4.14. In addition, Policy T2 states that development proposals should:
 - 'demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance

- reduce the dominance of vehicles on London's streets whether stationary or moving
- be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport.'
- 2.4.15. The 10 Healthy Street Indicators are shown below in **Figure 1** which has been extracted from Figure 10.2 of The London Plan.



Figure 10.2 - The Ten Healthy Streets Indicators

Figure 1 - The 10 Healthy Streets Indicators

- 2.4.16. Policy T4 Assessing and mitigation transport impacts states the following:
 - Where appropriate, mitigation, either through direct provision of public transport, walking and cycling facilities and highways improvements or through financial contributions, will be required to address adverse transport impacts that are identified.

- Where the ability to absorb increased travel demand through active travel modes has been exhausted, existing public transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans and funding exist for an increase in capacity to cater for the increased demand, planning permission will be contingent on the provision of necessary public transport and active travel infrastructure.'
- 2.4.17. Policy T6 Car Parking states that 'Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.'

Policy Summary

- 2.4.18. The proposed development accords with the objectives outlined in his Section given the following considerations:
 - The proposed development will provide 2,500 much needed homes identified in the Borough;
 - The proposed development is located entirely within a brownfield site;
 - Appropriate vehicle parking will be provided which will reflect the access to public transport, walking and cycling infrastructure, as opposed to an abundance of vehicle parking to encourage travel via car;
 - The proposed development will provide a comprehensive on-site footpath network based on key desire lines which prioritises pedestrians over vehicular traffic. This will include the delivery of as many pedestrian and cycle connections as is practical during each phase of the development build out to maximise connectivity and integration to key local destinations; and
 - Pedestrians and cyclists will benefit from a mixture of specific off-road facilities and on-road low speed site layout design to enhance safety.

2.5. Existing Site

- 2.5.1. The site occupies 16.37ha of brownfield land in a predominantly residential area, located to the west of Southgate and to the south of East Barnet.
- 2.5.2. The site is located in the London Borough of Barnet, circa 8 miles to the north-west of Central London. The site lies slightly outside of the circular route prescribed by the A406 North Circular Road.

2.6. Existing Public Transport Facilities

2.6.1. The development site is well located in terms of access on foot and by bicycle to public transport. Drawing ST-3013-02 'Accessibility Plan' has been attached in **Appendix C**, which shows the existing public transport facilities within the vicinity of the site.

2.7. PTAL Assessment

- 2.7.1. The Public Transport Accessibility Level (PTAL) methodology is used by TfL as a means to quantify and compare accessibility to public transport services for given sites. It takes into account the time taken to access the public transport network, including:
 - The walking time to public transport services;
 - The average waiting for each service; and
 - The reliability of each service.
- 2.7.2. The methodology is based on a walk speed of 4.8kph and considers railway stations within a 12-minute walk (960m) of a site and bus stops within an 8-minute walk (640m). The PTAL assessment is undertaken using the AM peak hour operating patterns of existing services.
- 2.7.3. An Equivalent Doorstep Frequency (EDF) is calculated for each of the public transport services accessible from the site based on the criteria described above. These individual EDF values are weighted to provide an accessibility index (AI) value for each service accessible from the site. The sum of the AIs for each mode are aggregated to provide a single measure of accessibility.
- 2.7.4. TfL's web-based calculator has been used to determine the site's existing PTAL, which shows a rating of 1a with an Al score of 17.78. This demonstrates that based on the PTAL calculator, the site is considered to have poor access to public transport. The PTAL rating varies between 1a, 1b and 2 across the site depending upon proximity to the . Further details are shown in **Figure 2** below which has been extracted from TfL's PTAL website.

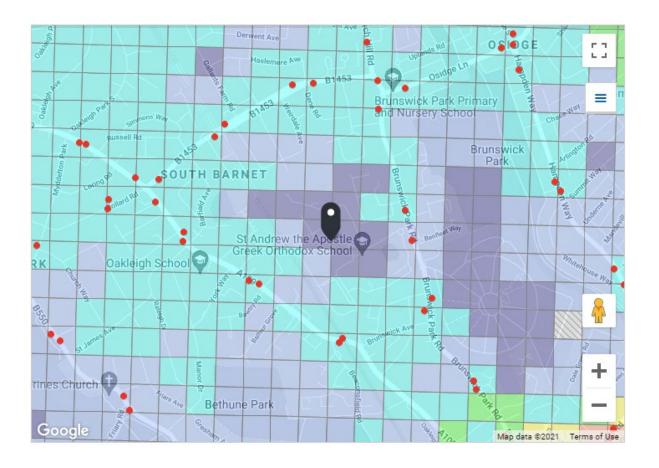


Figure 2 – Proposed Development PRAL Output Map (Base 2021)

2.7.5. Notwithstanding the above, this assessment demonstrates that the proposed development is located within 400m of a number of bus services operating on a high frequency, as described in more detail below.

2.8. Bus Services

- 2.8.1. There are two bus stops located adjacent to the site access: one on Brunswick Park Road and the other on the A109 Oakleigh Road North. Both of these stops are within 400m as measured from the centre of the site, and as illustrated in the Accessibility Plan contained in **Appendix C.**
- 2.8.2. The bus stops along the A109 Oakleigh Road North are accessible via the footways available from the site and along both sides of the A109 Oakleigh Road North. Access to the northbound bus stop is facilitated via a zebra crossing located along the A109 Oakleigh Road North adjacent to the southern site access.
- 2.8.3. The bus stops along Brunswick Park Road are accessible via the footways available from the site and along both sides of Brunswick Park Road. Access to the southbound

- bus stop is facilitated via a zebra crossing located along Brunswick Park Road to the north of the site access.
- 2.8.4. In addition to the bus stops located adjacent to the existing site accesses, there are also bus stops located along the B1453 Russell Lane. Whilst there is no existing access within the vicinity of the B1453 Russell Lane, a pedestrian/cycle access will be delivered as part of the proposals, which will link the north of the site to Ashbourne Avenue, which connects to the B1453 Russell Lane. As a result, the development parcels located within the northern area of the site will be within a 400m walking distance of existing stops along the B1453 Russell Lane.
- 2.8.5. The following bus services are available from the stops located along the A109 Oakleigh Road North:
 - Service 34 operates between Barnet Church and Walthamstow Central with one service in both directions every 8-10 minutes during the week, increasing to a 30 min frequency during the weekends. Service 34 also provides a link to Arnos Grove Underground Station, Walthamstow Central Station and neighbourhood centres at Whetstone, Barnet centre, Edmonton and Walthamstow;
 - Service 251 operates between Edgeware Bus Station and Arnos Grove Underground Station, with one service in each direction every 8-12 minutes during the week, reducing to every 20-30 minutes on Sundays. Service 251 also provides a link to Mill Hill Broadway Station.
- 2.8.6. Service 382 is available from the stops located along Brunswick Park Road. Service 382 operates between Millbrook Park and Southgate and runs on a 15 min frequency, increasing to a 30-minute frequency on Sundays. Service 382 also provides a link to Mill Hill East Underground Station, Finchley Central Station, Arnos Grove Underground Station and Southgate Underground Station.
- 2.8.7. Service 125 is available from the bus stops along the B1453 Russell Lane, operating between Colindale Station and Winchmore Hill, with one service in each direction every 10-12 minutes during the week and Saturday, with services every 15 minutes on Sundays.
- 2.8.8. An interactive public transport services map is provided online by TfL which shows live departures, routes and timetables from the stops adjacent to the site. This information can be found at Buses-Transport for London (tfl.gov.uk). Figure 3 provides an example

of live information available for Service 34 available from the stops at the A109 Oakleigh Road South.

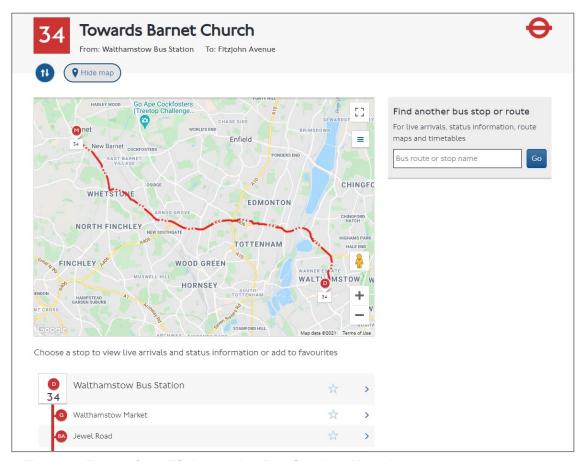


Figure 3: Extract from TfL Interactive Bus Services Map, June 2021

- 2.8.9. Bus journey time during peak periods from the stops along the A109 Oakleigh Road North to:
 - Arnos Grove Underground is 6 minutes;
 - Walthamstow Central Station is 35 minutes;
 - Mill Hill Broadway Station is 20 minutes; and
 - Edgeware Bus Station is 30 minutes.
- 2.8.10. Bus journey time during peak periods from the stops along Brunswick Park Road to:
 - Arnos Grove Underground Station is 6 minutes;
 - Southgate Underground Station is 10 minutes; and
 - Finchley Central Station is 35 minutes.

2.8.11. This level of service is therefore considered acceptable for the area, with a good, combined frequency of service, a multitude of travel options and a short walk distance to stops.

2.9. <u>Public Transport – National Rail Services</u>

- 2.9.1. The nearest National Rail stations to the site are Oakleigh Park to the north and New Southgate to the south (a 23-minute walk or 8-minute cycle journey from the centre of the site). These stations are on the Great Northern line between Moorgate and Welwyn Garden City.
- 2.9.2. Southbound services into London (Moorgate) are provided at 20-minute intervals during the week, which increase to a 30-minute interval during the weekends. The Northern, Circle, Metropolitan and Hammersmith & City underground lines all stop at the Moorgate hub.
- 2.9.3. Northbound services (to Welwyn Garden City) are provided at 20-minute intervals during the week, which increase to a 30-minute interval during the weekends.
- 2.9.4. The first weekday train departs New Southgate to Moorgate at 05:50, arriving at 06:16. The last train from Moorgate departs at 23:57. The journey between New Southgate and Oakleigh Park is approximately 3 minutes. This shows that the stations provide a service which caters to commuters working in the more central areas of London.
- 2.9.5. Passengers have the option to interchange to alternative surface rail services along the route from New Southgate. Key interchange stations include Finsbury Park, Highbury & Islington and Old Street.
- 2.9.6. Secure cycle storage is available at New Southgate and Oakleigh Park stations, making sustainable trips to the station attractive to residents of the area. Station information suggests there are currently 10 cycle storage spaces at New Southgate and 8 spaces at Oakleigh Park station.

2.10. <u>Public Transport – London Underground Services</u>

2.10.1. The site is located between two London Underground lines; the Northern Line and Piccadilly Line, with the nearest station being Arnos Grove on the Piccadilly Line (24minute walk or 8-minute cycle away). There are 10 cycle storage spaces at the station with additional stands in the local area. 2.10.2. The nearest station on the Northern Line is Totteridge & Whetstone (28-minute walk or 8-minute cycle journey via the Ashbourne Road link). There are 10 cycle storage spaces at the station. A table of key destinations is summarised below.

Stations	Line	Termini and Major Interchanges
Totteridge & Whetstone	Northern	Euston, Leicester Square, Tottenham Court Road, Bank, Elephant & Castle, Morden
Arnos Grove	Piccadilly	Euston, Leicester Square, Tottenham Court Road, Bank, Elephant & Castle, Morden

Table 1: London Underground Service Summary

- 2.10.3. Northern Line services from the Totteridge & Whetstone provide ample opportunity for interchange between lines or modes as well as serving a number of desirable destinations directly. Tottenham Court Road will also become a Crossrail station upon completion of the project, facilitating further options for travel east/west.
- 2.10.4. Piccadilly line from Arnos Grove serves several central interchange stations including King's Cross and Green Park. Between them these stations provide options for onwards travel by National Rail, Victoria London Underground line and Jubilee London Underground line amongst others.

2.11. <u>Pedestrians and Cyclists</u>

- 2.11.1. Zebra crossings are in place adjacent to both existing site accesses. Additional zebra crossings are also located along Oakleigh Road North and South; adjacent to Oakleigh Close; adjacent to Raleigh Drive, at the Russell Lane western mini roundabout; and to the south at Betstyle Circus. Other pedestrian facilities along Brunswick Park Road include a zebra crossing approximately 450m north of the existing site access and additional informal crossing points at regular intervals with dropped kerbs.
- 2.11.2. Footways continue on both sides of Oakleigh Road South and Oakleigh Road North between Friern Barnet and Whetstone. Street lighting is in place in conjunction with the footway provision. Footways in the vicinity of this existing access are 2m wide on average.
- 2.11.3. To the east of the site, footways are present on both sides of the carriageway with street lighting provided. At points the footway is set back from the carriageway with vegetation segregating the two uses
- 2.11.4. With regards to cycling, an off-highway cycle route to the east of the site provides a north-south connection towards East Barnet and New Southgate through Brunswick

Park, between Osidge Lane and Wilmer Way. Beaconsfield Road is a further locally recognised cycle route from the site which allows cyclists to avoid Betstyle Circus.

2.12. Local Amenities and Facilities

2.12.1. The Institution of Highways and Transportation document "Guidelines for Providing for Journeys on Foot" (GPJF) contains suggested acceptable walking distances for pedestrians for some common facilities. This document is intended to advise on planning for and providing for pedestrians, maintaining pedestrian infrastructure and promoting walking and as a result the distances stated in the document may be used for planning and evaluation purposes. Table 3.2 from Guidelines for Providing for Journeys on Foot (GPJF) is reproduced in Table 2 below for reference.

	Town Centres (m)	Commuting/School (m)	Elsewhere
Desirable	200	500	400
Acceptable	400	1000	800
Preferred maximum	800	2000	1200

Table 2 – Suggested Acceptable Walking Distance (Reproduced from Table 3.2 of GPJF)

- 2.12.2. The Accessibility Plan contained in **Appendix C** highlights the location of local facilities with respect to the development site. To provide context, boundaries indicating distances from the site boundary in 500m (or 6-minute walk/2-minute cycle), 1000m (12-minute walk/4-minute cycle) 1500m (18-minute walk/6-minute cycle) and 2000m (24-minute walk/8-minute cycle) increments are also shown.
- 2.12.3. As shown in Table 3 below, residents of the development will be able to access a range of local facilities on foot within an approximate 5, 10 and 15-minute walk of the development.

		Approximate Distance (m/mins)								
	0-400m 400-800m		800-1200m		1200-1500		1600-2000			
Facility	0-5mins walking	1-2 mins cycling	5-10 mins walking	2-3 mins cycling	10-15 mins walking	3-4 mins cycling	15-20 mins walking	5-6 mins cycling	20-25 mins walking	6-7 mins cycling
St Andrew the Apostle Greek Orthodox School		١	/							
Oakleigh Road Bus Stops		١								
Brunswick Park Road Bus Stops		•								
Oakleigh Road North / Balfour Grove Shopping Parade		1	/							
Russell Lane Shopping Parade		١								
Brunswick Park Medical Practice					٧					
Brunswick Park Primary School					•					

Table 3 – Walking/Cycling Accessibility to Local Facilities – Summary Table

- 2.12.4. Table 3 shows that there is a comprehensive range of facilities within a desirable and acceptable walking distance of the site including retail, education and health destinations.
- 2.12.5. There are over 10 schools within the preferred maximum distance from the site, including two secondary schools. This means that a variety of provision can be reached through sustainable means.
- 2.12.6. There is very little need for individuals to travel by car to meet every-day needs. The shopping parades at Oakleigh Road North/Balfour Grove and on B1453 Russell Lane have a variety of shops including convenience stores.
- 2.12.7. Further retail facilities are available at the Oakleigh Road North/Barfield Avenue and Hampden Square Neighbourhood Centres. The Oakleigh Road North/Barfield Avenue neighbourhood centre is within an approximate 10-minute walk of the redevelopment site and features food and convenience retail including a Tesco Express.

- 2.12.8. In additional Tesco Express is available at the Hampden Square neighbourhood centre as well as a variety of local stores. This centre is within an approximate 12-minute walk of the redevelopment site.
- 2.12.9. Health coverage in the area is wide ranging. A GP surgery and a pharmacy are both within a desirable distance of the redevelopment site. Patients can access the Hampdens Surgery within an approximate 4-minute walk of the redevelopment site. Four additional surgeries are located within a preferred maximum distance of the site.
- 2.12.10. With this variety of facilities within such a short distance of the site, it is considered that the site is in a sustainable location.

