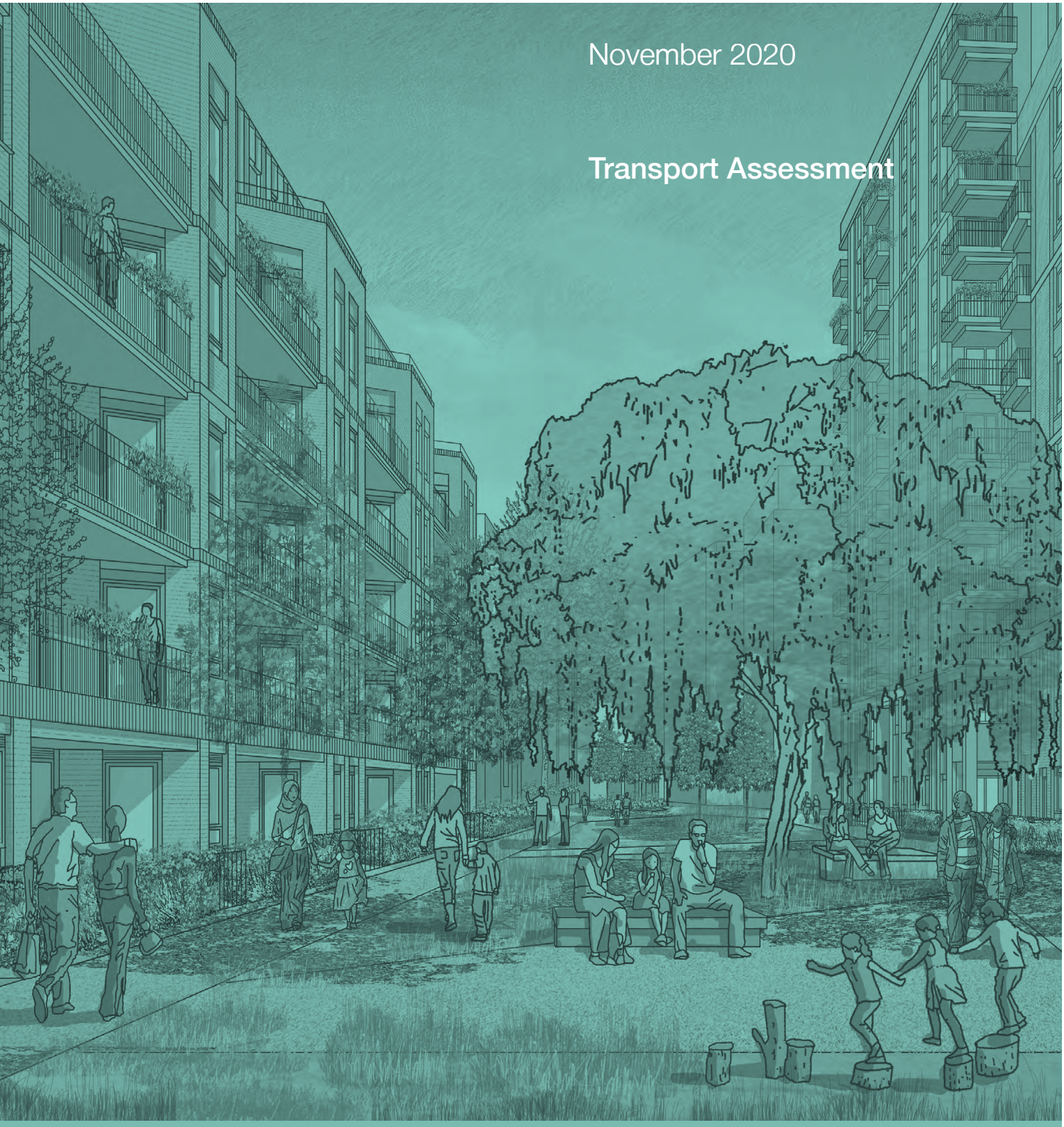
Patel Taylor

Cambridge Road Estate
Hybrid Planning Application



November 2020

Transport Assessment

CRE
CAMBRIDGE ROAD ESTATE

COUNTRYSIDE
Places People Love

THE ROYAL BOROUGH OF
KINGSTON
UPON THAMES

The Applicant

Cambridge Road (Kingston) Ltd

c/o Countryside Properties
Aurora House
71-75 Uxbridge Road
Ealing
London W5 5SL

The project site

Cambridge Road Estate
Project hub

2 Tadlow
Washington Road
Kingston Upon Thames
Surrey
KT1 3JL

Application forms

Covering letter

Application Form and Notices

CIL Additional Information Form

Design proposals

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- Vol.2 - The Detailed Component

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- Illustrative Plans
- Design Guidelines

Phase 1 Architecture and Landscape
- GA Plans, Sections and Elevations

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Rehousing Strategy

Financial Viability Appraisal

Draft Estate Management Strategy

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Car Parking Management Plan
Servicing and Delivery Management Plan

Construction Logistics Plan
Construction Method Statement and Construction Management Plan
Sustainable Design and Construction Statement (Including Circular Economy Statement)

Environmental Statement
- Non Technical Summary
- Vol.1 – Technical Reports
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Energy Statement (Including Overheating Assessment and Whole Life Cycle Assessment)

Daylight and Sunlight
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Extraction and Ventilation Strategy
Noise Impact Assessment

Arboricultural Report and Tree Conditions Survey
Arboricultural Impact Assessment & Method Statement
Preliminary Ecological and Bat Survey Report
Biodiversity Net Gain Assessment

Archaeology and Heritage Assessment
Ground Conditions Assessment

Utilities Report

Flood Risk Assessment
Phase 1 Drainage Statement

Fire Strategy Report

Accessibility Audit
Health Impact Assessment
Equalities Impact Assessment

Transport Assessment

Cambridge Road Estate Regeneration

29 October 2020

Prepared for

Cambridge Road (RBK) LLP

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C	Final	EJ	MH	EJ	MH	10/11/20
D	Final	EJ	MH	EJ	MH	12/11/20

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1. Introduction

1.1 Preamble

1.1.1 Markides Associates (MA) has been instructed to prepare this Transport Assessment by Cambridge Road (RBK) LLP (hereafter referred to as the 'the applicant") in support of a hybrid planning application for the regeneration of the Cambridge Road Estate. The proposals include the demolition of the existing estate and its replacement with a mixed-use development of approximately 2170 dwellings, retail, office, community uses, and new public open spaces food outlets. The site is approximately 9 hectares.

1.1.2 The site falls within the administrative authority area of the Royal Borough of Kingston upon Thames (RBK) who act as both the planning and highway authority.

1.1.3 The site is not located close to the Transport for London (TfL) Road Network (TLRN) but as the proposed development is a scheme of size and scale referable to the Mayor the Greater London Authority (GLA)/TfL will be a statutory consultee.

1.2 The Site

1.2.1 The Cambridge Road Estate (CRE) is located approximately 1km to the east of Kingston and is surrounded by largely residential development to the north, east and west, with Kingston Cemetery to the south.

1.2.2 The site area extends to approximately 9 hectares (ha). Cambridge Road Estate (CRE) was built in the 1970s and consists of the following buildings and facilities:

- 832 residential homes distributed across 4 multi-storey blocks of 17 storeys in height, low-rise blocks of 4/5 storeys in height and 2 storey terraced housing.
- The Bull and Bush Hotel within the west of the site.
- Piper Community Hall within the south of the site.
- Small formal and informal spaces/play spaces and ground level car parking areas.
- The site has significant level differences which make it difficult for those with accessibility concerns or parents with pushchairs to move easily through the site.