2.13. Summary

- 2.13.1. Access to the existing employment is achieved through the use of one of two accesses into the site.
- 2.13.2. The Oakleigh Road North access takes the form of a priority junction at the southern extent of the redevelopment site. The existing access from Brunswick Park Road takes the form of a crossroads arrangement on the eastern edge of the development site.
- 2.13.3. Zebra crossings are in place adjacent to both existing site accesses. Additional zebra crossings are located on Oakleigh Road North adjacent to Oakleigh Close, adjacent to Raleigh Drive, at the B14533 Russell Lane mini roundabout on Oakley Road South at Betstyle Circus and on Brunswick Park Road to the north of Prevost Road.
- 2.13.4. With regards to cycling, an off-highway cycle route to the east of the site provides a north-south connection towards East Barnet and New Southgate through Brunswick Park.
- 2.13.5. The level of service is therefore considered acceptable for the area, with a good, combined frequency of service to key facilities and transport infrastructure, a multitude of travel options and a short walk distance to stops.
- 2.13.6. The National Rail and London Underground provision in the vicinity allows for sustainable travel to a variety of destinations including employment centres.
- 2.13.7. There are a variety of facilities within a short walking distance of the site including education, retail and health facilities.
- 2.13.8. It is therefore considered that the site is in a sustainable location as required by the NPPF.

2.14. <u>Traffic Flows on Links and Junctions within the Study Area</u>

2.14.1. As requested by TfL during the scoping discussions, traffic counts were undertaken within the agreed area, as shown in **Figure 4** below and summarised in Table 4.

Ref.	Location	Junction Type
J1	A109 Oakleigh Road North/Oakleigh Park/Myddelton Park	Signalised Crossroads
J2	Church Hill Road/Russell Lane/Brunswick Park Road	3-arm Mini roundabout
J2a	Brunswick Park Road/Osidge Lane	3-arm Mini roundabout
J3	A109 Oakleigh Road North/Pollard Road/B5143 Russell Lane	4-arm Mini roundabout
J4	Site Access/Brunswick Park Road/Goldrill Drive	Crossroads
J5	A109 Oakleigh Road North/Site Access	Priority Junction
J5a	A109 Oakleigh Road South/Brunswick Avenue	Priority Junction
J6	A109 Oakleigh Road South/Coppies Grove	Priority Junction
J7	Friern Barnet Road/A109 Oakleigh Road North/Waterfall Road/Bowes Road (Betstyle Circus)	5-arm roundabout
J8	A109 Oakleigh Road/A1000 High Road/Totteridge Lane	Signalised Staggered Crossroads

Table 4 – Summary of Traffic Count Locations and Type

2.14.2. Manual Classified Count (MCC) surveys were undertake taken on Thursday 27th May 2021 at the locations shown on **Figure 4** below.



Figure 4 –2021 MCC Survey Locations (base mapping extracted from Bing Maps)

- 2.14.3. In addition to the MCCs undertaken, Automictic Traffic Counts (ATCs) were also installed within the vicinity of the site access along the A109 Oakleigh Road North and Brunswick Park Road.
- 2.14.4. These counts have been used to act as the baseline for assessment of traffic flows in the vicinity of the site and likely impact of traffic generated by the proposed development. The Observed 2021 traffic flow information is provided in **Appendix D.**
- 2.14.5. The baseline observed traffic flows and speeds are considered in more detail in Section 4 below in relation to development impact.

2.15. Personal Injury Accident Records

2.15.1. Personal Injury Collision (PIC) data covering the highway network within the vicinity of the site has been obtained from TfL. The data was obtained for the most recent period available; 5 years to the end of June 2019. For further details regarding the PIC data refer to London collision map - Transport for London (tfl.gov.uk).

2.15.2. Specific regard has been made to the occurrence of vulnerable road users¹ in any PIC data.

2.16. PIC Summary – Junctions

- 2.16.1. An assessment of the highway safety conditions at the 8 junctions identified within the study area are summarised below:
 - Junction 1 A109 Oakleigh Road North/Oakleigh Park/Myddelton Park 1 PIC classified as Slight in severity occurred at J1 in 2017 and involved 2 cars. Another Slight PIC was recorded in 2018 and involved a car and a motorcycle. No PICs that were classified as Serious or Fatal in severity were recorded during the most recent 5-year period;
 - Junction 2 Church Hill Road/Russell Lane/Brunswick Park Road 1 Slight PIC was recorded at J2 in 2015 which involved 2 cars. No other PICs were recorded at J2 during the 5-year period;
 - Junction 2a Brunswick Park Road/Osidge Lane 1 Slight PIC was recorded at J2a in 2019 which involved a car and a motorcycle. No other PICs were recorded at J2a during the 5-year period;
 - Junction 3 A109 Oakleigh Road North/Pollard Road/Russell Lane 3 Slight PICs were recorded at J3 in 2015. All of these incidents involved vehicles and no vulnerable road users. 1 Slight PIC was recorded in 2016 involving a bus. 1 Serious PIC was recorded in 2018 and involved a pedestrian and a motorcyclist;
 - Junction 4 Site Access/Brunswick Park Road/Goldrill Drive No PICs were recorded at J4 during the 5-year period;
 - Junction 5 A109 Oakleigh Road North/Site Access No PICs were recorded at J5 during the 5-year period;
 - Junction 5a A109 Oakleigh Road South/Brunswick Avenue No PICs were recorded at J5a during the 5-year period;
 - Junction 6 A109 Oakleigh Road South/Coppies Grove 1 Slight PIC was recorded at J6 in 2015 which involved 2 cars. 1 Slight PIC was recorded at J6 in 2018 which involved 2 cars;

-

¹ Vulnerable road users are considered to be pedestrians, scooters, cyclists, horse riders and powered two wheelers

- Junction 7 Friern Barnet Road/A109 Oakleigh Road North/Waterfall Road/Bowes Road (Betstyle Circus) 3 Slight PICs were recorded at J7 in 2015, all of which involved cars. 1 Slight PIC occurred in 2016 involving 2 cars. 1 Slight PIC was recorded in 2019 (along the eastern circulatory) which involved a car and a motorcycle. 3 further Slight PICs were recorded in 2019 that involved cars. 1 Serious PIC was recorded in 2019 (along the Friern Barnet Road approach) which involved a car and a pedestrian; and
- Junction 8 A109 Oakleigh Road/A1000 High Road/Totteridge Lane signalised crossroads 1 serious collision occurred in 2015 along the A1000 High Road northern arm involving a car and a cyclist. 2 serious collisions were recorded in 2017 and 2018, both involving motorcyclists along the A109 Oakleigh Road North approach. Another serious incident was recorded in 208 along the A109 Oakleigh Road North approach involving a vehicle only.

2.17. PIC Summary – Links

- 2.17.1. An assessment of the highway safety conditions along the key links within the study area has been undertaken. The following key links have been identified as they will provide access (both vehicular and pedestrian/cyclist) to the proposed development.
 - PIC Link 1 The A109 Oakleigh Road North and South (providing access to the site access to the south)
 - 4 Slight PICs in 2016, 1 involving a pedestrian (near Deodora Close).
 - 1 Slight PIC involving a cyclist (near Oakleigh Crescent);
 - 2 Slight PICs in 2017;
 - 2 Slight PICs in 2018, 1 involving a cyclist (north of Waterfall Road) and
 1 involving a motorcycle (near York Way).
 1 Serious PIC recorded in
 2018 involving a pedestrian.
 - 2 Slight PICs in 2019, 1 involving a pedestrian (near Carlisle Place);
 - PIC Link 2 Brunswick Park Road (providing access to the site via the east); no PICs recorded; and
 - PIC Link 3 Wierdale Avenue/Ashbourne Avenue/ B1453 Russell Lane (providing pedestrian/cycle only access to the north); no PICs recorded.

2.18. Summary

2.18.1. Table 5 below provides a summary of all PICs recorded at the junctions/links within the study area.

Ref.	Slight	Serious	Fatal	Total	Vulnerable road users involved	Comments
J1	2	0	0	2	Y	1 Slight PIC involved a motorcycle
J2	1	0	0	1	N	n/a
J2a	1	0	0	1	Y	1 Slight PIC involved a motorcycle
J3	4	1	0	5	Y	1 Serious PIC involved a pedestrian and a motorcycle
J4	0	0	0	0	N	n/a
J5	0	0	0	0	N	n/a
J5a	0	0	0	0	N	n/a
J6	2	0	0	0	N	n/a
J7	5	1	0	6	N	Slight PIC involved a motorcycle. One Serious PIC involved a pedestrian
J8	0	3	0	4	Y	2 Serious PICs involving motorcyclists and 1 Slight PIC involving a cyclist.
PIC Link 1	15	3	0	18	Y	Serious PIC involving a cyclist, 1 Serious PIC involving a cyclist. 1 Serious PIC involving a pedestrian. 1 Slight PIC involving a pedestrian.
PIC Link 2	0	0	0	0	-	-
PIC Link 3	0	0	0	0	-	-
Table 5	Total		tion DIO	37		

Table 5 - Summary of Junction PICs

2.18.2. No PICs were recorded at any of the existing or proposed site accesses. In the wider study area, given the timescale and volume of traffic likely to utilise the road network, the number and severity of collisions is not considered to be excessive or giving rise to specific concerns regarding access to the proposed development.

3. Proposed Development

- 3.1.1. The proposed development is for the regeneration of North London Business Park to provide a mixed-use development of up to 2,428 dwellings, 2,353sq.m of workspace, 3,835 sqm flexible non-residential floorspace, which could be used for community use, medical use, retail, offices, cafes etc. and a new 5FE school building with an anticipated 1,050-pupil capacity.
- 3.1.2. The site measures 16.37ha, of which approximately 13ha is currently undeveloped, comprising areas of disused open space and car parking.
- 3.1.3. The Detail Planning Area (Phase 1) is proposed to accommodate 459 new residential units, with a mixture of houses, duplexes and apartments. The Detail Planning Area (Phase 1) will also include the 5th form entry secondary school, which will replace the existing temporary school building on site accommodating the St Andrew the Apostle School. Further details of Phase 1 are shown in the Parameter Plans contained in Appendix A.
- 3.1.4. All associated site works, landscaped areas (including Brunswick Lakeside Park), transport infrastructure and car parking required to support the delivery of the Detail Planning Area (Phase 1) will be included in the Detail Application.
- 3.1.5. The Outline Planning Area (Phases 2-5) will also accommodate a small number of non-residential uses. These ancillary uses are intended as uses that will compliment and support the planned residential community on the site.
- 3.1.6. Table 6 below shows the Phase 1 development schedule.

Block	1 x Bed	2 x Bed	3 x Bed	4 x Bed	Total Units
С	58	78	18	0	154
D	70	52	47	2	171
Е	32	32	4	0	68
F	6	34	21	0	61
Total	166	196	90	2	454

Table 6 - Phase 1 Development Schedule

3.2. Means of Access Appraisal

3.2.1. The main site accesses for all vehicles will be taken from the existing access points on Brunswick Park Road (Eastern Access) and the A109 Oakleigh Road North (Southern Access), as identified on the Access Strategy Drawing, ST-3013-701, provided in **Appendix E**.

- 3.2.2. A new pedestrian/cycle access will be provided to the north of the site to link with the residential street, Ashbourne Avenue.
- 3.2.3. The existing Eastern Access onto Brunswick Park Road will be upgraded from its current crossroads arrangement to a new signalised junction. The junction will incorporate pedestrian/cycle signal phases in signals. A proposed Means of Access Plan for this junction is also provided in **Appendix E**.
- 3.2.4. Swept Path Analysis drawings for a Refuse Vehicle and 15m coach travelling into and out of the proposed upgraded access are provided in **Appendix F**, Drawings ST-3013-10 and 07, respectively.
- 3.2.5. Initial pre-application discussion was held with LBB and TfL in May/June 2011 and via subsequent follow up remote meetings/discussion. The principle of two separate accesses for the site was discussed and it was agreed that the form of these junctions would reflect the modelled requirements based on capacity as well as access requirements for pedestrians and cyclists in accordance with current policy.
- 3.2.6. A Stage 1 Road Safety Audit (RSA) will be undertaken for the proposed site accesses. The final design of the accesses will reflect the findings of the RSA, and be incorporated into the final layout, in accordance with the agreed Designer's Response.
- 3.2.7. In addition, off-site upgrades are focused on promoting access by sustainable modes of transport and can be summarised as follows:
 - Signalised pedestrian and cycle crossings will be provided across all arms of the new signalised Eastern Access onto Brunswick Park Road;
 - A new pedestrian/cycle link to Ashbourne Avenue to the north of the site; and
 - Upgrade of the existing bus stops along Brunswick Park Road and the A109
 Oakleigh Road North to provide shelters, seating and Real Time Information (RTI).
- 3.2.8. Within the site, the various parcels of development will be designed with low traffic speeds as a priority, with 20mph maximum speed being the overall objective. Pedestrians and cyclists will benefit from a mixture of specific off-road facilities and onroad low speed/lightly trafficked routes.
- 3.2.9. The following summarises the key access design features within the site:

- Within the site, vision splays of 2.4m x 25m will be provided to comply with Manual for Streets requirements for 20mph design speed for vehicle-to-vehicle inter-visibility;
- 2.0m wide footways will be provided within the site with associated informal dropped kerb crossing points and tactile paving for pedestrians. Footways will be designed to connect to shared surface spaces; and
- An off-road shared use route will be provided to connect the site to Ashbourne
 Avenue to the north. This will provide an attractive, traffic free route to//from the site,
 and to the commercial facilities located along the B5143 Russell Lane.
- 3.2.10. The access roads will be designed to comply with the latest LBB Standards, including allowing access for waste and emergency vehicles.
- 3.2.11. All properties within the site will be within 400m walking distance of a bus stop.
- 3.2.12. The site layout and means of access have been designed to comply with current design standards and accord with the advice received from LBB at pre-application stage.

Green Routes

- 3.2.13. Green routes are an element of the masterplan that seek to connect public parkland within the masterplan and also to ensure the main public thoroughfares are provided with high quality and generously designed margins.
- 3.2.14. The Parkway is the central spine route within the masterplan that connects all principal Character Areas, from New Brunswick Park South to the Northern Homezones. Entry Avenues from the A109 Oakleigh Road North and Brunswick Park Road, existing offsite streets, are wide planted entry routes, providing a defined character to visitors and residents as they enter the masterplan area.
- 3.2.15. Further details of the proposed Green Routes are shown on **Figure 5** below which has been extracted from the Masterplan produced by Plus Architecture.

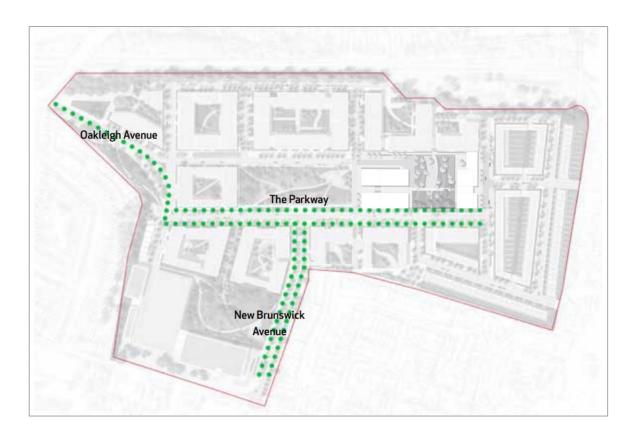


Figure 5 - Proposed Green Routes

3.3. Movement

- 3.3.1. Movement within the masterplan has been considered as the connection of parkland spaces with green routes. It is not conceived that the masterplan will become part of the wider public street network, albeit the site does act as a vehicle connection between the A109 Oakleigh Road North and Brunswick Park Road.
- 3.3.2. Passive discouragement of traffic passing through is proposed in the masterplan through design features in the public landscape. Vehicles are nonetheless free to use all primary and secondary streets within the masterplan, and a traditional arrangement of streets provide with parallel parking for visitors is proposed in most streets of the masterplan. Tertiary streets will be typically used only by residents for access.
- 3.3.3. The masterplan does open up the site to pedestrian traffic, both for new residents leaving and entering the site, with a variety of access locations and for the wider community as a new permeable pedestrian environment.
- 3.3.4. New connections include the A109 Oakleigh Road North and Brunswick Park Road entrances, as well as a new pedestrian and cycle connection to the north of the site at Ashbourne Avenue. Multiple route options within the site are presented to pedestrians,

- allowing access to all public parkland space as well as the non-residential floorspace supporting the new community.
- 3.3.5. Further details of the vehicle and pedestrian movements are shown in **Figures 6** and **7** below, which have been extracted from the Masterplan produced by Plus Architecture.

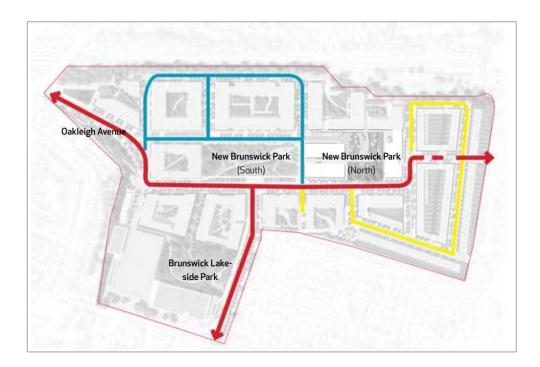


Figure 6 – Vehicle Movement

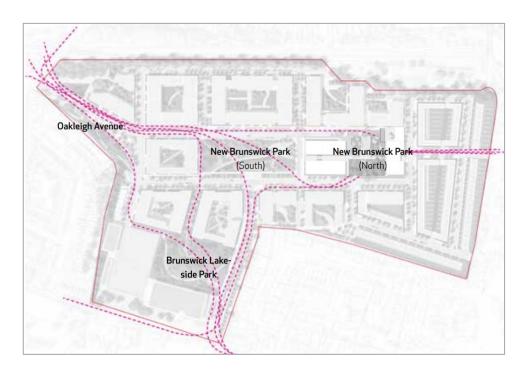


Figure 7 – Pedestrian Movement

3.4. Streets and Routes

- 3.4.1. Streets throughout the development area will be designed to constrain vehicle speeds and ensure pedestrian and cyclists' safety. Key elements of the street design alignment, street features such as raised tables, parking, footways, planting, furniture and lighting will be used to help keep traffic speeds to safe residential area.
- 3.4.2. The primary vehicular, pedestrian and cycle routes proposed at the development are shown in Figure 8 below which has been extracted from the Masterplan produced by Plus Architecture.

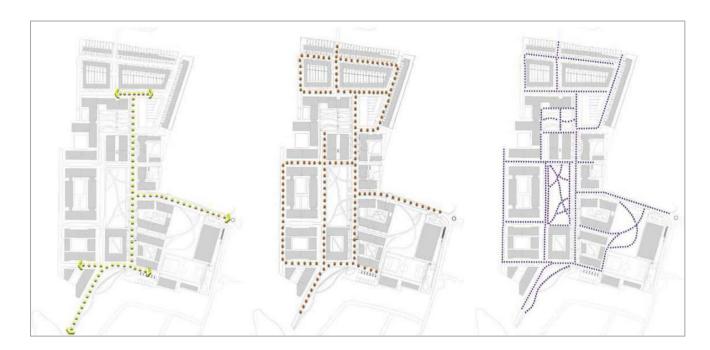


Figure 8 - Primary Vehicular, Pedestrian and Cycle Routes

3.4.3. The following street hierarchy will be implemented as part of the development proposals:

Primary Streets

- 3.4.4. Primary streets form the principal circulation route through the site linking the A109 Oakleigh Road North to the south and Brunswick Park Road to the east. The design principles of the Primary Streets are as follows:
 - Keep free of on-street parking to reduce overall width of paved road and maximise pedestrian routes;
 - Raised tables at junctions Level gradient crossing points;
 - Providing street widths between residential blocks of 24m;

3.4.5. The primary streets proposed at the development are shown in **Figure 9** below which has been extracted from the Masterplan produced by Plus Architecture.



Figure 9 – Primary Streets (extracted from the Masterplan produced by Plus Architecture

Secondary Streets

- 3.4.6. Secondary streets form the principal vehicle and pedestrian access to residential blocks and basement parking. The size of the streets should address a more residential feel than the primary routes. The design principles of the Secondary Streets are as follows:
 - On-street parking to single side of the road;
 - Raised tables at junctions; and
 - Providing street widths between residential blocks with a minimum of 18m.
- 3.4.7. The secondary streets proposed at the development are shown in **Figure 10** below which has been extracted from the Masterplan produced by Plus Architecture.

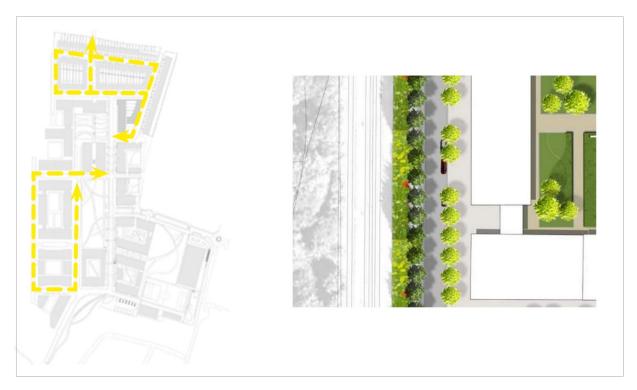


Figure 10 - Secondary Streets (extracted from the Masterplan produced by Plus Architecture

Tertiary Streets

- 3.4.8. Tertiary streets are form the shared surface areas. The design principles of the Tertiary Streets are as follows:
 - Raised area;
 - No raised kerbs; and
 - On-street parking in defined areas.
- 3.4.9. The tertiary streets proposed at the development are shown in **Figure 11** below which has been extracted from the Masterplan produced by Plus Architecture.

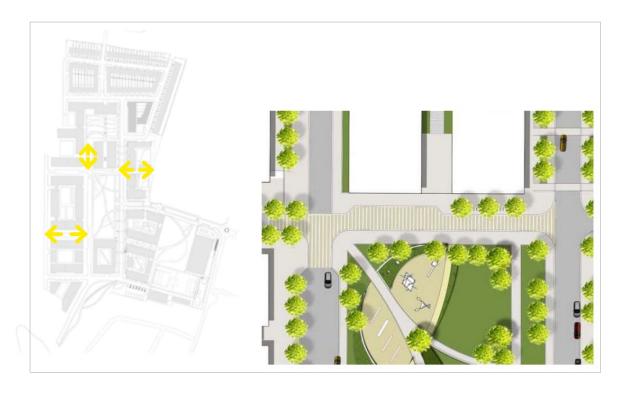


Figure 11 – Tertiary Streets and Routes (extracted from the Masterplan produced by Plus Architecture

4. Active Travel Assessment

4.1. <u>Active Travel Zone (ATZ) Scope</u>

- 4.1.1. The ATZ assessment is a qualitative analysis of cycle and walking network's surrounding the proposed development, the methodology has been developed by TfL to support the Healthy Streets approach and Vision Zero.
- 4.1.2. The Active Travel Zone (ATZ) assessment is carried out to assist the understanding of the proposed development's potential contribution to promoting sustainable travel. The ATZ assessment reviews the main routes to/from the site to key destinations within a 20-minute walking distance. Point of View (PoV) records of the key routes are taken at various intervals to assess the condition and suitability of these routes for pedestrians/cyclists. The photographic survey of the routes is then benchmarked against Healthy Streets indicators 3-10 as follows:
 - Easy to cross;
 - · People feel safe;
 - Things to see and do;
 - Places to stop and rest;
 - · People feel relaxed;
 - Not too noisy;
 - · Clean air; and
 - Shade and shelter.
- 4.1.3. The ATZ is defined as the area within a 20-minute cycle of the proposed development.
 The ATZ for the proposed development is illustrated in **Appendix G**.
- 4.1.4. Details of the existing public transport services and infrastructure are outlined in Chapter2.

4.2. <u>Destination Priority</u>

- 4.2.1. The priority of the sustainable mode's destination is based upon the prevalent user group of the proposed developments occupants.
- 4.2.2. The key trip land use associated with the proposed development therefore is primarily residential, and when determining the relevance of key destinations, those linked to the residential use have been prioritised as follows:

- Public Transport Services High Priority;
- Local Centres High Priority;
- Amenities High Priority; and
- Local Cycle Network Medium Priority.
- 4.2.3. The key destinations have been prioritised, as shown in Table 7, based on the expected main users of the site and their most common journeys.

Amenity	Destination	Priority	Included within the ATTZ
Public Transport Stops	Adjacent to the existing access along Brunswick Park Road (to the east) the A109 Oakleigh Road South (to the south) and the B1453 Russell Lane (to the north) which will be accessible via the future pedestrian/cycle link to the site	High	Yes
London Underground Rail Stations	Arnos Gove Station or Totteridge & Whetstone Station	High	No – however within a 10-minute cycle
Rail Stations	New Southgate Station or Oakleigh Park Station	High	No – however within a 10-minute cycle
Local Centres	Russell Lane, Osidge and Oakleigh Road North	High	Yes
Education Facility	Oak Hill School, Sacred Heart Roman Catholic Primary School, Oakleigh School and St Andrew the Apostle Greek Orthodox School	High	Yes
Medical Facility	Oakleigh Road Medical Centre, Brunswick Park Medical Centre	High	Yes
Parks	Brunswick Park, Friary Park, New Southgate Recreation Ground, Bethune Park	Medium	Yes
Cycle Network	Off-road cycle route provided within Brunswick Park and Friary Park	Medium	Yes

Table 7 - Key ATZ Destinations

- 4.2.4. **Appendix G** shows the routes for assessment.
- 4.3. <u>ATZ Assessment</u>
- 4.3.1. As part of the Active Travel Zones assessment, on-site studies are taken along the route to each key active travel destination. These routes are as follows:
 - Route 1 Ashbourne Avenue/ Weirdale Avenue;
 - Route 2 B1453 Russell Lane;

- Route 3 A109 Oakleigh Road North A1000 High Road A5109 Totteridge Lane (towards Totteridge and Whetstone Underground Station);
- Route 4 A1000 High Road (towards local centre);
- Route 5 Raleigh Drive/St James Avenue/B550Friern Barnet Lane/Friary Road/Torrington Park/A1000 High Road;
- Route 6 A109 Oakleigh Road South/Beaconsfield Road/The Crescent (towards Friern Barnet School);
- Route 7 Beaconsfield Road/A1033 Friern Barnet Road/A109 Station Road (towards New Southgate Rail Station);
- Route 8 A1110 Bowes Road (towards Arnos Grove Underground Station);
- Route 9 Brunswick Park Avenue;
- Route 10 Brunswick Park Road;
- Route 11 Osidge Lane; and
- Route 12 Church Hill Road.
- 4.3.2. The routes are demonstrated in Tables 8 19 below.

Route 1 – Ashbourne Avenue/Weirdale Avenue

4.3.3. The associated images with Route 1 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 8.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Traffic volumes are likely to be low on this route. There are a few trees present on abutting properties	There is no area for improvement.
People feel safe	Street lighting present. Residential street resulting in low vehicle speeds. Pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement.
Not too noisy	Quiet residential street.	There is no area for improvement.
Easy to cross	No existing formal crossings at present. However, given that the route is within a residential street, vehicle numbers will be low allowing crossing	Potential provision of zebra crossings at key locations

Places to stop and rest	This route does not provide any places to stop and rest.	There is no area for improvement.
Shade and shelter	The entire route is lined by trees, providing shade from the sun/weather.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and is generally in good condition with a small number of incidences of uneven surface and vegetation growth encroaching.	General maintenance of the footway and vegetation.
Things to see and do	There is little to see and do, although this is a very short route in close proximity to the commercial facilities along the B4153 Russell Lane.	There is no area for improvement.

Table 8 - Healthy Streets Analysis of Route 1

Route 2 - B4351 Russell Lane

4.3.4. The associated images with Route 2 are included at **Appendix H.** The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 9.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	The route is lined by trees and often grass verges. Entrances to the side roads and pedestrian crossings along the street section may cause traffic to stop and wait.	Further promotion of sustainable and active travel to reduce traffic volumes.
People feel safe	The entire route is sufficiently lit, and the footway and sufficiently wide.	There is no area for improvement.
Not too noisy	Limited levels of background noise associated with medium levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There is a formal crossing with dropped kerbs and appropriate tactile paving at the north-eastern end of the B143 Russell Lane adjacent to the Church Hill Road junction. There is also a zebra crossing with dropped kerbs and tactile paving at the south-western end adjacent to the junction with the A109 Oakleigh Road North.	There is no area for improvement.
Places to stop and rest	This route does not provide any places to stop and rest.	There is no area for improvement.
Shade and shelter	The route is lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide, generally in good condition.	There is no area for improvement.
Things to see and do	The northern stretch of the B1453 Russell Lane benefits from active frontage providing users with things to see and do.	There is no area for improvement.

Table 9 - Healthy Streets Analysis of Route 2

Route 3 – A109 Oakleigh Road North – A1000 High Road – A5109 Totteridge Lane (towards Totteridge and Whetstone Underground Station)

4.3.5. The associated images with Route 3 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to Figure 1 in Section 2) in Table 10.

Observations	Areas for Improvement
The route is lined by trees and often with grass verges. Entrances to the side roads and pedestrian crossings along the street section may cause traffic to stop and wait.	Further promotion of sustainable and active travel to reduce traffic volumes.
The entire route is sufficiently lit, and the footway and sufficiently wide.	There is no area for improvement.
Some levels of background noise associated with medium/high levels of traffic in an urban environment.	There is no area for improvement.
There are 3 zebra crossings with dropped kerbs and tactile paving located along the A109 Oakleigh Road North, one of which is located adjacent to the Southern Site Access. There are several uncontrolled crossings with dropped kerbs and appropriate tactile paving located at key	
locations along the A109 Oakleigh Road North. There are 2 signal-controlled crossings located along the A109 Oakleigh Road. One is located at the A109 Oakleigh Road North/Oakleigh Park Road/Myddleton Park junction. The second is located at the A109 Oakleigh Road North/A1000 High Road/A5109 Totteridge Lane junction.	There is no area for improvement.
There is an uncontrolled crossing facility along the A5109 Totteridge Lane opposite the Totteridge and Whetstone Underground Station.	
Benches are located along the route, providing users the opportunity to stop and rest.	There is no area for improvement.
Some stretches of the route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
The footway is sufficiently wide, generally in good condition.	There is no area for improvement.
The A1000 High Street benefits from active frontage providing users with things to see and do.	There is no area for improvement.
	The route is lined by trees and often with grass verges. Entrances to the side roads and pedestrian crossings along the street section may cause traffic to stop and wait. The entire route is sufficiently lit, and the footway and sufficiently wide. Some levels of background noise associated with medium/high levels of traffic in an urban environment. There are 3 zebra crossings with dropped kerbs and tactile paving located along the A109 Oakleigh Road North, one of which is located adjacent to the Southern Site Access. There are several uncontrolled crossings with dropped kerbs and appropriate tactile paving located at key locations along the A109 Oakleigh Road North. There are 2 signal-controlled crossings located along the A109 Oakleigh Road. One is located at the A109 Oakleigh Road North/Oakleigh Park Road/Myddleton Park junction. The second is located at the A109 Oakleigh Road North/A1000 High Road/A5109 Totteridge Lane junction. There is an uncontrolled crossing facility along the A5109 Totteridge Lane opposite the Totteridge and Whetstone Underground Station. Benches are located along the route, providing users the opportunity to stop and rest. Some stretches of the route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises. The footway is sufficiently wide, generally in good condition.

Table 10 – Healthy Streets Analysis of Route 3

Route 4 – A1000 High Road (towards local centre)

4.3.6. The associated images with Route 4 are included at **Appendix H.** The journey is reviewed against each Healthy Streets indicator (please refer to Figure 1 in Section 2) in Table 11.

1.1 1/1		
Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	The route is lined by trees in some areas. Entrances to the side roads and pedestrian crossings along the street section may cause traffic to stop and wait.	Further promotion of sustainable and active travel to reduce traffic volumes.
People feel safe	The entire route is sufficiently lit, and the footway sufficiently wide.	There is no area for improvement.
Not too noisy	Some levels of background noise associated with medium/high levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There are 4 zebra crossings with dropped kerbs and tactile paving located along the A1000 High Road. There are 2 signal-controlled crossings located along the A1000 Oakleigh Road. One of which is located at the A109 Oakleigh Road North/A1000 High Road/A5109Totteridge Lane junction.	There is no area for improvement.
Places to stop and rest	Benches are located along the route, providing users the opportunity to stop and rest.	There is no area for improvement.
Shade and shelter	Some stretches of the route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and generally in good condition.	There is no area for improvement.
Things to see and do	The A1000 High Street benefits from active frontage providing users with things to see and do.	There is no area for improvement.