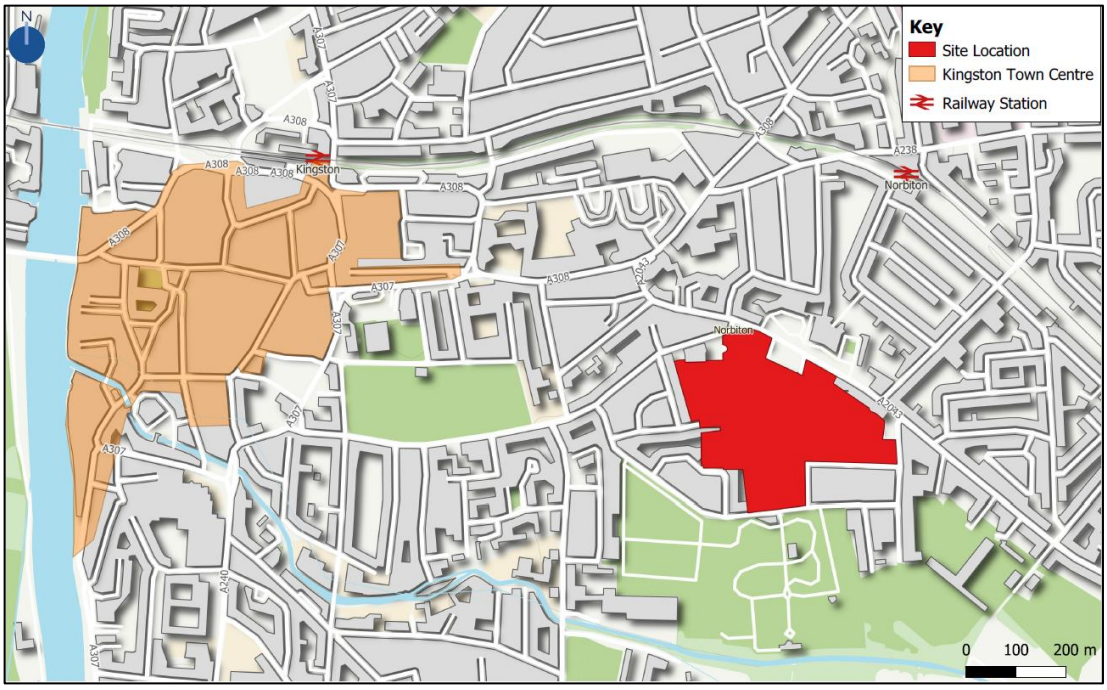
1.2.3 Cambridge Road runs northwest / southeast on the northern boundary of the site. Hawks Road from its junction with Cambridge Road effectively runs west towards Kingston from the north-eastern corner of the site. Vehicular/pedestrian access from the north is taken directly from Cambridge Road itself. From the east access is from Hampden Road, Vincent Road, and Cambridge Grove Gardens (all via Hampden Road). From the west access is from Bonner Hill Road, Somerset Road, Rowlls Road/Piper Road, via Bonner Hill Road.

1.2.4 There are many pedestrian access points across the estate. However, they do not form a coherent network, instead they are disjointed and indirect. There are also level differences across the estate which make getting about more difficult for those with mobility impairments.

1.2.5 Cycling within the estate is considered to be relatively unattractive due to the level differences and unwelcoming environment.

1.2.6 A site context plan is shown in **Figure 1.1** as an extract and is reproduced to scale at the end of this report.

Figure 1.1 Site Context Plan



1.3 The Proposed Development

Description of Development

1.3.1 Specifically, this planning application proposes:

"Hybrid Planning Application for a mixed use development, including demolition of existing buildings and erection of up to 2,170 residential units (Use Class C3), 290sqm of flexible office floorspace (Use Class E), 1,395sqm of flexible retail/commercial floorspace (Use Class E/Sui Generis), 1,250sqm community floorspace (Use Class F2), new publicly accessible open space and associated access, servicing, landscaping and works.

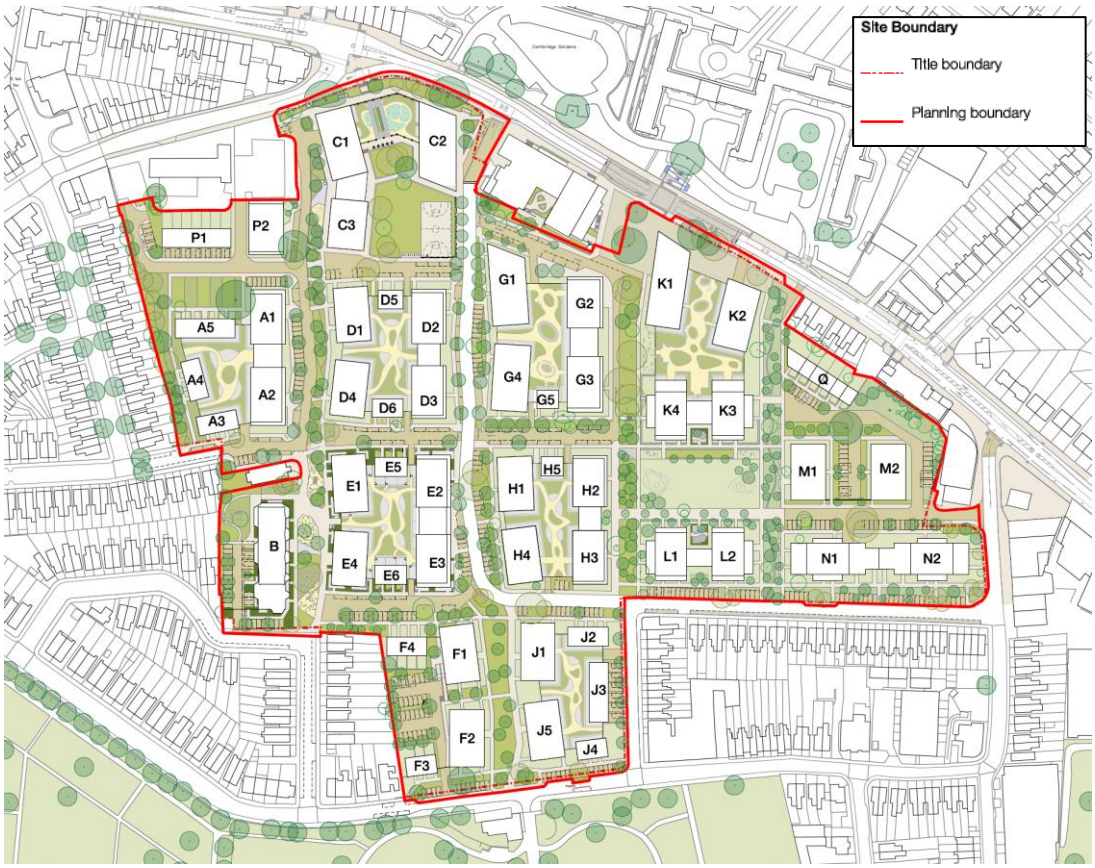
Detailed permission is sought for Phase 1 for erection of 452 residential units (Use Class C3), 1,250sqm community floorspace (Use Class F2), 290sqm of flexible office floorspace (Use Class E), 395sqm of flexible retail/commercial floorspace (Use Class E/Sui Generis), new publicly accessible open space and associated access, servicing, parking, landscaping works including tree removal, refuse/recycling and bicycle storage, energy centre and works

Outline permission (with appearance and landscaping reserved) is sought for the remainder of the development ("the Proposed Development")."

1.4 Masterplan and Phase 1 Layouts

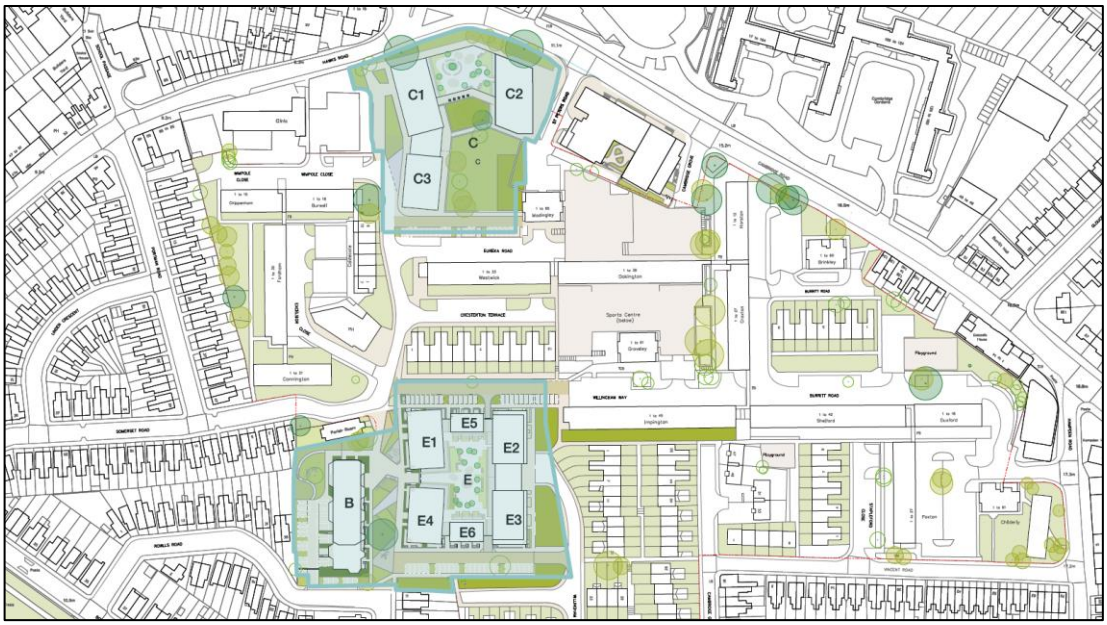
1.4.1 **Image 1.1** shows the proposed masterplan with **Image 1.2** showing the Phase 1 site plan. **Appendix A** contains both plans in full.

Image 1.1 Illustrative Masterplan



Source: Patel Taylor 503-PTA-MP-RF-DR-A-1201 P23

Image 1.2 Phase 1 Site Plan



Source: Patel Taylor 503-PTA-MP-RF-DR-A-5101 P02

1.5 Planning Policy

1.5.1 This planning application has been prepared in consideration of national, regional and local transport planning policies that are relevant to the development site including:

- National Planning Policy Framework – NPPF (2019).
- The London Plan (2016).
- The Draft London Plan (2019).
- The Mayor's Transport Strategy (2019).
- Healthy Streets for London (2017).
- Vision Zero Action Plan (2018).
- Kingston Local Plan 2015-2030
- Sustainable Transport SPD (May 2013)
- Cambridge Road Estate – Strategic Development Brief

1.5.2 A summary of the relevant planning policies and standards for the proposed development site is provided in **Appendix B** .

1.6 Healthy Streets, Vision Zero and the Mayor's Transport Strategy

1.6.1 The development has been designed to support the strategic priorities of the Mayor in terms of Healthy Streets, Vision Zero and the Mayor's Transport Strategy (MTS). **Table 1.1** provides a summary of the primary design components and considerations relevant to these strategic objectives.

Table 1.1 Supporting Strategic Transport Objectives

Design Principle	Description	Objectives		
		MTS	Healthy Streets	Vision Zero
Development within high Public Transport Accessibility Level (PTAL) area	The proposed development significantly improves the PTAL rating improving accessibility to established public transport, walking and cycling networks maximising their likely use.	✓	✓	✓
Lower Car Parking Provision	The proposals will reduce the amount of car parking and encourage the use of sustainable transport trips through design.	✓	✓	
Priority for walking and cycling	The masterplan creates a new public space for people to stop and dwell. Improved and more direct routes which are safer for pedestrians and cyclists, as well as improved links to the surrounding area	✓	✓	✓
Servicing Strategy	The development and Framework Delivery and Servicing Plan have been designed with safety and efficiency in mind. Minimising conflict across the site and aiming to reduce the level of service trips generated.		✓	✓
Creation of new public realm	The creation of new public space provides for people to stop and rest and find shelter.		✓	
Active Frontages	A significant proportion of the ground floor of proposed buildings will provide an active frontage increasing natural surveillance and therefore perception of safety and active uses providing spaces for people with things to see and do.		✓	
Reducing vehicle trips	The development results in a forecast reduction in vehicle-based trips, providing the ability for cleaner air and safer streets.	✓	✓	✓
Sustainable freight	The design has considered opportunities for encouraging sustainable freight, such as designing for Cargo Bikes.		✓	

1.7 Pre-Application Engagement

Royal Borough of Kingston Upon Thames Engagement

1.7.1 A number of formal pre-application discussions have taken place with RBK, including the highways officers. These discussions have informed both the scope of this TA and the design detail proposed. The primary points of feedback from officers following these discussions are summarised below:

- Car lite development with a ratio of 0.4 spaces per unit is supported, subject to new residents not being able to apply for a parking permit for any existing or future Controlled Parking Zone (CPZ).
- Disabled parking to be in accordance with the draft London Plan.
- Cycle parking to be provided in accordance with the Draft London Plan.

- RBK supported the overall strategy for the site access and routes through the site.
- RBK supported the strategy to restrict rat-running between Hawks Road and Cambridge Road.
- RBK supported the principle of using the junction of Hawks Road and Washington Road for construction vehicles only.
- RBK supported a manual PTAL calculation incorporating the pedestrian route through Cambridge Gardens.
- RBK supported the principle of the TA focussing on the masterplan application with detailed points to be covered under Reserved Matters Applications (RMA).

1.7.2 Two Scoping Notes were submitted to RBK which are provided in **Appendix C** .

TfL Engagement

1.7.3 An initial screening meeting was held with TfL on the 17th September 2019, with the primary points of feedback from officers following these discussions are summarised below:

- The TA should be in accordance with the Healthy Street Approach.
- TfL support a car lite development with a ratio of 0.4 spaces per unit.
- New residents should not be able to apply for a parking permit for any existing or future CPZ.
- Disabled parking to be in accordance with the Draft London Plan.
- Cycle parking to be provided in accordance with the Draft London Plan.
- TfL noted the high-quality public realm proposed and that the site will improve permeability and connectivity of the site and reduce walking distances to local bus stops.
- TfL supported a manual PTAL calculation incorporating the pedestrian route through Cambridge Gardens.
- TfL would not require a local junction modelling.
- TfL requested a potential route through the site be available for buses in the future.
- TfL requested Active Travel Zone (ATZ) to cover routes to Norbiton & Kingston Railway Stations, bus stops, Kingston Town Centre, Schools, Kingston Hospital and Parks.

1.8 Other Transport Related Supporting Documents

1.8.1 In accordance with the pre-application engagement, the following transport related documents are also submitted in support of the detailed phase 1 and outline application:

- Framework Travel Plan (FTP).
- Framework Delivery and Servicing Plan (FDSP).
- Framework Car Park Management Plan (FCPMP).
- Framework Construction and Logistics Plan (FCLP).

1.9 Report Structure

1.9.1 This report is structured as follows:

- **Chapter 2** – covers information on transport planning for people, including details of the development proposals.
- **Chapter 3** – provides an overview of the Site and its surroundings.
- **Chapter 4** – outlines the ATZ in relation to the site.
- **Chapter 5** – provides details of the London-wide network in relation to the site, including details of the trip generation characteristics of the development and design solutions.
- **Chapter 6** – provides consideration of the construction and logistics related impact of the development proposals.
- **Chapter 7** – provides a summary of the key transport impacts/issues and the solutions/mechanisms and concluding remarks.

2. Transport Planning for People

2.1 Overview

2.1.1 This section provides details of the proposed development, including details on who the development is for, when they will travel there and why.

2.2 Development Proposals

2.2.1 **Table 2.1** shows the different development quantum between the existing site and the proposed masterplan. The table also shows the proposed schedule for Phase 1 of the development – the detailed element of the application.

Table 2.1 Area Schedule (Existing / Proposed / Phase 1)

Land Use	Existing	Masterplan Proposals	Difference (+/-)	Phase 1
Residential (C3)	832 Units	2170 Units	1338 Units	452 Units
Flexible Office (E)	N/A	290 sqm	290 sqm	290 sqm
Flexible Retail / Commercial (E)	N/A	1395 sqm	1395 sqm	395 sqm
Community (F1/F2)	290 sqm	1250 sqm	960 sqm	1250 sqm
Total Non-Residential Uses	1948 sqm	2935 sqm	987 sqm	1935 sqm

2.2.2 The proposed development results in an increase of 1338 dwellings with an increase of 987 sqm commercial / retail / office floorspace.

Transport Elements of the Proposed Masterplan

2.2.3 The proposed development includes the demolition of the existing estate including the removal of all existing footways, paths, and roads provides including the stopping of existing highway, maintainable at the public expense (public highway). The site will then be comprehensively redeveloped providing, once fully complete, the land uses shown in **Table 2.1**.

2.2.4 The masterplan will create new east/west and north/south connections to the existing highway infrastructure improving permeability and connectivity through the site. The masterplan provides new public realm and green spaces.

2.2.5 The outline application will be guided by a set of parameter plans which will fix the development within certain parameters which cover a wide range of items include building height location as well as transport related elements such as location and routes for pedestrians, cycles and vehicles and locations of new accesses.

2.2.6 Key elements of the masterplan (transport related) include:

- Prevention of rat-running through the new estate:

- Improved walking and cycling links
- Improved public realm and public open space
- Car lite scheme with a parking ratio of 0.4 spaces per dwelling.
- Provision of Car club spaces onsite for those without access to their own car.
- Provision of electric vehicle charging points in accordance with TfL standards.
- Provision of cycle parking in accordance with TfL standards.
- Significant improvement in the sites PTAL rating.
- Reduction in vehicle trips compared to the existing site.
- New residents will be prevented from purchasing a permit to park in existing or future Controlled Parking Zones – therefore there will be no increase in pressure on the level of on-street parking capacity.