Table 11 - Healthy Streets Analysis of Route 4

Route 5 – Raleigh Drive/St James Avenue/B550Friern Barnet Lane/Friary
Road/Torrington Park/A1000 High Road

4.3.7. The associated images with Route 5 are included at Appendix H. The journey is reviewed against each Healthy Streets indicator (please refer to Figure 1 in Section 2) in Table 12.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	The route is lined by trees in some areas. This route also extends alongside the Friary Park and the North Middlesex Golf Club in parts. Entrances to the side roads and pedestrian crossings along the street section may cause traffic to stop and wait.	Further promotion of sustainable and active travel to reduce traffic volumes.
People feel safe	The entire route is sufficiently lit, and the footway is sufficiently wide.	There is no area for improvement.
Not too noisy	Some levels of background noise associated with low levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There are uncontrolled pedestrian crossing facilities with dropped kerbs and tactile paving located along Friary Road an Friern Barnet Lane.	There is no area for improvement.
Places to stop and rest	Benches are located along the route, providing users the opportunity to stop and rest.	There is no area for improvement.
Shade and shelter	Some stretches of the route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and generally in good condition. This route also extends alongside the Friary Park.	There is no area for improvement.
Things to see and do	The A1000 High Street benefits from active frontage providing users with things to see and do. This route also extends alongside the Friary Park.	There is no area for improvement.

Table 12 - Healthy Streets Analysis of Route 5

Route 6 – A109 Oakleigh Road South/Beaconsfield Road/The Crescent (towards Friern Barnet School)

4.3.8. The associated images with Route 6 are included at **Appendix H.** The journey is reviewed against each Healthy Streets indicator (please refer to Figure 1 in Section 2) in Table 13.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	The route is very green and is lined by trees and often with grass verges. Furthermore, some extents of this route pass alongside Bethune Park (adjacent to Beaconsfield Road) and allotments (adjacent to The Crescent). Entrances to the side roads and pedestrian crossings	There is no area for improvement
	along the street section may cause traffic to stop and wait.	
People feel safe	The entire route is sufficiently lit, and the footway is sufficiently wide. Stretches of Beaconsfield Road and The Crescent/Crescent Road are subject to a 20mph speed limit.	There is no area for improvement.

Not too noisy	Some levels of background noise associated with low levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There is a zebra crossing facility with dropped kerbs and tactile paving located along the A109 Oakleigh Road North adjacent to the Southern Site Access. There are uncontrolled pedestrian crossing facilities with dropped kerbs and tactile paving located along Beaconsfield Road. There are no crossing facilities located adjacent to the Friern Barnet Primary School	Provision of a pedestrian crossing facility along Crescent Road to facilitate pedestrian movements to the Friern Barnet School.
Places to stop and rest	Benches are located along the route, providing users the opportunity to stop and rest.	There is no area for improvement.
Shade and shelter	The entire route is lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide, generally in good condition. This route also extends alongside the Bethune Park.	There is no area for improvement.
Things to see and do	This route also extends alongside Bethune Park.	There is no area for improvement.

Table 13 - Healthy Streets Analysis of Route 6

Route 7 – Beaconsfield Road/A1033 Friern Barnet Road/A109 Station Road (towards New Southgate Rail Station)

4.3.9. The associated images with Route 7 are included at **Appendix H.** The journey is reviewed against each Healthy Streets indicator (please refer to **Figure** 1 in Section 2) in Table 14.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Pedestrian crossings and entrances to side roads may cause traffic to slow and stop, particularly during peak times. However, there are trees along the A1003 Friern Barnet Road, and the pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement
People feel safe	The entire route is sufficiently lit, and the footway is sufficiently wide.	There is no area for improvement.
Not too noisy	Some levels of background noise associated with low/medium levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There is a zebra crossing facility and a signal-controlled crossing along the A1003 Friern Barnet Road. There is a signal-controlled crossing along the A109 Station Road. There is a zebra crossing along the A109 Station Road opposite the Southgate Rail Station entrance.	There is no area for improvement.

Places to stop and rest	This route does not provide any places to stop and rest.	There is no area for improvement.
Shade and shelter	Some parts of this route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and in good condition.	There is no area for improvement.
Things to see and do	The A1003 Friern Barnet Road benefits from significant active frontage, providing users with things to see and do.	There is no area for improvement.

Table 14 - Healthy Streets Analysis of Route 7

Route 8 – A1110 Bowes Road (towards Arnos Grove Underground Station)

4.3.10. The associated images with Route 8 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 15.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Pedestrian crossings and entrances to side roads may cause traffic to slow and stop, particularly during peak times. However, there are trees along the A1110 Bowes Road, and the pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement
People feel safe	The entire route is sufficiently lit, and the footway and sufficiently wide.	There is no area for improvement.
Not too noisy	Some levels of background noise associated with medium levels of traffic in an urban environment.	There is no area for improvement.
Easy to cross	There are 3 zebra crossing facilities located along the A110 Bowes Road. 2 are located along the approach to Betsyle Circus, and 1 is located opposite Arnos Grove Underground station.	There is no area for improvement.
Places to stop and rest	There is a bench located at Arnos Grove Underground Station.	There is no area for improvement.
Shade and shelter	Some parts of this route are lined by trees, providing shade from the sun/weather. There are also bus shelters and commercial premises.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and in good condition.	There is no area for improvement.
Things to see and do	The A1110 Bowes Road benefits from significant active frontage, providing users with things to see and do.	There is no area for improvement.

Table 15 - Healthy Streets Analysis of Route 8

Route 9 - Brunswick Park Avenue

4.3.11. The associated images with Route 9 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 16.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	There are very few trees along this route, but there are garden frontages associated with the residential properties.	There is no area for improvement
People feel safe	Street lighting present. Residential street resulting in low vehicle speeds. Pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement.
Not too noisy	Quiet residential street.	There is no area for improvement.
Easy to cross	No existing formal crossings at present. However, given that the route is within a residential street, vehicle numbers will be low.	There is no area for improvement.
Places to stop and rest	There are no benches provided, however this route is short in length.	There is no area for improvement.
Shade and shelter	There are a few trees to provide shade/shelter.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and generally in good condition although with incidences of uneven surface and vegetation growth encroaching.	General maintenance of the footway and vegetation.
Things to see and do	There are limited facilities along this route.	There is no area for improvement.

Table 16 - Healthy Streets Analysis of Route 9

Route 10 - Brunswick Park Road

4.3.12. The associated images with Route 10 are included at **Appendix H.** The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 17.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Trees line the entire route, and wide footways provide a safe space between pedestrians and traffic. Part of this route extends parallel to the New Southgate Recreation Ground and the New Southgate Cemetery and Crematorium. Entrances to the side roads and pedestrian crossings along the high street section may cause traffic to stop and wait.	There is no area for improvement

People feel safe	The entire route is lit. Pavement is of sufficient width keeping pedestrians an adequate distance away from traffic. Guard railing provided at some locations	There is no area for improvement.
Not too noisy	Some levels of background noise associated with medium levels of traffic in an urban environment likely to be experienced during peak times.	There is no area for improvement.
Easy to cross	2 zebra crossings provided along Brunswick Park Road. 1 within the vicinity of the existing Eastern Access, and 1 located along the approach to the B1453 Osidge Lane. There are several formal uncontrolled crossing facilities with dropped kerbs and tactile paving provided at key locations.	There is no area for improvement.
Places to stop and rest	There is a bench located at the northern end of Brunswick Park Road near to the junction with the B1453 Osidge Lane. Furthermore, there are benches provided within the New Southgate Recreation Ground which runs parallel to Brunswick Park Road.	There is no area for improvement.
Shade and shelter	The entire route is tree lined, providing shade from the sun/weather.	There is no area for improvement. Provision of bus shelters adjacent to the site access to provide shelter/seating.
People feel relaxed	The footway is sufficiently wide, generally in good condition although with incidences of uneven surface and vegetation growth encroaching.	General maintenance of the footway and vegetation.
Things to see and do	Part of this route extends parallel to the New Southgate Recreation Ground and the New Southgate Cemetery and Crematorium. There are a few shops located	There is no area for improvement.
Table 47 Ha	oldhur Otmanta Amahasia at Davita 40	

Table 17 - Healthy Streets Analysis of Route 10

Route 11 - B1453 Osidge Lane

4.3.13. The associated images with Route 11 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 18.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Trees line the entire route, and wide footways provide a safe space between pedestrians and traffic. Part of this route extends past Pymmes Brook green area. Entrances to the side roads and pedestrian crossings along the high street section may cause traffic to stop and wait.	There is no area for improvement
People feel safe	The entire route is lit. Pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement.

Not too noisy	Some levels of background noise associated with medium levels of traffic in an urban environment likely to be experienced during peak times.	There is no area for improvement.
Easy to cross	2 zebra crossings provided along the B1453 Osidge Lane. There is a formal uncontrolled crossing facility with dropped kerbs and tactile paving provided along the approach to the junction with Hampden Way and another opposite the Barnet Scout Group Building.	There is no area for improvement.
Places to stop and rest	There is a bench located near to the junction with Beresford Avenue.	There is no area for improvement.
Shade and shelter	The entire route is tree lined, providing shade from the sun/weather. There are bus shelters/seating also provided along this route.	There is no area for improvement.
People feel relaxed	The footway is sufficiently wide and in good condition.	General maintenance of the footway and vegetation.
Things to see and do	This route benefits from significant active frontage, providing users with plenty to see and do.	There is no area for improvement.

Table 18 - Healthy Streets Analysis of Route 11

Route 12 - B1453 Church Hill Road

4.3.14. The associated images with Route 12 are included at **Appendix H**. The journey is reviewed against each Healthy Streets indicator (please refer to **Figure 1** in Section 2) in Table 19.

Healthy Streets Indicator	Observations	Areas for Improvement
Clean air	Trees line the entire route, and wide footways provide a safe space between pedestrians and traffic. Part of this route extends parallel to Oak Hill Park. Entrances to the side roads and pedestrian crossings along the high street section may cause traffic to stop and wait.	There is no area for improvement
People feel safe	The entire route is lit. Pavement is of sufficient width keeping pedestrians an adequate distance away from traffic.	There is no area for improvement.
Not too noisy	Some levels of background noise associated with medium levels of traffic in an urban environment likely to be experienced during peak times.	There is no area for improvement.
Easy to cross	There are several formal uncontrolled crossing facilities with dropped kerbs and tactile paving provided at key locations.	There is no area for improvement.
Places to stop and rest	There are no benches provided along this route. However, there are benches available within the nearby Oak Hill Park.	There is no area for improvement.
Shade and shelter	The entire route is tree lined, providing shade from the sun/weather. There are bus shelters/seating are also provided along this route.	There is no area for improvement.

People feel relaxed	The footway is sufficiently wide and in good condition.	General maintenance of the footway and vegetation.
Things to see and do	This route benefits from significant active frontage, providing users with plenty to see and do. Part of this route also extends along Oak Hill Park.	There is no area for improvement.

Table 19 - Healthy Streets Analysis of Route 12

4.4. ATZ Assessment Summary and Identified Improvements

Potential Improvements

- 4.4.1. As part of the Active Travel Zones Assessment, an audit and photographic surveys were carried out for the 12 routes identified in Tables 8 19.
- 4.4.2. The following areas of improvement were identified:
 - Provide general maintenance to the footways along Routes 1,9,10,11 and 12 to remove vegetation and improve overall condition;
 - Provide a pedestrian crossing facility along The Crescent to facilitate pedestrian movements to Friern School; and
 - Provision of bus shelters and seating along Brunswick Park Road (Route 10) outside the eastern site access,

Improvements vs Mitigation

- 4.4.3. It is essential that any financial contributions sought towards mitigation of the proposed development are sought within the National Planning Policy Framework (2019) conditions. The NPPF states that "planning obligations must only be sought where they meet all of the following tests:
 - Necessary to make the development acceptable in planning terms;
 - Directly related to the development; and
 - Fairly reasonably related in scale and kind.

5. Waste Management Strategy

5.1. <u>Introduction</u>

5.1.1. This Waste Management Strategy considers the potential impacts that may arise from waste generated during the operational phase with the overall aim of developing a strategy for legislative compliance and good practice in the separation, storage, collection, treatment and/or disposal of waste arisings.

5.2. <u>Policy Review Summary</u>

National Planning Policy for Waste - 2014

- 5.2.1. The Waste Management Plan for England sets out the Government's ambition to work towards a more sustainable and efficient approach to resource use and management.
- 5.2.2. This policy sates that `Positive planning plays a pivotal role in delivering this country's waste ambitions through:
 - ensuring that waste management is considered alongside other spatial planning concerns, such as housing and transport, recognising the positive contribution that waste management can make to the development of sustainable communities; and
 - ensuring the design and layout of new residential and commercial development and other infrastructure (such as safe and reliable transport links) complements sustainable waste management, including the provision of appropriate storage and segregation facilities to facilitate high quality collections of waste.'
- 5.2.3. When determining planning applications, local authorities should: ensure that waste management facilities in themselves are well-designed, so that they contribute positively to the character and quality of the area in which they are located.'.

North London Waste Plan – January 2019

- 5.2.4. Once adopted, the North London Waste Plan (NLWP) will form part of the Development Plan for each of the respective 7 London Boroughs which comprises the London Plan and borough Local Plans.
- 5.2.5. The aim of the NLWP acknowledges that the NLWP is part of a wider but integrated approach that will help to deliver sustainable waste management in North London, alongside such measures as improved resource management, and waste prevention

and reduction spanning strategies which influence but are outside of the planning framework.

5.2.6. The NLWP aim and objectives reference and integrate the Waste Hierarchy, which is shown in **Figure 12** below, which has been extracted from Figure 5 of the NLWP.

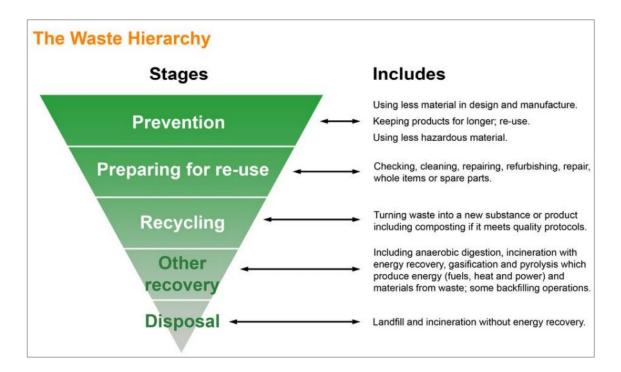


Figure 12 – Waste Hierarchy (extracted from Figure 5 of the NLWP)

London Borough Barnet's Reduction and Recycling Plan 2018 – 2022

- 5.2.7. LBB are currently developing its Reduction and Recycling Plan (RRP) which will set out the Borough's key actions for cutting waste and boosting recycling for the period 2018-2022.
- 5.2.8. The RRP will be used to drive and promote local activity that will also play an important role helping to achieve the Mayor's London-wide targets to cut food waste by 50% per person and achieve 65% municipal waste recycling by 2030.

<u>London Borough Barnet's Municipal Recycling and Waste Strategy and Future Delivery</u> <u>for Barnet – 2016 – 2031</u>

- 5.2.9. The Municipal Recycling and Waste Strategy and Future Delivery for Barnet) sets out the following aims:
 - 'Provide services that help our rapidly growing community to manage its environmental impact;

- Manage the rising cost of waste collection and disposal by designing services that promote recycling and reuse and are integrated, intuitive and efficient.
- Encourage all Barnet's residents, businesses and visitors to take responsibility for the waste that they produce, but using enforcement where necessary; and.
- Embrace new technologies and ways of working that help us deliver services that respond better to the needs of our community'.
- 5.2.10. The Waste Strategy for the proposed development has been produced to accord with the aims and objects identified in the policies summarised above.

5.3. Generation of Household Waste

- 5.3.1. Household waste generation from the Comprehensive Development has been estimated using Gov.uk municipal waste statistics and London data. The Current data (2019/2020) states that the annual residual household waste per household is 0.53 tonnes for London which is derived from the Municipal Waste Management Statistics published by the Department for Environment, Food and Rural Affairs.
- 5.3.2. At this stage in the design process the figures can only be considered indicative as a variety of factors, such as the on-going promotion of waste minimisation and recycling, consumer habits and population changes will impact on waste generation rates in future years.
- 5.3.3. Barnet's Municipal Recycling and Waste Strategy and Future Delivery for Barnet states current household recycling rate is 38%. This is outlined in Table 20. This average household waste generation rate was then used to provide an estimate of the waste arisings from the future residents of the proposed development.

No. Residential Units Estimates Tonnes per Annum (assurance of the control of th		Estimated Tonnes per Week
2,500	835	16

Table 20 - Estimated Household Waste Arisings *assumes 38% of waste is recycled

5.3.4. At this stage, it is estimated that if current waste levels remain consistent, the proposed development could potentially generate up to 835 tonnes of household waste per annum (up to 16 tonnes per week) should all units be occupied.

General Requirements

- 5.3.5. LBB's guidance sets out that the locations of a bin storage area should be designed to maximise efficiency of collections where:
 - Larger communal containers must be presented within 10m of the property boundary. The walking distance for the crew to collect larger communal bins should not exceed 10m from the collection point. For the avoidance of doubt the distance to wheel the bin from the bin store to the public highway which can be easily accessed by our collection vehicles must not exceed 10m; and
 - Footpaths be built wide enough to accommodate bins of all sizes and dropped kerbs to be provided as necessary to ensure no (dropped) kerbs are within the 10m between the bin storage area and the collection vehicle.

5.4. <u>Household Recycling and Residual Waste Storage Requirements</u>

- 5.4.1. Household waste storage requirements for the proposed development have been quantified based on LBB's 'Information for developers and architects Provision of Household Recycling and Waste Service guidance (April 2019).'
- 5.4.2. The guidance states that for larger blocks of 6 or more flats the available bin sizes are 240 litres and 1100 litres. Each property within the block must be allocated a minimum of 100 litres of mixed recycling provision plus 70 additional litres of mixed recycling per bedroom beyond the first bedroom.
- 5.4.3. For residual waste, the guidance states that each property within the block must be allocated a maximum of 100 litres of residual waste provision plus 70 additional litres of residual waste per bedroom beyond the first bedroom.
- 5.4.4. Table 21 below details the overall waste provision for properties of varying sizes.

Number of Bedrooms	Mixed Recycling Provision
1	100 litres
2	170 litres
3	240 litres
4	310 litres

Table 21 – Recycling Provision for Large Blocks of Flats

5.4.5. Bin storage facilities will be provided in accordance with the standards described above throughout the residential element of the proposed development.

Collections of Household Waste

- 5.4.6. In accordance with LBB's guidance, the aim will be for the distance from the curtilage of properties (or the agreed collection point for wheeled bins) to the refuse collection vehicle to not exceed 10m.
- 5.4.7. Where properties are located off the main and secondary collection routes (i.e., those with private driveways), residents will be required to take their wheeled bins to agreed collection points.

Collection of Commercial Waste

- 5.4.8. It is assumed at this stage that collection of commercial waste will be undertaken via external waste management contractors. It will be the responsibility of the commercial occupants to arrange for refuse and recycling to be collected from their premises. The type of collection will be dependent on the nature of the businesses.
- 5.4.9. Waste collection frequency will be dependent upon the volume of waste generated, the storage method (i.e., whether balers and waste compactors are used) and the schedule of the appointed waste contractor.

Storage of Commercial Waste

- 5.4.10. At this stage it is expected that the non-residential elements will be provided with their own/shared waste storage areas for refuse and recycling with ease of access for end users and by collection vehicles.
- 5.4.11. All waste storage areas will be clearly labelled to ensure cross contamination of refuse and recycling is minimised.
- 5.4.12. Floor surfaces will be of a smooth, continuous finish and free from steps or other obstacles. Any steps will incorporate a dropped kerb. Measures will be taken to ensure that access to the agreed collection point will not be restricted on collection day.

Summary

- 5.4.13. It is estimated that the proposed development could potentially generate up to 835 tonnes of household waste per annum (up to 16 tonnes per week) should all units be constructed and occupied.
- 5.4.14. Residential units will incorporate sufficient internal waste storage containers to promote the separation of recycling and compostable materials at source.

- 5.4.15. Externally, sufficient areas will be provided to enable waste containers to be stored in accordance with LBB's refuse and recycling collection arrangements.
- 5.4.16. The non-residential elements will be provided with their own/shared waste storage areas for refuse and recycling with ease of access for end users and by collection vehicles.
- 5.4.17. The proposals set out in this Strategy meet the requirements of relevant waste policy and follow applicable guidance.

6. Delivery and Servicing Management Plan

- 6.1.1. The purpose of this Delivery and Servicing Management Plan (DSMP), is to inform the authorities of the intent of the applicant in managing service vehicle trips to and from the development in order to minimise their impact on the surrounding public highway.
- 6.1.2. Refuse vehicle access to the site will be via the widened extent of carriageway at the eastern access from Brunswick Park Road.
- 6.1.3. The swept path of a 10m refuse vehicle (10m in length and 2.5m in width as per LBB requirements) is shown on Drawing ST-3013-12, provided in **Appendix I**. Deliveries to the development will be controlled by site management and trolleyed to the commercial building entrances.

6.2. <u>Proposed Development Deliveries Trip Generation</u>

6.2.1. The number of servicing vehicle trips for the residential use for the daily, AM, PM peaks has been derived using the TRICS database, as summarised in Table 22 below. Details of the TRICS data is contained in **Appendix J** for reference.

Peak	LGV Trips (2-Way)	HGV Trips (2-way)	Total Trips (2-way)
Daily (0700 – 1900)	105	23	128
AM Peak (0800 – 0900)	6	1	7
PM Peak (1700 – 1800)	14	1	15

Table 22 – Proposed Residential Servicing Trips (1,150 Units)

6.2.2. Table 23 below provides an hourly breakdown of the servicing profile.

Peak	LGV Trips (2-Way)	HGV Trips (2-way)	Total Trips (2-way)
0700 – 0800	8	0	8
0800 – 0900	6	1	7
0900 – 1000	9	0	10
1000 – 1100	8	0	8
1100 – 1200	12	0	12
1200 – 1300	10	0	10
1300 – 1400	9	0	9
1400 – 1500	6	0	6
1500 – 1600	8	0	8

1600 – 1700	8	21	30
1700 – 1800	14	1	15
1800 – 1900	7	0	7

Table 23 – Proposed Residential Servicing Profile (1,150 Units)

6.2.3. Residents will be encouraged by the management company to arrange for as many deliveries as possible after 1000hrs. The majority of deliveries will be delivered directly to the concierge and therefore the delivery time will be minimal.

6.3. Objectives

This Delivery and Servicing Management Plan will therefore seek to achieve the following objectives:

- Demonstrate that goods and services can be delivered, and waste removed, in a safe, efficient and environmentally friendly way;
- Identify deliveries that could be reduced, re-timed or even consolidated, particularly during busy periods;
- Improve the reliability of deliveries to the site;
- Reduce the operating costs of building occupants and freight companies; and
- Reduce the impact of freight activity on local residents and the environment.

6.4. Measures

This Section outlines the overarching measures and initiatives included within the Delivery and Servicing Management Plan which are applicable to the development site. This Delivery and Servicing Management Plan will specifically aim to ensure that servicing of the development can be carried out efficiently, whilst minimising any effects on the local highway network, residents and commercial occupiers within and surrounding the site, and the environment.

Commercial Refuse Collection

6.4.1. Refuse collection will be undertaken outside of the peak hours where possible, with the specific collection times being arranged with the local authority or private waste contractor to minimise impacts upon the operation of the site.

Servicing Facilities

- 6.4.2. The proposed development has been designed to ensure that all servicing activities are undertaken within designated areas in order to ensure that traffic flows on the surrounding highway network are unaffected by the operation of the site.
- 6.4.3. Any special deliveries to the site will need to be pre-arranged with site management by telephone or through an online booking system. Special deliveries are defined as unusually large items which would arrive on an infrequent basis. The delivery time and duration will be negotiated with the site management office to minimise the impact upon the routine daily servicing requirements of the development.
- 6.4.4. Out of peak time deliveries will be encouraged for such instances where possible. The management agents will regularly contact residents through newsletters and emails advising them of the necessary arrangements for large deliveries.

Operational Efficiency

- 6.4.5. Peak hour deliveries will be discouraged through consultation with occupiers of the buildings by the site managers. On the basis that the AM peak is often the busiest hour for servicing, the operation of the development would spread deliveries throughout the day using a computer/web-based vehicle booking system.
- 6.4.6. Residents will be encouraged by the management company to arrange for as many deliveries as possible after 1000. The majority of deliveries will be delivered directly to the concierge and therefore the delivery time will be minimal.
- 6.4.7. The appointed site management company will be responsible for providing funding and time resources for all of their site-based staff to receive appropriate training relating to the processes and procedures in operation on the development site. On-going training requirements will be identified through annual Personal Development Reviews (or equivalent internal review process).

Enforcement

6.4.8. The contents of this Delivery and Servicing Management Plan have been prepared in order to inform the planning authority of the developer's intent for the planning application for this site. Therefore, it must be complied with unless otherwise agreed in writing with the planning authority.

7. Phase 1 Parking Strategy

7.1.1. This Section sets out the aims to assist the management parking needs for residents, seeking to promote an appropriate balance between parking supply and demand, whilst meeting the objective of the emerging Local Plan and the London Plan which seek to reduce levels of car parking within London.

7.2. <u>Car, Motorcycle and Cycle Parking Provision</u>

- 7.2.1. Planning policy promotes sustainable modes (walking, cycling and public transport), and the Mayor's Transport Strategy sets a target of 75% sustainable travel mode share for Outer London by 2040. In light of this, it is proposed to provide car parking within Phase 1 at a ratio of approximately 0.8 spaces per dwelling resulting in a total of 381 car parking spaces for the 454 total dwellings within Phase 1. Of these 381 car parking spaces, 37 spaces will be allocated for disabled parking provision.
- 7.2.2. A total of 901 cycle parking spaces will be provided which equates to 1 space per bedroom which is in accordance with the guidance set out within the London Plan.
- 7.2.3. The cycle parking will be provided within locked, sheltered enclosures, with sliding gates provided to enable residents to access their bicycle easily. The parking will be provided at ground level within each individual building and the quantum within each store will correspond directly with the requirements relating to the specific blocks of flats that the store serves.

7.2.4. The cycle parking implementation considers:

- Layout all parking is conveniently located and laid out to ensure that users can comfortably manoeuvre in and out of cycle stands;
- Signage signage will be provided on and near the site directing users to cycle parking facilities;
- Attractive cycle parking facilities will be maintained to a good condition to ensure it is inviting to use;
- Secure to be located in areas where they have high levels of passive surveillance and where this is not possible, security lighting will be implemented to further reduce the risk of bike theft;
- Covered future residents will benefit from cycle parking that is sheltered and protected from the elements; and

- Type of stand Sheffield / Camden type stands will be used. Front wheel locking stands will not be considered.
- 7.2.5. A small element of cycle parking will also be provided for the commercial/retail units. This again will be provided in line with the London Plan requirements. Short-stay cycle parking will be incorporated into the public realm, strategically located in order to increase exposure.
- 7.2.6. The cycle parking utilisation will be monitored, and the design will consider re-allocation of the spaces as per the needs of the development if spaces are underutilised.
- 7.2.7. The car parking spaces will be provided in the podiums of the blocks. A total of 52 motorcycle parking spaces will be provided within Phase 1. The allocation of the car, motorcycle and cycle parking spaces in the car parks is detailed in Table 24 below. The total 381 car parking spaces are inclusive of 37 accessible spaces.

Block	Car Parking Spaces	Motorcycle Spaces	Cycle Parking Spaces
Block C & D	262	28	656
Block E	56	13	108
Block F	49	11	137
7 x Houses	14	-	-
Total	381	52	901

Table 24 - Phase 1 Residential Car, Motorcycle and Cycle Parking Provision

- 7.2.8. Swept path analysis has been undertaken for the proposed car parking layouts, as shown in **Appendix K.** The swept path analysis demonstrates that cars will have sufficient space to manoeuvre in and around the car parks.
- 7.2.9. A report on residential parking in new developments was produced by Transport for London (TfL) in 2012 and examines the relationship between parking, car ownership and car use amongst residents of new developments in Greater London. Key findings from the report were:
 - There is a strong relationship between public transport and household car ownership
 as public transport accessibility increases, car ownership in new developments
 falls;
 - The more parking provided by a new development, the more attractive it becomes to car owning households: people choose housing that meets their needs;

- The more parking provided by a new development, the higher the household car ownership level. Where there is more parking, there are more cars. This was true for all groups and in all areas studied;
- Developments with more parking produce more car travel. People who own cars use them: driving their cars frequently at all times of day, including the busiest peak periods; and
- The level of car parking provided in new developments therefore has a substantial impact on the level of car use generated by that development.
- 7.2.10. The report demonstrates that where parking is not made available for prospective residents of the proposed development, it will attract people who do not require a car; indeed, this will in turn mean that car travel will subsequently be lower at the development. In addition to this, a number of measures such as a financial contribution towards improved local bus services, the provision of on-site car club bays, and cycle maintenance/repair kits available (further details of this are contained in the accompanying Travel Plan document) are proposed within the development to encourage sustainable travel.
- 7.2.11. Furthermore, a study undertaken by LBB in 2019 stated the following:

During the 10-year period between census data collections the number of households with no vehicles registered increased by 15.1%, which is more than double the percentage increase in the total number of households. These figures demonstrate that there is an increasing number of households that do not own a vehicle'.

- 7.2.12. Based on the sustainable measures to be implemented, and TfL aspirations, a provision of 0.8 spaces per dwelling is considered appropriate for this development.
- 7.2.13. In accordance with the London Plan standards, 20% of the spaces will be for electric vehicles ('active' provision) with the remaining 80% of spaces having passive provision for electric vehicles in the future.
- 7.2.14. Disabled parking will be in line with the London Plan standards, with a provision of 37 spaces. These bays will all be provided at ground level in close proximity to the accessible units within each of the Blocks. Demand for accessible bays will be monitored and if not used could be allocated to family units if required.

7.3. Car Club

- 7.3.1. 7 car club bays will also be provided at the development. This will provide residents who do not own a car with an opportunity to use one when they require. The car club cars will also be available for use by the wider local community.
- 7.3.2. Initial discussions with the car club operator ZipCar suggest that the development at full build out could support 8 car club cars. 2 spaces will be provided within Phase 1, located along the site access road from Brunswick Park Road. If there is a high demand for Car Sharing vehicles, then the provision of additional spaces within the later Phases will be reviewed.
- 7.3.3. The location of the car club bays will maximise exposure and ensures the bays are conveniently located regardless of which block future residents reside in. The 7 bays will be located appropriately to maximise visibility for both those residing within the development and others in the wider local community.
- 7.3.4. The chosen car club operator will be marketed at the development through:
 - Bespoke marketing material;
 - Advertisement within the development; and
 - Car club ambassadors.
- 7.3.5. It is recognised that the best time to influence travel behaviour is when residents first move into or utilised a new development. The car club will therefore be in place and operational prior to occupation of the first dwelling.
- 7.3.6. The benefits of the car clubs will be highlighted to future residents, including:
 - Cheaper owning a car has the added cost of insurance, tax, service and maintenance and depreciation;
 - Greener generally those involved in the scheme choose walking, cycling and public transport as their mode of travel, using the car club only when it is the best option; and
 - Convenient you can book with a minute's notice and be on your way in a clean,
 well looked after car, which you use only for as long as you need it.