2.3 New Development Users

2.3.1 The proposed development has the potential to influence how people choose to travel because the site is located within close proximity to Kingston town centre and benefits from good accessibility to public transport as described later in this report.

2.3.2 The primary users of the site will be residents and it is expected that they will likely follow a typical residential trip profile with many people travelling to and from work during the morning and afternoon peaks with other trips throughout the remainder of the day for shift working, leisure or education purposes for example.

2.3.3 The work space uses are expected to follow similar travel patterns in terms of peak time travel, with the retail and community uses expected to be ancillary to the development in the local area and generating pass-by or linked trips from residents of the new development or those living and/or working in the local area.

2.3.4 The Transport Classification of Londoners (TCL) demographic segments have also been referenced in order to identify the TCL segment users of the site would most likely fall into. Kingston is predominately classified as 'Detached Retirement' which accounts for 58% of the borough. However, it does not reflect the existing estate which does experience social issues where the Family Challenge classification of the TCL may be more appropriate. However given the location of the development its proximity to public transport and the flatted nature of the dwellings it may be that other classifications in addition to Family Challenge as Affordable Transitions, Educational Advantage, or Urban Mobility for example may become part of the demographic, which is ultimately the driver of many large scale urban developments such as this. All of which generally have lower car ownership and also an above average propensity to change travel behaviour to more active modes.

Table 2.2 shows the percentage of all trips undertaken by residents of RBK between 2015/16 and 2017/18 (The Travel in London Report 12 (2018) Page 69 & the accompanying dataset).

Table 2.2 Sustainable Trips in LBR (2015/16 – 2017/18)

Mode	Percent (%)
Public Transport	23
Cycle	3
Walk	32
Total	**58**

2.3.5 The table shows that for all trips which start or end within RBK 58% of residents use sustainable modes of transport, which covers the entire borough. Whereas, the output area from the 2011 Travel to Work census data shows that 70% of residents use sustainable modes of transport with Section **3.8** providing more detail.

3. Existing Conditions

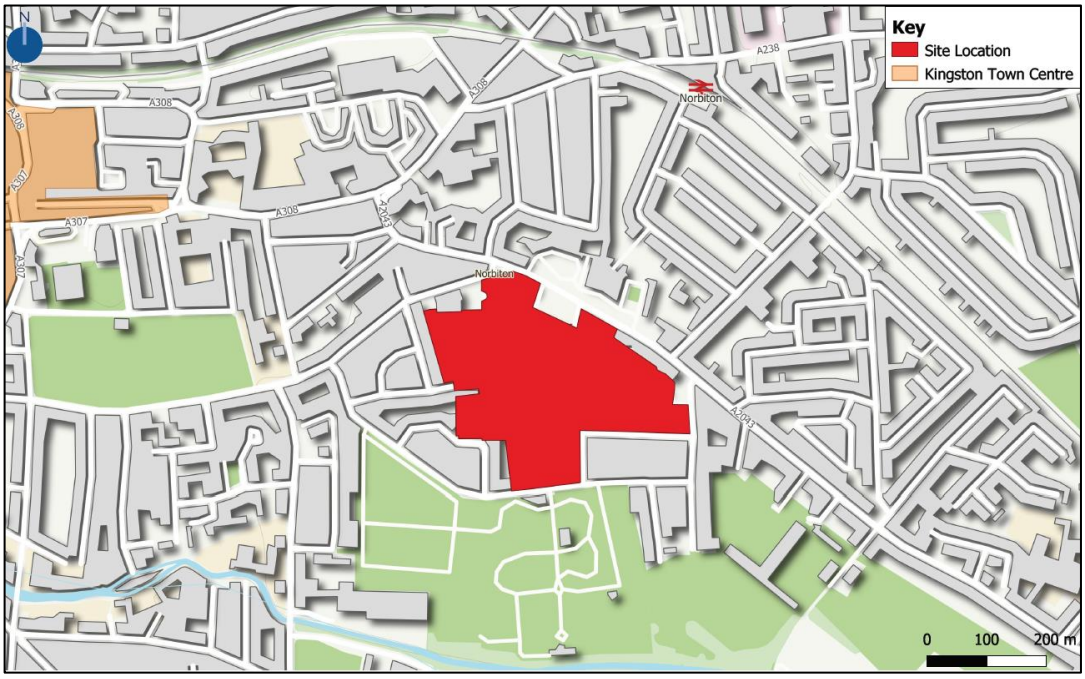
3.1 Overview

3.1.1 This section of the report provides details of the site as existing, its permitted uses, access arrangement and accessibility by all modes.

3.2 Site Description

3.2.1 The site is located off Cambridge Road, Kingston Upon Thames, KT1 3JB ('the site'), which is positioned to the west of the A2043 within walking distance of Kingston Town Centre and Norbiton. A site location plan is included as **Figure 3.1** as an extract below and included to scale at the end of this report.

Figure 3.1 Site Location Plan



3.2.2 The area is currently a housing estate, made up of 832 residential dwellings (use class C3) units in the form of both flats and terrace housing. The site covers some 9 ha. The site can be separated into 31 individual areas, those being different building types. The building types that are scattered around the development site include tower blocks consisting of between 60 and 61 residential units, slab blocks consisting of between 12 to 42 residential units, low-rise flats consisting of 12 units and terrace housing. The development site is enclosed by the A2034 Cambridge Road to the east, Hawks Road to the north, Portman Road/Piper Road to the west and finally Bonner Hill Road to the south of the site, as well as Kingston Cemetery and Crematorium.

3.3 Local Facilities

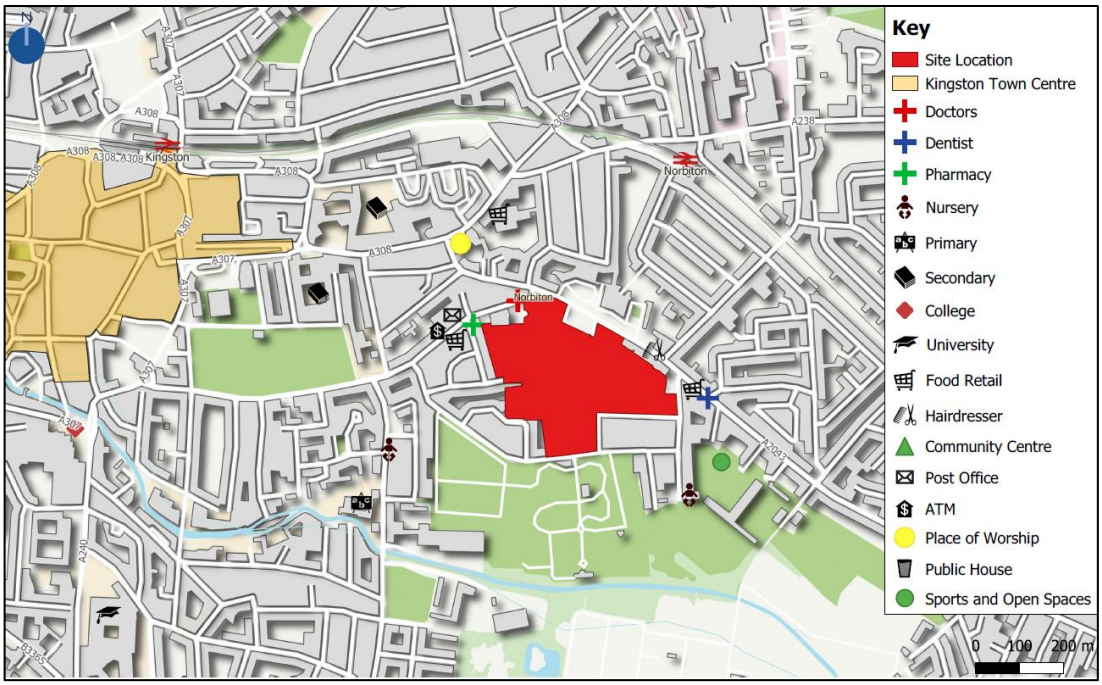
3.3.1 **Table 3.1** provides a summary of the local facilities surrounding the site and approximate walking/cycling distances. Due to the composition of the site, all of the measures have been taken from the local facility to the middle of the development site.

Table 3.1 Local Facilities

Facility		Location	Distance	Travel Time (mins)	
				Walk	Cycle
Medical Facilities					
Doctors	Hawks Road Clinic	KT1 3EW	200m	2	1
Dentist	Simply Crown and Bridge Dental Laboratory	KT1 3LF	700m	9	3
Pharmacy	Hawks Pharmacy	KT1 3JB	350m	4	1
Education Facilities					
Nursery	Kings Meadow Pre-School	KT1 3HG	550m	6	2
	The FeatherNest Nursery	KT1 3AP	800m	10	3
Primary	King Athelstan Primary School	KT1 3AR	750m	9	3
Secondary	Tiffin School	KT2 6RL	1.1km	14	5
	Kingston Grammar School	KT2 6PY	900m	11	4
College	Kingston College	KT1 2AQ	1.4km	18	6
University	Kingston University	KT2 6TN	700m	9	3
Retail Facilities					
Food Retail	SPAR	KT1 3LU	800m	10	4
	Costcutter	KT1 3NQ	650m	8	3
	Hawks Local	KT1 3EG	500m	6	2
	ASDA Kingston Upon Thames	KT2 6QL	650m	8	3
Hairdresser	Capelli	KT1 3NS	650m	8	3
Community Facilities					
Community Centre	Piper Hall	KT1 3EX	180m	2	1
Post Office	Hawks Road Post Office	KT1 3EG	500m	6	2
ATM	Costcutter ATM	KT1 3NQ	650m	8	3
Place of Worship	Churches together Surbiton and Tolworth	KT2 6QL	650m	8	3
Public House	The Cricketers	KT1 2UL	800m	10	3
Sports and Open Spaces	Kingstonian Football Club Ground & AFC Wimbledon	KT1 3PB	1km	15	5
	F45 Training Kingston	KT1 3LF	650m	8	3

3.3.2 The facilities outlined in the table above are shown diagrammatically in **Figure 3.2** which is included at scale at the end of this report.

Figure 3.2 Local Facilities Plan



3.3.3 The figure above shows that a range of land uses are located within close proximity to the site, ensuring that these trips attractors can be accessed by all modes other than the private car and realistically on foot or by bike. This reflects the fundamental requirements of national, regional, and local planning policy for creating sustainable communities. The Chartered Institute of Highways and Transportations (CIHT) March 2015 guidance document, 'Planning for walking', states that 'walkable neighbourhoods' are those with a typical catchment of around 800m, with many of the key identified land uses being within this walking distance threshold.

3.4 Pedestrian and Cycle Access

3.4.1 In terms of pedestrian infrastructure, there are adequate footways across the whole of the site, where footways and footpaths are between 1.5 and 2.5m wide. According to 'Manual for Streets' an acceptable width for a footway is 2m.

3.4.2 Footways are lit which provides for a safe and accessible environment for residents to be able to travel to foot at any time of the day and/or the year. However, this does not provide safe or accessible access for all users in terms of navigation or level changes which occur throughout the site.

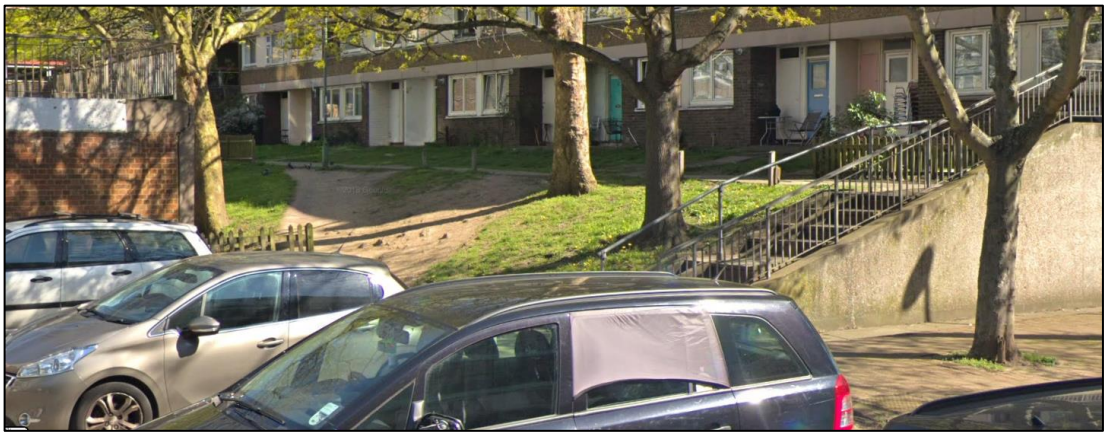
3.4.3 The current development site provides pathways for residents to be able to navigate around the estate roads. **Image 3.1** shows there are dropped kerbs and tactile paving on adopted roads within the site which aids the safe crossing of the roads.

Image 3.1 Site Footways (Willingham Way)

Source: Google Street view

3.4.4 Whilst the infrastructure may be acceptable in terms of footway widths and tactile paving the estate does suffer from some substantial level differences which are difficult for those with accessibility concerns, or parents with young children and/or pushchairs to negotiate. **Image 3.2** shows an example of an informal ramp and steps which are not suitable for wheelchair users, or pushchairs making active travel more difficult.

Image 3.2 Existing Level Differences



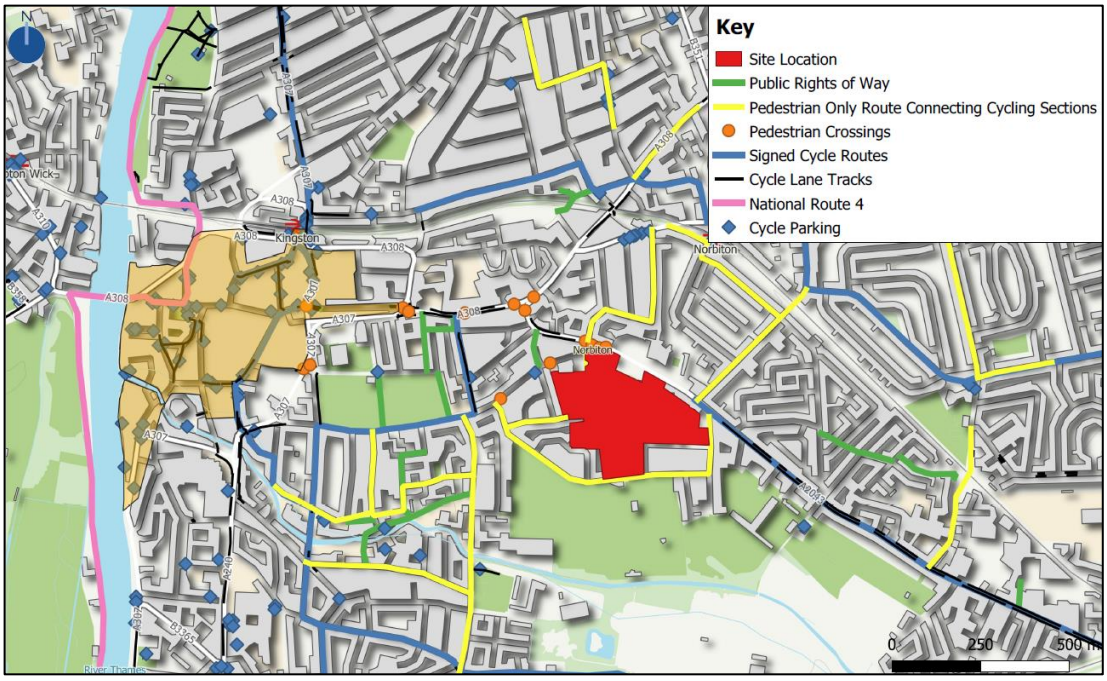
Source: Google Street view

3.4.5 The site is surrounded by a network of pedestrian and cycle infrastructure, with the main cycle infrastructure being in place along the A2043 Cambridge Road in the form of on carriageway cycle lanes. Although the cycle lanes are intermittent, they do provide a largely

segregated route into Kingston Town Centre which provides a large number of local amenities to the development site.