7.4. Parking Management

Residential Permit Parking Scheme and Allocation

- 7.4.1. A Resident Permit Parking Scheme (RPPS) will operate and be enforced within the site, through appropriate signage, road markings and patrolling. Enforcement Officers (EOs) will actively patrol the site to monitor on-street parking operations and move drivers on or issue Penalty Charge Notices (PCNs) if required. This will be enforced by the on-site management team.
- 7.4.2. Parking operations will be monitored and managed by the same on-site management team, with the use of vehicle clamps to aid enforcement as required. Car parks will be accessible by way of a secure gate with residents granted access by way of a security key fob.
- 7.4.3. A total 23 visitor parking bays will be provided on-street.
- 7.4.4. In order to ensure all leased parking spaces located on the site are being utilised and are not being left vacant, individual parking spaces in the secure car parks will be allocated to a specific residential unit and space usage will be regularly monitored by the on-site facilities management team.
- 7.4.5. 8 regular bays will be for use by tradespeople visiting the development for servicing purposes. These spaces will need to be booked in advance through the concierge.
- 7.4.6. Spaces which are restricted to use by Blue Badge holders only will be identified through the introduction of appropriate signage. All parking is restricted for Blue Badge holders except for any agreed visitor parking. The management company will ensure that the number of spaces are restricted to use by Blue Badge holders only and with tenants that are registered Blue Badge holders at all times.

7.5. Electric Vehicle Charging

- 7.5.1. To encourage sustainable travel, electric vehicle charging points will be provided in line with the London Plan. The London Plan demands that 20% of residential parking spaces across the development have electric vehicle charging points, with the remaining bays featuring passive provision for future conversion into electric charging bays.
- 7.5.2. It is proposed as part of this development that 20% of bays have electric vehicle charging points, and the remaining 80% have capability for future conversion.
- 7.5.3. These proposals ensure that:

- All electric vehicle parking spaces are clearly signed and located in prominent, convenient and accessible locations in the car parks e.g., close to the entrance of facilities;
- They meet the appropriate technical standards for the type of development;
- A full cabling network will be installed in the car parking area to support all active and passive charging points (32 Amp rated to ensure flexibility);
- The default socket type to install at 'active' charge points will be Type 2 IEC62196-2 connector; and
- The car club parking spaces will be prioritised for the provision of Electric Vehicle Charging points, especially with regard to the provision of passive charging infrastructure that would cover all car club parking spaces.

7.6. On-Site Delivery and Servicing

- 7.6.1. A number of measures will be introduced to manage the delivery and servicing activities on the site associated with the residential and commercial uses. These will include the following:
 - Contractors associated with deliveries to the site will be made aware of the delivery
 access restrictions and be required to adhere to these restrictions in writing. It is
 envisaged that development security staff will be familiar with the details of all
 delivery vehicles;
 - Any other occasional delivery companies who do not normally deliver to the development will also be provided with delivery restrictions by on-site management and directed to the appropriate loading/unloading facilities;
 - If a driver does not comply with the delivery access restrictions (as witnessed by the
 on-site management or reported via local residents), the supplier will be informed of
 the vehicle registration/driver not complying with the contracted conditions. Noncompliance with the delivery restrictions will then be used as a deciding factor in the
 appointment of future contracts associated with the development; and
 - Recommended delivery timings will be defined by the site management in order to minimise the number of service vehicle trips during the busiest times on the surrounding road network (such as the weekday morning and evening peak periods).

8. Appraising the Impact of the Proposed Development

8.1. <u>Assessment Criteria</u>

- 8.1.1. The proposed development is for the regeneration of North London Business Park to provide a mixed-use development of up to 2,500 dwellings, 1,162sq.m retail space, 1,010sq.m community space and a 1,050-pupil capacity secondary school.
- 8.1.2. As agreed with TfL as part of the scoping exercise, only the development above and beyond the extant 1,350 dwellings and 3,125sq. m of commercial space permitted in 2020 will need to be assessed within the revised TA. This equates to a total of 1,150 dwellings that will need to be assessed within this TA.
- 8.1.3. This appraisal is based on three key assessments as follows:
 - The suitability of the site access(es) to accommodate proposed development access demands;
 - The ability to access the site via **sustainable modes** of transport; and
 - The impact of the proposed development on off-site transport infrastructure and services.
- 8.1.4. It is important to note that the general direction of national and local policy seeks to locate development sites in sustainable locations in order to enable future residents to take advantage of sustainable modes of travel.
- 8.1.5. Alongside this there is also a general understanding that increasing highway capacity to meet predicted demand is neither desirable nor achievable as it will not promote use of sustainable modes.
- 8.1.6. Experience also indicates that sites in urban areas are likely to require access via junctions that may be at or close to capacity with limited scope for increasing capacity. This represents the 'trade off' between sustainable locations and potentially constrained access.
- 8.1.7. Furthermore, land is not likely to be available in urban areas to increase capacities at junctions in line with previous assessment methodology. Where there is competition for space between highway capacity and providing sustainable transport infrastructure policy clearly requires the latter to take priority.

8.2. <u>Construction Traffic</u>

- 8.2.1. Construction traffic routing may be a concern for residents and businesses. The issue is not considered in detail in this assessment other than to appraise any highway conditions that may affect the routing of construction traffic.
- 8.2.2. The site is located close to the strategic road network and adjacent to roads used to taking significant volumes of industrial traffic, so we do not anticipate any construction traffic routing issues.
- 8.2.3. We anticipate that a Construction Traffic Management Plan will be required by planning condition that will include consideration of traffic routing in more detail.

8.3. <u>Base Year Traffic Flows</u>

- 8.3.1. The observed traffic counts undertaken in May 2021 have been used to inform the Base Year assessment.
- 8.3.2. Further details of the locations of observed traffic counts are shown in Table 4 shown previously in Section 2.14.

8.4. <u>Assessment Periods and Assessment Years</u>

- 8.4.1. The typical weekday peak periods on the highway network will be assessed as they are likely to be the most capacity constrained. Based on data extracted from traffic counts, peak times (and especially PM peaks) vary so the widely used traditional network peak periods have been used for this assessment as follows:
 - 0800 0900 (AM network peak); and
 - 1700 1800 (PM network peak).
- 8.4.2. The following assessment scenarios are to be undertaken as part of this TA, as agreed with TfL. However, due to delays in obtaining data from TfL, the assessments will be undertaken and reported in an addendum to this TA in due course.
 - 2021 Opening Year baseline flows;
 - 2021 Opening Year baseline flows + development;
 - 2021 Opening Year baseline flows + development + committed developments;
 - 2031 Future Year baseline flows:

- 2031 Future Year baseline flows + development; and
- 2031 Future Year baseline flows + development + committed developments.
- 8.4.3. Base Year 2021 Observed Traffic Flow diagrams are shown in **Appendix D.**
- 8.5. <u>Vehicular Trip Generation Proposed Development</u>
- 8.5.1. Reference has been made to the TRICS database under the land-use category 'Residential' and the sub-category 'flats privately owned' to specifically identify peak hour person-trips generated by the proposed development ("Total People" trip rate per dwelling). For this assessment, sites outside of London have been excluded, as requested by TfL.
- 8.5.2. The TRICS outputs are summarised in Table 25 and the original TRICS database information can be found in full in **Appendix J.**

	Residential - 'Total People' Trip Generation					
Peak Period	Inbound		Outbound		Two-Way	
	Rate	Trips	Rate	Trips	Rate	Trips
AM Peak	0.061	70	0.423	486	0.484	557
(0800 to 0900)	0.001	70	0.423	400	0.404	337
PM Peak	0.280	322	0.139	160	0.419	482
(1700 to 1800)	0.200	<i>322</i>	0.100	100	0.413	402

Table 25 Trip Rates per Dwelling (TRICS residential –flats privately owned – based on 1,150 units)

8.5.3. Based on the person trip rates summarised in Table 25, the proposed development of up 1,150 dwellings would be expected to generate in the region of 557 movements during the AM peak and 482 movements in the PM peak hour.

8.6. Mode Shift

- 8.6.1. In order derive the baseline mode share for the proposed development, Census data for the Middle Super Output Area (MSOA) of Barnet 010 `Travel to Work' has been which is a good measure of travel habits and is considered to be a robust measure of travel demand to and from the site.
- 8.6.2. The baseline mode share is summarised below in Table 26 below, alongside the respective development trips.

Method	Development Trips (AM Peak 2-way)	%
Works mainly at or from home	57	10.3%
London Underground	126	22.7%
Train	40	7.2%
Bus, minibus or coach	57	10.3%
Taxi	3	0.5%
Motorcycle, scooter of moped	7	1.3%
Driving a car or van	223	40.1%
Passenger in a car or van	11	2.0%
Bicycle	5	1.0%
Foot	23	4.1%
Other	3	0.6%
Total	557	100.0%

Table 26 - Baseline Mode of Travel to Work - Census 2011

- 8.6.3. The information in Table 26 above demonstrates that 40.1% of journeys to work are via single occupancy car vehicle, and 57.6% via sustainable modes (including home working).
- 8.6.4. Planning policy promotes sustainable modes (walking, cycling and public transport), and the Mayor's Transport Strategy sets a target of 75% sustainable travel mode share for Outer London by 2040.
- 8.6.5. A minimum mode shift target of 55% via sustainable modes (inclusive of home working) by year 2026 has been adopted as part of this assessment. Longer term, by 2031 the objective target of 60% is anticipated in order to progress to the 75% target set out in the London Plan by 2041. Further details of the proposed mode shift are summarised in Table 27 below.

Method	Year 1 Development Trips (AM Peak 2-way)	%	Year 5 Development Trips (AM Peak 2- way)	%	Year 10 Development Trips (AM Peak 2-way	%
Works mainly at or from home	57	10.3%	60	12.0%	71	13.0%
London Underground	126	22.7%	130	26.9%	140	26.0%
Train	40	7.2%	40	8.0%	40	7.2%
Bus, minibus or coach	57	10.3%	60	12.6%	75	13.5%
Taxi	3	0.5%	3	0.5%	5	0.9%
Motorcycle, scooter of moped	7	1.3%	7	1.3%	7	1.3%
Driving a car or van	223	40.1%	210	30.2%	153	26.7%
Passenger in a car or van	11	2.0%	11	2.0%	16	2.9%
Bicycle	5	1.0%	8	1.4%	14	2.5%
Foot	23	4.1%	25	4.5%	32	5.5%
Other	3	0.6%	3	0.6%	3	0.6%
Total	557	100.0%	557	100.0%	557	100.0%

Table 27 - Mode Shift Targets

- 8.6.6. The targets shown in Table 26 reflect where the main Travel Plan measures are to be applied. Further detail on the proposed targets is set out in the accompanying Travel Plan.
- 8.6.7. To provide a robust worst-case assessment in this TA, the above mode shift targets have not been taken into account in assessing the likely impact of the development.

8.7. Traffic Distribution

- 8.7.1. Census 2011 data showing usual place of work of residents for the Middle Super Output Area (MSOA) of Barnet 010 has been analysed to identify likely distribution of traffic during peak hours. Online journey planning mapping has been used to identify likely traffic routing at peak times. Some judgement has been made on routing based on highway layout and other matters, such as where route choice is marginal in journey time.
- 8.7.2. The site is located close to the strategic road network and the majority of external destinations (and therefore peak time vehicle trips) are likely to be to the north and west of the site. The assignment of traffic will reflect this, and will be tested by using online journey planning at peak times.

8.7.3. It is recognised that 'local knowledge' may influence traffic routing. The assessment of development traffic impact will be based on the data, method and assumptions summarised above. The findings of the assessment will be checked to ensure they are robust and, where reasonable any 'local refinement' considered before concluding.

8.8. <u>Traffic Impact Assessment</u>

8.8.1. This Section provided an assessment of the overall traffic impact of the proposed development on the local highway network.

8.9. <u>Junction Assessments</u>

8.9.1. At the time of preparing this report, Stomor are awaiting data from TfL in order to undertake junction capacity assessments. Therefore, a separate addendum will be prepared to accompany this Transport Assessment, focussing on the trip generation, distribution and junction capacities.

8.10. Access by Large Vehicles

- 8.10.1. It is expected that the vast majority of vehicles associated with the site would be private cars of typical dimensions. A refuse vehicle would collect from the site once a week. The improvements to the main access roads will improve accessibility for larger vehicles due to the increased width and kerb radii provided.
- 8.10.2. The site has been designed to accommodate visits by waste, emergency and commercial delivery/servicing vehicles. These are likely to be the largest vehicles accessing the site, albeit infrequently by waste and emergency vehicles.
- 8.10.3. Coaches will visit the school on a weekday basis and the site accesses have been designed to accommodate these vehicles.
- 8.10.4. Swept path analysis of an 10m waste vehicle has been undertaken for the main site access roads. Drawing ST-3013-10 (see **Appendix F**) demonstrates that a vehicle of this size can access the site and leave in either direction in forward gear without need to change the site access. Further Swept Path Analysis will be undertaken for other phase as they come forward via reserved matters planning applications.
- 8.10.5. The construction period of the proposed development will also require access by large vehicles, albeit over a relatively short timescale for each individual phase. The site access has been designed to accommodate the turning movements of construction traffic vehicles.

8.10.6. A Construction Traffic Management Plan (CTMP) would normally be required via Planning Condition when more is known about the construction programme. At this stage our assessment

9. Sustainable Travel Impact Overview

9.1. <u>Introduction</u>

- 9.1.1. Current national and local policy clearly seeks to promote less travel and, where necessary, more travel by sustainable modes.
- 9.1.2. In addition to the physical measures set out below, a Travel Plan (TP) will be used to promote and manage sustainable travel to and from the site on an ongoing basis. The TP will focus on promoting a range of measures over time to ensure walking, cycling, scooting, bus and car sharing become the preferred mode of travel for the site.
- 9.1.3. The sustainable transport package and TP will effectively reduce the impact of private vehicle trips. Census mode share data indicates that private car use is currently relatively low in Barnet 010 (reflecting car ownership levels and the good public transport network).
- 9.1.4. Given the sustainable location of the site and the package of measures set out below, the Travel Plans for the site would seek to reduce private car usage to below 30% of mode share.
- 9.1.5. Achieving this mode share target would have positive effects on the core junction modelling results, bringing impacts closer to the 'Without Development' scenarios in 20 and 2031. Where residual 'With Development' impacts would remain higher than the 'Without Development' scenario, it is considered that this would be sufficient to justify additional capacity provision.

9.2. Sustainable Transport

- 9.2.1. The development proposals provide a suite of public benefits in addition to much needed new homes. The site includes a variety of land uses in order that residents can live and work within the site or adjoining area, which is within walking and cycling distance. This is a great example of a new sustainable masterplanned community and therefore by its very nature will increase use of sustainable modes of travel.
- 9.2.2. The public parkland and facilities provided within the development will encourage future residents to stay within the site for leisure activities. There will be convenience shopping facilities provided on-site as part of the commercial development. Furthermore, there are food and shopping facilities located adjacent to the site (along the B1453 Russell Lane and A109 Oakleigh Road North) which also allows future residents and employees to access key destinations on foot or by bicycle.

- 9.2.3. The mix of uses on site and proximity of key services to the site will help reduce the need to travel to and from the site as well as enable positive choices regarding use of sustainable modes of travel.
- 9.2.4. We have appraised the existing transport infrastructure and services in the context of potential demand alongside promoting access by sustainable modes as a priority.
- 9.2.5. The site is very well located in terms of sustainable transport, with local employment, retail, education and bus stops within easy walking and cycling distance of all parts of the site. New pedestrian/cycle links and crossings will be provided to promote sustainable access to the wider network, alongside upgrades to existing infrastructure.

9.3. Pedestrian and Cycle Access Strategy

- 9.3.1. The site layout will be characterised by the creation of a comprehensive network of interconnected streets and spaces that allow efficient movement on foot and by bicycle, promoting a permeable network within the site with strong links to the surrounding employment, retail and residential areas.
- 9.3.2. The provision of direct and convenient routes for pedestrians and cyclists will encourage residents to use more sustainable travel options by reducing walk/cycle journey times.
- 9.3.3. The pedestrian/cycle access strategy is designed to make travel on foot or by bicycle the preferred mode of travel within the site and to immediately adjacent destinations.
- 9.3.4. To improve connectivity and promote walking and cycling the following strategy is to be implemented within and adjacent to the proposed development;
 - Provision of crossing facilities on all arms of the new signalised Eastern Access providing a connection to the bus stops and the wider footway network along Brunswick Park Road;
 - Provision of a comprehensive on-site footway network based on key desire lines which prioritises pedestrians over vehicular traffic. This will include the delivery of links to off-site pedestrian and cycle connections;
 - From the early phases of the development onwards, combined footway/cycleways
 will be provided along with site access points solely for pedestrians and cyclists and
 speed control measures (such as speed tables and shared surfaces) to reduce traffic
 speed and promote safe access on foot/by bicycle; and

- Provision of signage to direct pedestrians and cyclists to the key locations on- and off-site. This signage will be delivered on a phase-by phase basis dependent upon the facilities delivered within each respective phase.
- 9.3.5. The provision of a comprehensive footway/cycleway network and additional crossings/links off site will also mean travel to and through the site is also a viable option on foot/by bicycle.

9.4. Public Transport Strategy

- 9.4.1. The demand for bus services at the development is intrinsically linked to the levels of development occupancy across each of the respective phases Therefore, a flexible approach to the delivery of these services is paramount when:
 - Responding to the needs of the occupiers of the proposed development;
 - Balancing costs with anticipated demand / revenue responding to the needs of the occupiers of the development; and
 - Ensuring value for money in the expenditure of any developer contributions.
- 9.4.2. As part of the scoping discussions, TfL stated that they do not wish to divert any of the existing bus services through the development site. As part of the extant 2020 permission, a financial contribution of sum of £825,000 was secured as part of the S106 to provide an additional bus service on the 382 bus route.
- 9.4.3. Given that it will not be feasible to divert any existing TfL bus services through the site, and that the 382 route is an excellent service to local destinations, it is proposed that the financial contribution sum is increased to reflect to uplift in the residential development 1,150 units).
- 9.4.4. Furthermore, Comer Homes will provide an on-site shuttle bus service which will provide an `on-demand` service to key destinations such as local commercial and health centres and also to key public transport interchange hubs.

9.5. Home and Remote Working

9.5.1. Census 2011 data indicates a significant number of people will work at or from home in the proposed development. We would expect this figure to have grown by the time of the next Census, and any increase reflected in the proposed development where new dwellings have the potential to be served by high-speed broadband and improved mobile communications networks.

- 9.5.2. Increases in home working will reduce demand to travel to and from the site, especially at peak times.
- 9.5.3. Remote working from local facilities equipped with broadband may also change some demand for peak time travel from journeys to external destinations to shorter distance journeys to locations within Barnet can be undertaken on foot or by bicycle.

9.6. Car Sharing and Car Clubs

- 9.6.1. Car Clubs are increasingly popular for people who wish to have occasional access to a car without owning one (i.e., for occasional work or leisure purposes). This may help some residents live without the need for owning a car for regular and, therefore, peak time use.
- 9.6.2. Further details of the proposed Car Club strategy at the proposed development are outlined in Section 7.3.
- 9.6.3. Promoting use of sustainable modes as well as Car Sharing and Car Clubs via a Travel Plan would help reduce demand for motor vehicle travel and have a positive impact on peak time travel especially.
- 9.6.4. Given the scale of development proposed, and the length of time over which it will be implemented, this overall strategy can ensure both that the transport impact of proposed development can be minimised, but also that the principles of "places first" can deliver a high-quality sustainable development.
- 9.6.5. However, where this assessment indicates that there is likely to be an impact on highway capacity resulting from the proposed development, the proposed sustainable transport 'package' set out in this assessment is considered the most appropriate way of mitigating this impact.
- 9.6.6. Improving highway capacity is not considered to be a cost-effective way of delivering a sustainable development and promoting sustainable access. It is also possible that where congestion/delay already exists or is predicted, provision of improved walking, cycling and public transport will encourage more use of these modes.

9.7. Home shopping and delivery

9.7.1. The growth of online shopping and increase in capacity of home delivery services (both convenience and comparison goods) suggests that fewer trips will be made to retail and takeaway food establishments in future years.

9.7.2. The use of 'multi-drop' delivery services could effectively replace multiple car journeys. Whilst it is likely that this will be mainly 'off-peak' for the purposes of this assessment, there is potential for home delivery services to reduce some peak time traffic to and from the site.

10. Road Safety Audit

10.1.1. A Stage 1 Road Safety Audit will be carried out based upon on the Access Strategy drawings ST-3013-700 and 701. The audit will be carried out by an independent Safety Auditor. Should the auditors provide appropriate recommendations, a Designer's Response will be prepared which addresses recommendations and proposes the necessary measures to address issues at the detailed design stage.

11. Travel Plan

- 11.1.1. A Travel Plan (TP) will be prepared for the proposed development. The TP will ensure residents and visitors of the development have access to information on how to travel to and from the site via sustainable transport modes (i.e., routes and journey times to key destinations).
- 11.1.2. In addition, information will be provided with information on journey planning by various modes of travel as well as information on car sharing.
- 11.1.3. The overall objective would be to promote a culture of sustainable travel from the outset as there are a range of services and facilities than can be accessed by sustainable modes of travel.
- 11.1.4. The TP will set out a range of 'soft' measures and initiatives to promote and encourage the use of sustainable travel alongside the 'hard' infrastructure and services provided by the development.
- 11.1.5. The TP will be managed and monitored and flexible enough to adapt and change as requirements of the site may change.

12. Conclusions

- 12.1.1. Stomor Ltd. has been commissioned by Comer Homes Group to prepare a Transport Assessment (TA) in support of a Hybrid Planning Application for the regeneration of the North London Business Park to provide a mixed-use development of up to 2,428 dwellings, 2,353sq.m of workspace, 3,835 sqm flexible non-residential floorspace, which could be used for community use, medical use, retail, offices, cafes etc. and a and a new 5FE school building with an anticipated 1,050-pupil capacity.
- 12.1.2. The site measures 16.37ha, of which approximately 13ha is currently undeveloped, comprising areas of disused open space and car parking. The site is bounded by the East Coast Mainline railway along the entire western boundary, with residential development and Brunswick Park Road adjacent to the eastern boundary.
- 12.1.3. The site benefits from planning permission for wholesale redevelopment. The original application was submitted in hybrid form and planning permission was granted at appeal in February 2020 for:

"the phased comprehensive redevelopment of the North London Business Park to deliver a residential led mixed-use development. The detailed element comprises 360 residential units in five blocks reaching eight storeys, the provision of a 5 Form Entry Secondary School, a gymnasium, a multi-use sports pitch and associated changing facilities, and improvements to open space and transport infrastructure, including improvements to the access from Brunswick Park Road, and; the outline element comprises up to 990 additional residential units in buildings ranging from two to nine storeys, up to 5,177 sqm of non-residential floor space (Use Classes A1-A4, B1 and D1) and 2.54haof public open space. Associated site preparation/enabling works, transport infrastructure and junction works, landscaping and car parking."

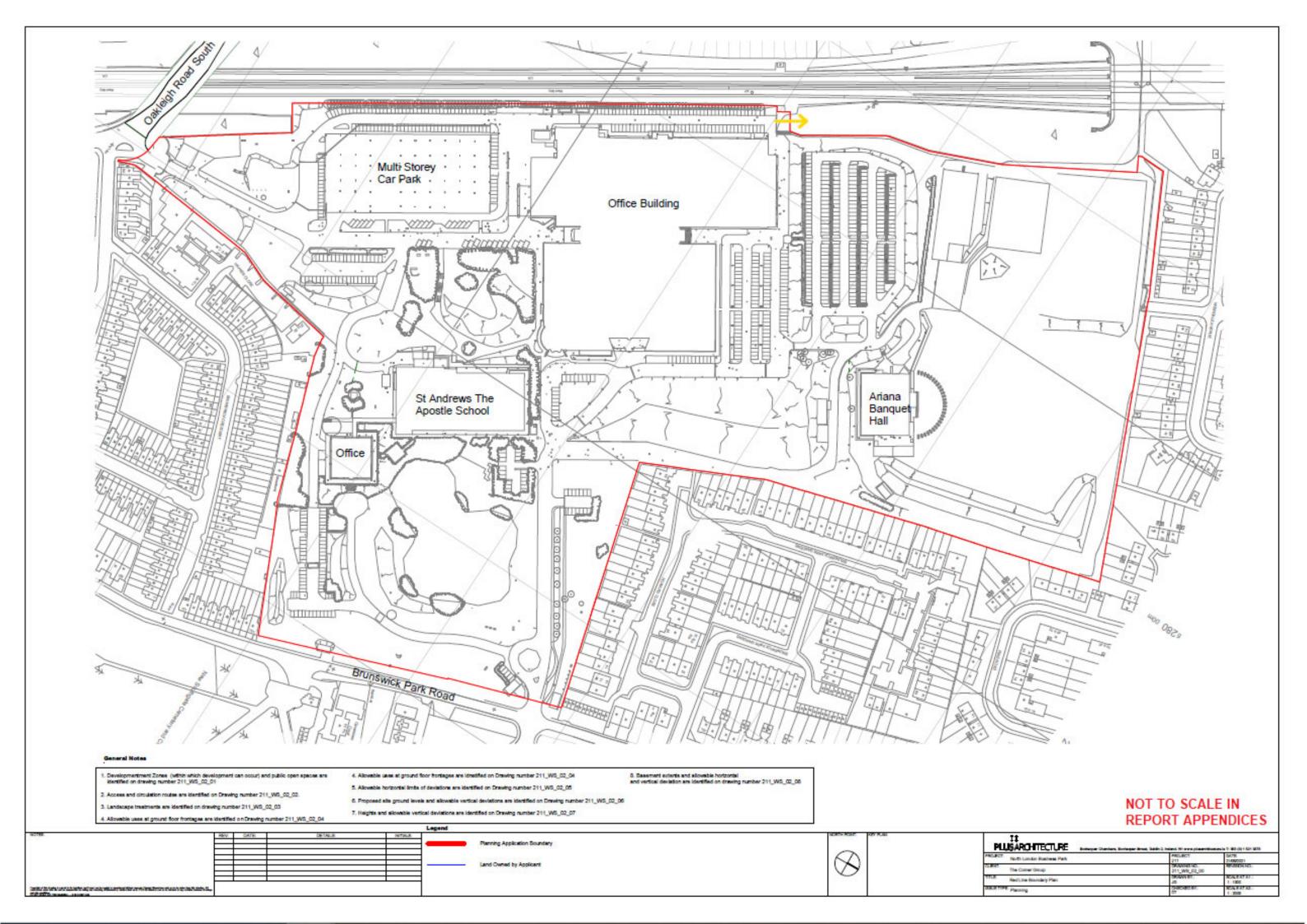
- 12.1.4. The main site accesses for all vehicles will be taken from the existing access points on Brunswick Park Road (Eastern Access) and the A109 Oakleigh Road North (Southern Access).
- 12.1.5. A new pedestrian/cycle access will be provided to the north of the site to link with the residential street, Ashbourne Avenue.
- 12.1.6. The existing Eastern Access onto Brunswick Park Road will be upgraded from its current crossroads arrangement to a new signalised junction. The junction will incorporate pedestrian/cycle signal phases in signals.

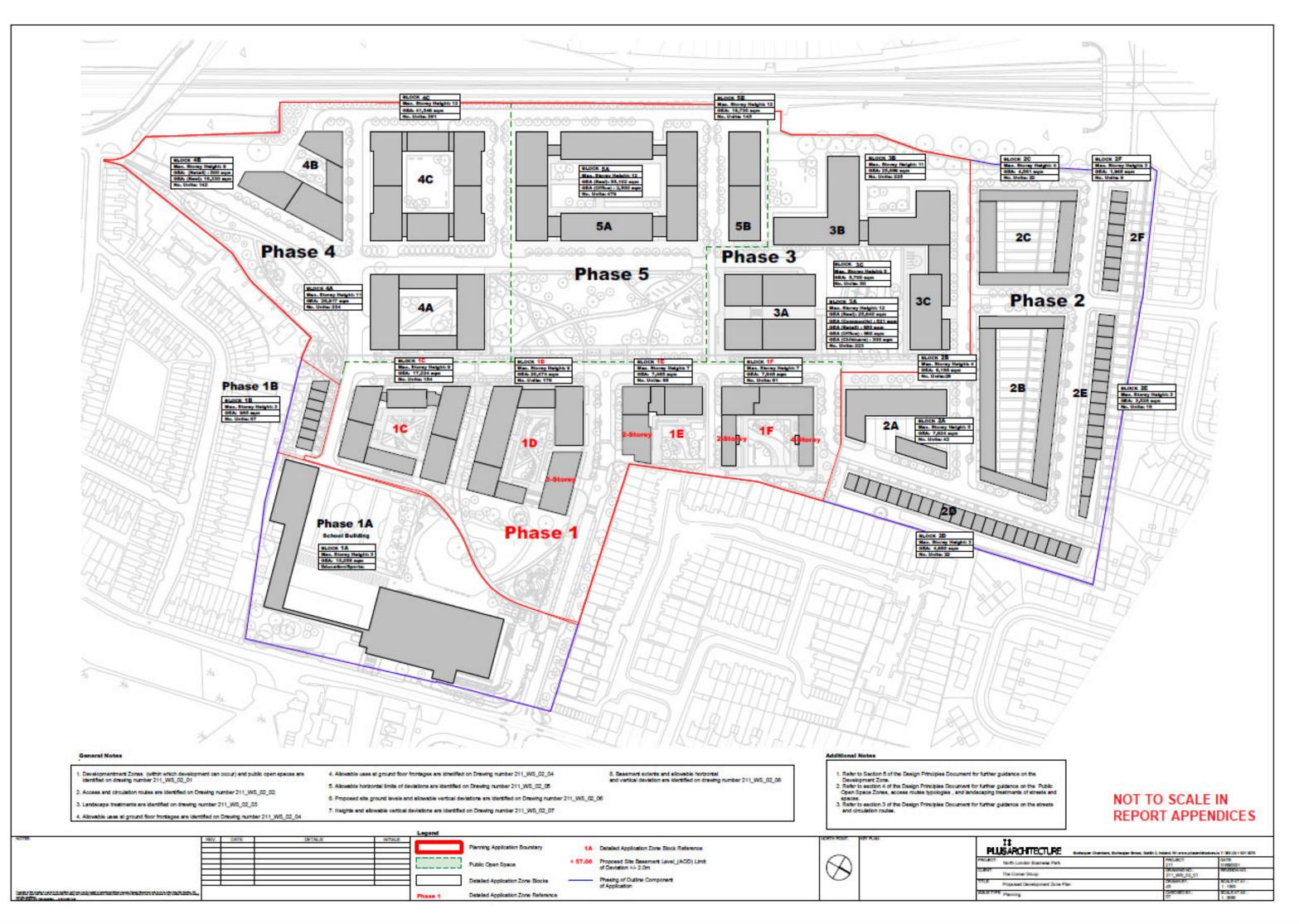
- 12.1.7. The site layout has been designed to promote low traffic speeds, with a 30mph design speed on the main site access roads and 20mph on all cul-de-sacs and shared surfaces serving parcels of development. The layout will be checked to ensure visibility at internal junctions and around bends complies with the required standard.
- 12.1.8. Swept path analysis has been undertaken for the site accesses to demonstrate that the site can accommodate the largest vehicle likely to use the site.
- 12.1.9. The site will be designed to promote access by sustainable modes of transport using the following strategy:
 - Providing a mix of land uses on site to encourage people to live, work and use school and leisure facilities this promoting walking and cycling within the site:
 - Locating a significant volume of housing within easy walking and cycling distance of local employment and retail facilities as well as on a bus route to key areas and rail connections;
 - Providing additional employment and education services within walking and cycling distance of existing residential development and on an existing bus route;
 - Providing pedestrian and cycle links to existing footway and cycleway infrastructure as well as pedestrian and cycle routes and crossings within the site to provide good connectivity to and permeability within the site;
 - Providing new bus stop facilities on the A109 Oakleigh Road North and Brunswick Park Road;
 - Providing fair and justifiable financial contribution towards off-site improvements to sustainable transport infrastructure;
 - Providing a Travel Plan to help promote sustainable travel to, from and within the site, managed and monitored over time with evolving measures as circumstances change; and
 - Enabling home working and access to online retail and home deliveries by providing access to broadband services for residents, businesses and pupils.
- 12.1.10. A Stage 1 Road Safety Audit will be undertaken of the proposed site accesses, and any design issues identified will be addressed at detailed design stage.