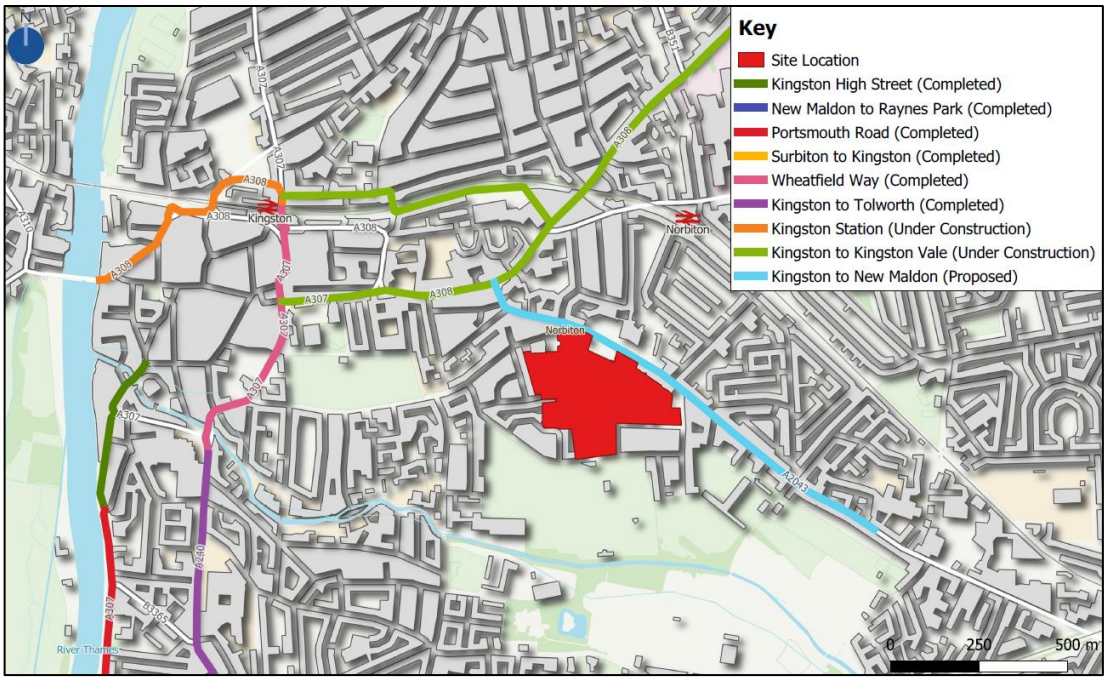
3.4.6 Pedestrian and cycle infrastructure within the vicinity of the development site, is shown in **Figure 3.3**.

Figure 3.3 Pedestrian and Cycle Infrastructure Plan



3.4.7 RBK are currently designing a new cycle route which will provide a fully segregated cycle route along the A2043 between Kingston Town Centre and New Malden. The proposed cycle infrastructure has been highlighted in **Figure 3.4**. The new cycle route is part of the 'Go Cycle' proposals, which is a £32 million infrastructure transformation project funded by the Mayor of London.

Figure 3.4 Go Cycle Scheme



3.4.8 The figure above shows that the site will benefit from a new high-quality segregated cycle infrastructure linking New Malden with Kingston town centre and beyond to Surbiton and Tolworth. RBK's website states construction is due to start in 2020/2021.

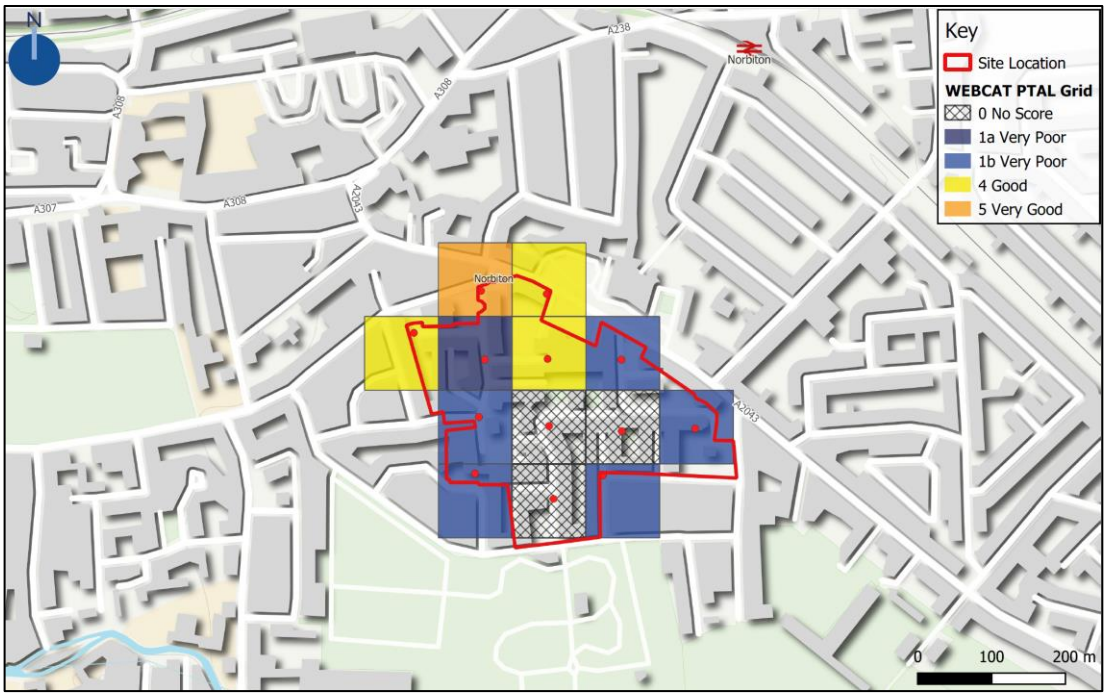
3.5 Public Transport

Public Transport Accessibility Level (PTAL)

3.5.1 Public Transport Accessibility Levels (PTAL) are a theoretical measure of accessibility of a given point to the public transport network, considering walk access time and service accessibility. All bus routes within 640m and underground/rail stations within 960m are considered within the calculation; any transport services beyond this distance are disregarded.

3.5.2 A PTAL score ranges between 1a and 6b, where 1a represents a poor level of accessibility and 6b an excellent level. The PTAL rating of the site has been assessed using the TfL land use planning PTAL assessment tool WebCAT. The WebCAT assessment of the site location identifies PTAL ratings between 0 and 5 at the site. **Figure 3.5** shows the existing PTAL of the site, with the full PTAL output included in **Appendix D** .

Figure 3.5 Existing PTAL Rating



Source: TfL WebCAT tool

3.5.3 The PTAL rating does show that some parts of the existing estate are relatively inaccessible to public transport. Section **3.4** outlined some of these issues. Chapter **5.9** outlines the impact of the masterplan on the PTAL rating.

Bus Accessibility

3.5.4 The bus stops which are within the closest proximity to the development site are situated on the A2043 Cambridge Road are named 'Cambridge Road' Stop A and Stop L. These are located 550m from the centre of the development site, which is around a 7-minute walk. These bus stops are served by bus routes 131 and N87. Further to this, there are also bus stops located to the north of the site along the A308 London Road and are called Norbiton Church, these are located 700m to the north of the centre of the site, which is around an 8-minute walk. Norbiton Church bus stop is served by 57, 85, 213, 371, K2, K3, K4, and K5 bus routes. The routes and frequency of these services are outlined in **Table 3.2**.

Table 3.2 Local Bus Services

Bus Number	Route	Peak Hour Frequency			Weekday Services	
		Weekday	Saturday	Sunday	First	Last
Cambridge Grove						
131	Fairfield Bus Station – Tooting Broadway Station	Every 5-10 minutes	Every 6-9 minutes	Every 10-13 minutes	05:16	00:01
N87	Aldwych/ Somerset House – Fairfield Bus Station	4 per hour	4-5 per hour	4 per hour	01:12	05:54
Norbiton Church						
57	Fairfield Bus Station – Atkins Road/New Park Road	Every 7-12 minutes	Every 8-13 minutes	Every 9-13 minutes	24 hours	24 hours
85	Kingston Hall Road – Putney Bridge Station	Every 7-11 minutes	Every 7-12 minutes	Every 8-11 minutes	24 hours	24 hours
213	Sutton Bus Garage – Fairfield Bus Station	Every 7-12 minutes	Every 7-13 minutes	Every 10-14 minutes	24 hours	24 hours
371	Manor Road/Sainsburys – Kingston Hall Road	Every 10-11 minutes	Every 2-8 minutes	Every 11-13 minutes	05:51	01:27
K2	Hook Parade – Kingston Hospital	Every 8-12 minutes	Every 10-11 minutes	Every 20 minutes	05:55	00:01
K3	Trinity School – Roehampton Vale / Asda	4 per hour	4 per hour	3 per hour	06:14	00:02
K4	Kingston Hospital – Ripon Gardens	2 per hour	2 per hour	None	06:08	23:53
K5	Dysart Avenue – Morden Station	2 per hour	2 per hour	None	06:21	19:32

3.5.5 The table above shows that there are a large number of bus services that serve the development site, with destinations including Roehampton, Kingston, Kingston Hospital, Tooting, Sutton and Putney Bridge Station.

Rail Facilities

3.5.6 The nearest railway station is Norbiton Railway Station which is approximately 900m north east of the railway station, which is around a 13-minute walk from the site. Norbiton Railway Station is served by South Western Railway with destinations including London Waterloo Station, Richmond and Kingston l. The site is also within walking distance of Kingston Railway Station which is located 1.4km to the north west of the development site which is around an 18-minute walk. Kingston Railway Station is also served by South Western Railway and therefore has the same destinations as Norbiton Railway Station.

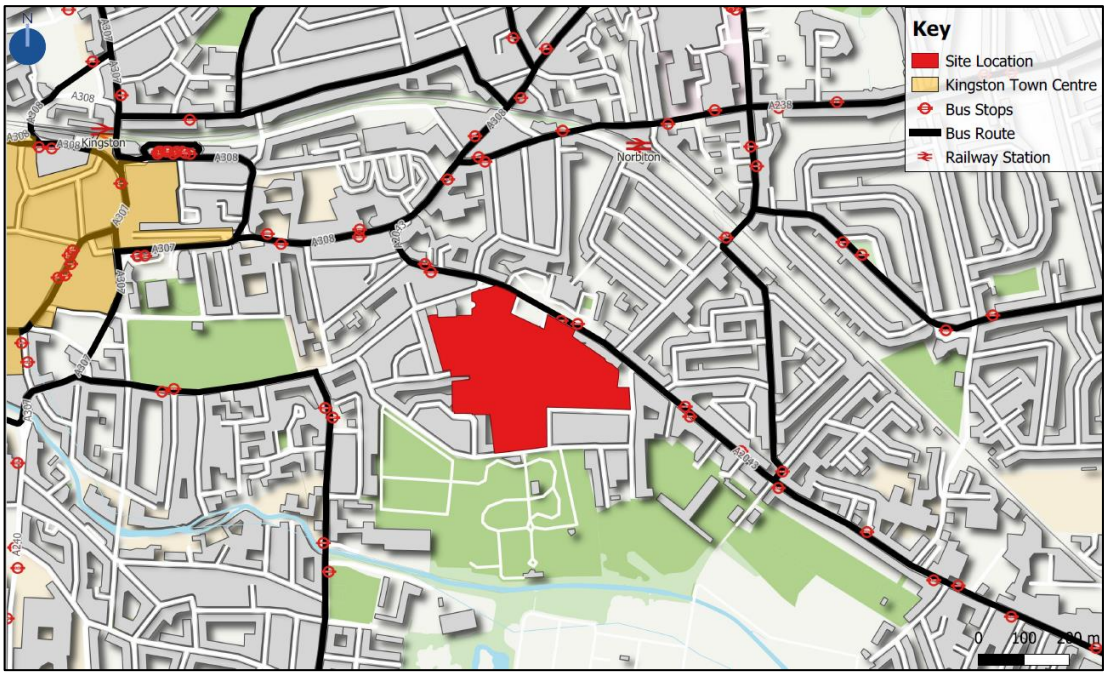
3.5.7 The local railway services by destination, their frequency and journey times are summarised in **Table 3.3**.

Table 3.3 Local Rail Services

Direct Service Destination	Peak Hour Frequency			Approx. Journey Times
	Weekday	Saturday	Sunday	
Norbiton/Kingston Railway Station				
London Waterloo Station	5 per hour	4 per hour	3 per hour	29 minutes
Wimbledon	4 per hour	4 per hour	2 per hour	10 minutes
Clapham Junction	6 per hour	4 per hour	2 per hour	20 minutes
Shepperton	2 per hour	2 per hour	2 per hour	29 Minutes
Richmond	2 per hour	2 per hour	2 per hour	26 minutes
Putney	2 per hour	2 per hour	2 per hour	37 minutes

3.5.8 The table above demonstrates that the site benefits from frequent rail services to/from Norbiton and Kingston Railway Stations via South Western Railway services to destinations including London Waterloo Station, Wimbledon and Clapham Junction, with onward connections to the rest of London and the UK. **Figure 3.6** shows the bus and rail infrastructure.

Figure 3.6 Public Transport Plan



3.6 Local Highway and Parking

3.6.1 The site is bound by Bonner Hill Road to the south, the A2043 Cambridge Road to the east, Hawks Road to the north and Piper Road, Somerset and Portman Roads to the west.

3.6.2 The A2043 Cambridge Road is a single carriageway, two-way road which forms a main arterial road through Norbiton towards New Malden which is located to the south east of the development site. This route has a speed limit of 30mph. The A2043 Cambridge Road provides one access point directly into the estate at the junction of St Peters Road. The junction of Cambridge Road and Hampden Road provides access on the eastern side of the estate via Vincent Road and Burritt Road. Access to the site from the west is from Somerset Road, Bonner Hill Road, Rowlls Road and Piper Road, all via Bonner Hill Road or Portman Road which lead to Hawks Road.

3.6.3 Hawks Road runs from its junction with Cambridge Road in the north west of the site to Kingston town centre in the west via Fairfield South.

3.6.4 All the roads within the vicinity of the site have a speed limit of 20mph, with the exception of Cambridge Road which has a speed limit of 30mph.

3.6.5 Double yellow lines prevent on-street parking along the A2043, Cambridge Road because it benefits from bus lanes along both the northern and southern carriageway. Double yellow lines also prevent on-street parking on Hawks Road.

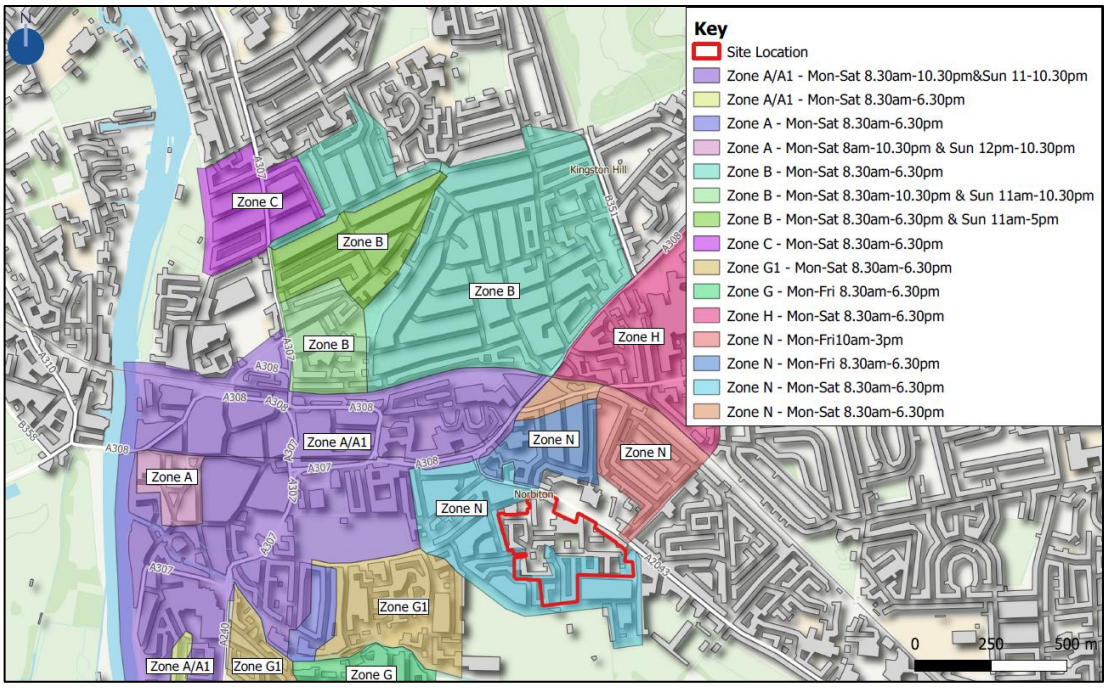
3.6.6 In terms of the highway within the estate itself there are a series of two-way residential roads which provide direct access to the residential units within the estate. The series of residential roads are all subject to a 20mph speed limit and they are all well-lit.

Controlled Parking Zones

3.6.7 The majority of the estate itself does not benefit from a Controlled Parking Zone (CPZ). There are areas within the estate where parking is controlled by either single or double yellow lines to support highway safety. Much of the estate is made up of unrestricted parking or private parking, which is not managed in any way, and is therefore effectively open to the general public.

3.6.8 **Figure 3.7** shows the extent and hours of operation for the CPZ within the local area.