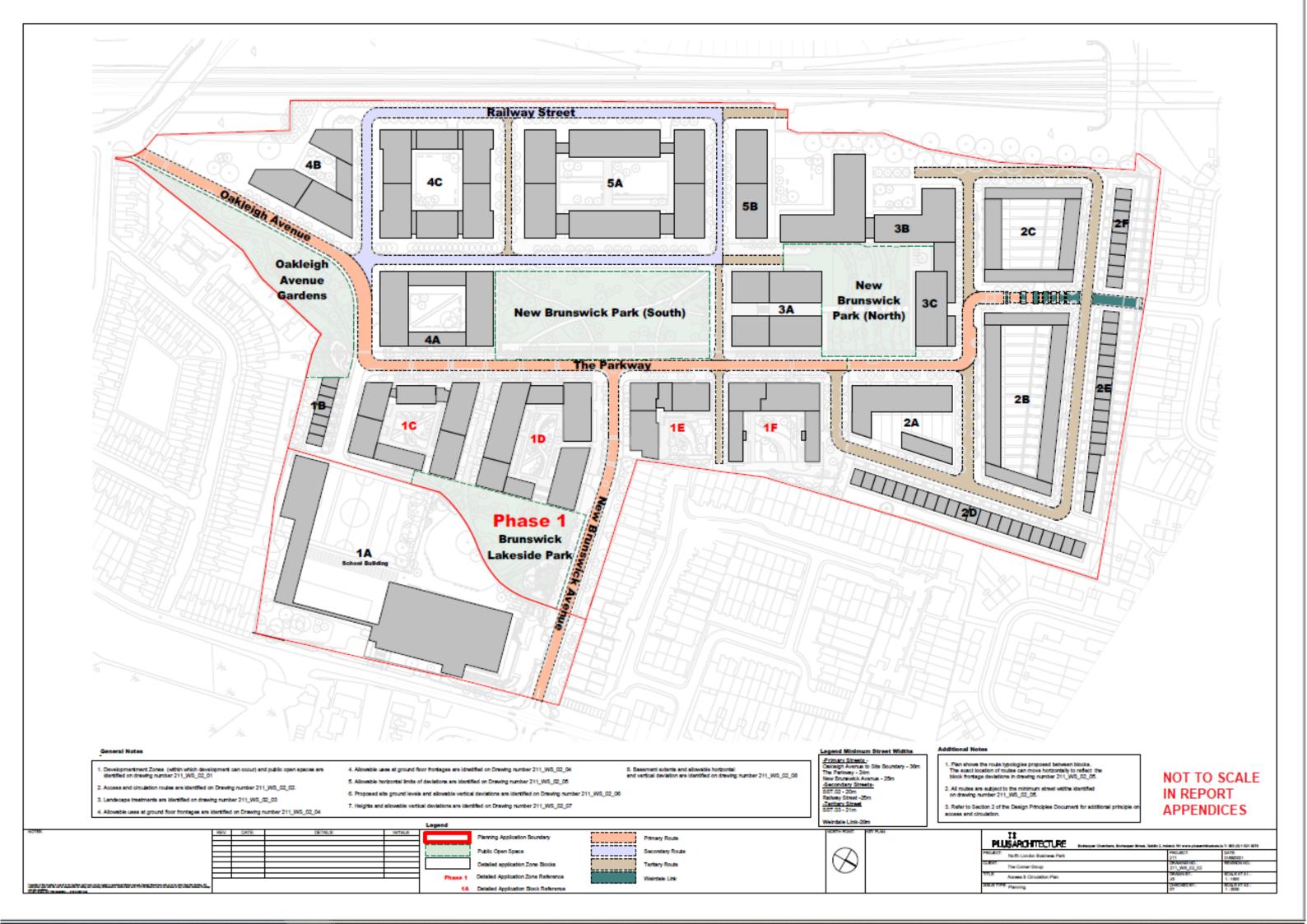
- 12.1.11. Vehicle and cycle parking provision will be in accordance with London standards with care taken not to over-provide vehicle parking. Cycle parking will be provided to ensure safe and secure storage of bicycles as part of the overall package of sustainable transport improvements.
- 12.1.12. Electric vehicle charging infrastructure will be accommodated in accordance with London standards.
- 12.1.13. The proposals will result in an increase in traffic during peak hours which will have an impact on junctions in the vicinity of the site and wider area. At the time of preparing this report, Stomor are awaiting data from TfL in order to undertake junction capacity assessments. Therefore, a separate Addendum will be prepared in due course to address these assessments.
- 12.1.14. The access strategy for the proposed development is based on providing safe and convenient access at the site accesses. The over-arching priority is to promote sustainable access, either via retaining trips internally or promoting sustainable modes of travel.
- 12.1.15. The strategy set out above (including financial contribution) is considered the most policy compliant approach and would mitigate the impact of the proposed development. Capacity improvements to existing junctions are not the preferred approach due to the limitations on physical options in some locations, the limited long-term benefit of capacity improvements and the potential negative impact on sustainable transport infrastructure.
- 12.1.16. Any contribution would need to be fair, reasonable and justifiable in scale to the impact of the proposed development, taking into consideration the proposed infrastructure and services to be provided by the development.
- 12.1.17. Given the scale of the development and anticipated impact, with reference to paragraph 109 of the of the National Planning Policy Framework (NPPF), the likely residual cumulative impact of the development, taking into account the potential reduction in trips associated with the travel demand management measures, is not considered to be 'severe'.

APPENDIX A









APPENDIX B



From: Rentzos, Costi
To: Paula Cullen

Subject: RE: North London Business Park - TRICS
Date: Monday, May 24, 2021 2:28:34 PM

Attachments: image001.jpg

Hi Paula.

Yes, let's go with Melvyn's recommendation.

Kind regards Costi

From: Paula Cullen <p.cullen@stomor.com>

Sent: 24 May 2021 13:54

To: Rentzos, Costi < Costi.Rentzos@Barnet.gov.uk > **Subject:** FW: North London Business Park - TRICS

Hi Costi,

Would you like us to exclude TRICS sites outside of London as part of our assessment also?

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Dresner Melvyn (ST) < Melvyn.Dresner@tfl.gov.uk >

Sent: Monday, May 24, 2021 12:39 PM

To: Paula Cullen <<u>p.cullen@stomor.com</u>>; Rentzos, Costi <<u>Costi.Rentzos@Barnet.gov.uk</u>>
Cc: Simon Young <<u>s.young@stomor.com</u>>; Michael Holloway <<u>MHolloway@danielwatney.co.uk</u>>

Subject: RE: North London Business Park - TRICS [Filed 24 May 2021 12:43]

Thanks Paula,

If you can send me a technical note setting out your base and future trip assumptions then we comment in detail. As well as proposed methodology, this should include the data use (including observed data), how it applies to your site, person trip assumptions by land use and phase, and initial mode assumptions. Mode assumptions include main mode and access mode

On the TRICS outputs you provided, I would exclude sites from outside London and data older than 5 years.

I'm unclear why we forecasting office/ business park use as I thought this is residential scheme? Maybe the note can explain this aspect.

Most large developments in Barnet are residential or residential led. However, my most recent mixed use assessment in Barnet was undertaken for the rephasing application at Brent Cross. You can find the application on Barnet's website under reference: 19/5493/OUT. It's the May 2020 Transport Report (page 133 most useful) that sets out the details and set out a first principles approach adopted for employment.

For example of recent residential schemes, the nearest sites seemed to be refused e.g. Victoria Quarter or the Homebase at North Finchley. In both vases, TfL accepted the trip methodology.

For recent approvals, I would reference Silk Park on Hyde Estate Road, Grahame Park, Beaufort Park or Colindale Gardens. Again, we were ok with trip assumptions. I accept the approach to your site maybe different...

Regards

Melvyn

From: Paula Cullen <p.cullen@stomor.com>

Sent: 24 May 2021 11:28

To: Rentzos, Costi <<u>Costi.Rentzos@Barnet.gov.uk</u>>; Dresner Melvyn (ST) <<u>Melvyn.Dresner@tfl.gov.uk</u>> Cc: Simon Young <<u>s.young@stomor.com</u>>; Michael Holloway <<u>MHolloway@danielwatney.co.uk</u>>

Subject: FW: North London Business Park - TRICS

Good morning Costi/Melvyn,

We have obtained the attached trip rates which we propose to utilise to inform our assessment.

Having spoken with TRICS, given the scale of density of development, there are limited sites within their database which are reflective of the development proposals. As such, some of the sites TRICS we have been provided are outside of London and with higher PTAL scores that the North London Business Park.

Can you please confirm if you are in agreement with the sites selected, or if there are any other sites you would like us to consider?

Given the time pressure we are under, I would be really grateful if you could confirm this by end of play today, if that's at all possible.

Please do give me a call if you wish to discuss.

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



Suite 2 | First Floor | Portmill House | Portmill Lane | Hitchin | Hertfordshire | SG5 1DJ

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From: Info | TRICS <info@trics.org>
Sent: Friday, May 21, 2021 3:40 PM
To: Paula Cullen p.cullen@stomor.com>
Cc: Simon Young <s.voung@stomor.com>

Subject: RE: North London Business Park - TRICS [Filed 24 May 2021 11:11]

Hi, Paula

Please find the requested three Enhanced Site lists attached.

The first is for the 02/A Office land use category. I've applied quite wide filters at this stage to try to include as many surveys as possible. Still, you'll see the survey sample remains relatively small, at five. I've looked for multi-modal surveys between 1,000m² and 10,000m² GFA, from 01/01/2010 in Suburban Area, Edge of Town and Neighbourhood Centre locations. I've set a minimum local public transport provision of at least 200 buses or trains between 07:00-19:00 on a weekday.

The second is for the 02/B Business Park land use category and I've applied exactly the same filters as above. This leaves six surveys in the sample.

The third is for the 03/A Flats Privately Owned category. The official definition for this land use is as follows. Housing developments where at least 75% of households are privately owned. Of the total number of units, 75% must also be flats (sum of flats in blocks and "split" houses), with no more than 25% of the total units being "non-split" houses. The TRICS definition of a privately owned dwelling is a dwelling at which residents have any degree of equity, or a dwelling that is owned by a private landlord and rented at market rates. I've set a minimum number of dwelling of 200 but the date range, location types and public transport provision filters are all set exactly the same as the other two. This leaves a survey sample of eight.

Please let me know your thoughts on all of the above and let me know if you have any questions!

Kind regards

Owen

Owen Edwards Assistant Manager TRICS Consortium Ltd

10 Ashdon House Moon Lane Barnet EN5 5YL 020 3657 2187 07765 383 630

owen.edwards@trics.org

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From: Paula Cullen <p.cullen@stomor.com>

Sent: 21 May 2021 12:36
To: Info | TRICS <info@trics.org>

Subject: RE: North London Business Park - TRICS

Hi Owen,

OK not a problem – sorry to bother you!

Speak soon.

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Info | TRICS <info@trics.org>
Sent: Friday, May 21, 2021 12:35 PM
To: Paula Cullen <p.cullen@stomor.com>
Cc: Simon Young <s.young@stomor.com>
Subject: RE: North London Business Park - TRICS

Hi, Paula

I have an internet engineer at my house at the moment, hopefully he won't be too long. Once he's done, I'll give you a call back about this bureau service request.

Apologies for the delay.

Kind regards

Owen

Owen Edwards Assistant Manager TRICS Consortium Ltd 10 Ashdon House Moon Lane Barnet EN5 5YL 020 3657 2187 07765 383 630

owen.edwards@trics.org

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From: Paula Cullen <p.cullen@stomor.com>

Sent: 21 May 2021 12:18

To: Owen Edwards | TRICS < owen.edwards@trics.org >

Cc: Info | TRICS < info@trics.org >; Simon Young < s.young@stomor.com >

Subject: FW: North London Business Park - TRICS

Hi Owen,

Are you able to give me a call when you can if that's OK?

07468566114

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Paula Cullen

Sent: Friday, May 21, 2021 9:50 AM
To: Info | TRICS < info@trics.org>

 $\textbf{Subject:} \ \mathsf{RE:} \ \mathsf{North} \ \mathsf{London} \ \mathsf{Business} \ \mathsf{Park} \ \mathsf{-} \ \mathsf{TRICS}$

Hi Owen,

Sorry can I update my request?

We actually need trip rates for apartments/flats not houses. Mixed ownership but majority private. We also need to make sure we're not relying on sites that may have higher car ownership.

Hope that's OK?

Could I see a list of the sites if that's OK too?

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Info | TRICS <info@trics.org>
Sent: Thursday, May 20, 2021 6:00 PM
To: Paula Cullen <p.cullen@stomor.com>
Cc: Simon Young <s.young@stomor.com>
Subject: RE: North London Business Park - TRICS

Hi, Paula

To respond to this e-mail, each multi-modal trip rates calculation report would cost £460 plus VAT, a total of £920 plus VAT.

Kind regards

Owen

Owen Edwards Assistant Manager TRICS Consortium Ltd

10 Ashdon House Moon Lane Barnet EN5 5YL 020 3657 2187 07765 383 630 owen.edwards@trics.org

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From: Paula Cullen < p.cullen@stomor.com>

Sent: 20 May 2021 09:50

 $\textbf{To:} \ Owen \ Edwards \ | \ TRICS < \underline{owen.edwards@trics.org} >; \ Info \ | \ TRICS < \underline{info@trics.org} >; \ A result of the large of the large$

Cc: Simon Young <<u>s.young@stomor.com</u>> **Subject:** FW: North London Business Park - TRICS

Importance: High

Good morning,

Further to my email below, can we please have a quotation for circa 4000m2 of B1 office at the same site?

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Paula Cullen

Sent: Wednesday, May 19, 2021 3:26 PM

To: owen.edwards@trics.org; Info | TRICS < info@trics.org>

Cc: Simon Young <<u>s.young@stomor.com</u>> **Subject:** North London Business Park - TRICS

Good afternoon,

May I obtain a quotation for the latest multi-modal trip rates for a site located in the London Borough of Barnet. It is a mix of houses and flats, assume privately owned

privately owned.		
The site is located below:		
	?	
	_	

We need this info ASAP if that's possible?

The sit e

Kind regards

Paula Cullen Transport Planning Consultant p.cullen@stomor.com Direct line: 01462 342141 Office: 01462 615433



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From: Hawkins Phil
To: Paula Cullen

Cc: Simon Young; Dresner Melvyn (ST)

Subject: RE: Model Date

Date: Thursday, June 10, 2021 1:03:37 PM

Attachments: <u>image001.jpg</u>

Hi Paula

I'm afraid that the information on planned homes and jobs increases is not included in the requested output. I think it may be something that needs to be agreed with Melvyn, but I would suggest that if the other development is planned and consented, it could be considered to be included in the London Plan growth included in the model already. i.e, you just need to add in your development trips. That would save you a lot of work and expense trying to decipher the model planning inputs.

We've quoted 3 days officer time to collate the data and I have already asked them to proceed – I would hope therefore you would have outputs next week.

We'll need a PO to cover the amount, and then I believe we invoice you (and that will contain payment details)

Cheers Phil

From: Paula Cullen <p.cullen@stomor.com>

Sent: 10 June 2021 09:00

To: Hawkins Phil < PhilHawkins@tfl.gov.uk> **Cc:** Simon Young < s.young@stomor.com>

Subject: RE: Model Date

Hi Phil,

Thanks for clarifying. I presume all that info will be available as part of the model outputs we will receive?

Also, can I have TfL's BACS details, as we will arrange payment for the data today?

Once this has been paid, do you know approx. how long it will take to receive the data?

Sorry more questions!

Kind regards

Paula Cullen
Transport Planning Consultant
p.cullen@stomor.com

Direct line: 01462 342141 Office: 01462 615433



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From: Hawkins Phil < PhilHawkins@tfl.gov.uk

Sent: Thursday, June 10, 2021 8:44 AM **To:** Paula Cullen < p.cullen@stomor.com >

Subject: RE: Model Date

Hi Paula

You would need to delve into the planning assumptions in the demand model to determine that one. Basically though the model uses London Plan levels of jobs and homes growth across London distributed via borough SHLAA for homes and a GLA employment sites database.

Phil

From: Paula Cullen < p.cullen@stomor.com>

Sent: 09 June 2021 16:27

To: Hawkins Phil < PhilHawkins@tfl.gov.uk>

Subject: RE: Model Date

Hi Phil,

Sorry I forgot to ask earlier, do you or does anyone in the modeling team know if the extant scheme is included within the model?

We have assumed that the extant permission for the 1,350 dwellings is already included within the background traffic related to the strategic model for the forecast years. As such, we will assess the net increase of the additional 1,150 dwellings as part of our development for highway and public transport impact.

I will have sign off from the client this evening regarding the modelling fee.

Kind regards

Paula Cullen
Transport Planning Consultant
p.cullen@stomor.com
Direct line: 01462 342141

Office: 01462 615433