Figure 3.7 CPZ Zones in the vicinity of CRE

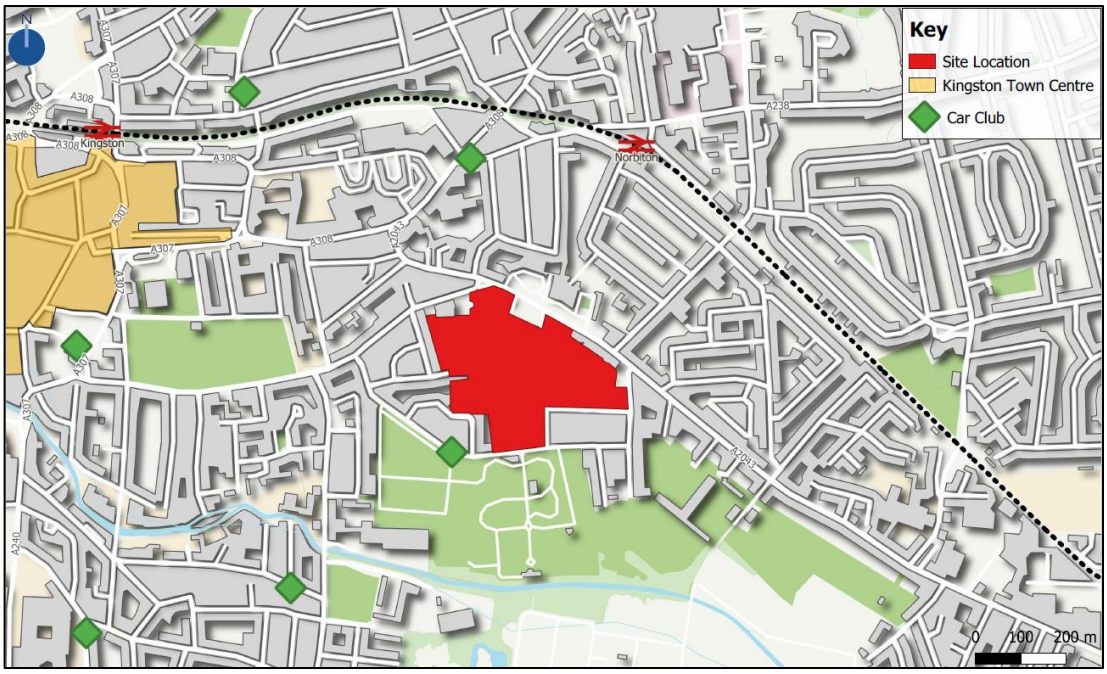


3.6.9 The figure above shows that the extent to which site is bounded by CPZ's.

3.7 Car Clubs

3.7.1 There are several car clubs located within close proximity to the development site. One of the car club spaces is located on Bonner Hill Road, which is approximately 350m from the centre of the development site, which is around a 4-minute walk. **Figure 3.8** shows the location of the existing car clubs.

Figure 3.8 Location of Existing Car Clubs



3.7.2 The car club spaces are operated by ZipCar which allows for cars and vans to be reserved at short notice via the internet/smart phone in order to hire the vehicle for the time and distance that is required. This car club scheme is available at all times, making it convenient and a sustainable travel choice at any time of the day.

3.8 Local Characteristics

Existing Modal Split

3.8.1 In order to establish local travel characteristics, the 2011 Census has been queried for method of travel to work data for the Middle Super Output Area (MSOA) Kingston Upon Thames 005, which includes this site. The results of this search are included in **Table 3.4** below.

Table 3.4 Method of Travel to work Census Information - Residents

Method of Travel to Work	Percent (%)
Underground, metro, light rail or tram	4%
Train	23%
Bus, minibus or coach	14%
Taxi	0%
Motorcycle, scooter or moped	1%
Driving a car or van	27%
Passenger in a car or van	1%
Bicycle	6%
On foot	23%
Other method of travel to work	0%
Total	**100%**

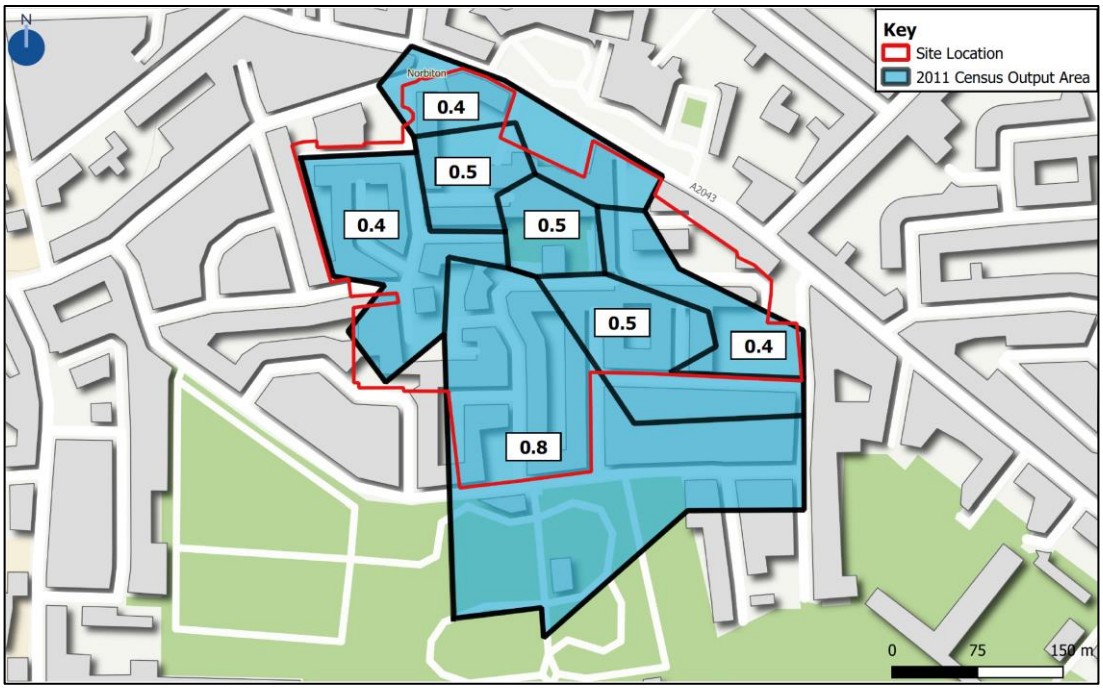
* *errors due to rounding*

3.8.2 The table above demonstrates that in the locality of the site, some 27% of people travelling to work via the use of the private car, with 41% of people travelling to work via public transport. 70% of people (within the 2011 Census Output Area in which the site sits), travel to work via sustainable transport, including by foot and by bicycle.

Existing Level of Car Ownership

3.8.3 The 2011 Census data (KS404EW - Car or van availability) has been reviewed to understand the level of car ownership within the site. **Image 3.3** shows the existing ownership levels (ratio of cars per dwelling) for each output area within the site.

Image 3.3 Existing Car Ownership Level (Ratio per dwelling)



Source: Replicated from the Nomis Website

3.8.4 The table above shows that for each output area within the site the car ownership level is between 0.4 and 0.5 vehicles per dwelling. The area to the south of the site has a ratio of 0.8 however, this includes houses which lie outside the site boundary which are likely to have a different car ownership profile.

Parking Beat Survey Results

3.8.5 A parking beat survey was undertaken on Wednesday 8th and Thursday 9th of July 2020, in accordance with the Lambeth Methodology for residential developments. The survey was split into two parts, the first surveyed an area 200m from the edge of the site, and the second surveyed the site itself.

3.8.6 A summary of the main points from the parking beat survey is provided below, with **Appendix E** providing a Technical Note outlining the results in more detail and which includes the raw data.

Offsite Parking Beat Survey Results

- Unrestricted parking (28 spaces) – 79% occupancy
- Permit holder parking (412 spaces) – 60% & 80% occupancy
- Permit holder which allow for daytime parking (155 spaces) – 50% occupancy
- Average occupancy of 47% / 48% across both days.

3.8.7 The above shows that beyond the site there exists additional on-street parking capacity.

Cambridge Road Estate Parking Beat Survey Results
• Unrestricted parking (134 spaces) – 77% and 78% occupancy • Private parking areas (304 spaces) – 88% and 87 % occupancy • Average occupancy of 56% and 57% across both days.

3.8.9 Within the site additional capacity exists for further parking. Chapters **4** and **8** outline how the proposed development will not impact upon the existing on-street parking stock outside of the application site boundary.

3.8.10 The parking beat survey identifies approximately 741 parking spaces. However, there are other parking spaces on-site which were not identified by the survey. There are a further 194 garages and driveways within the estate available for car parking. This brings the total to 935 spaces on site. This give a ratio of 1.1 spaces per dwelling for the existing site.

3.8.11 If the on-street spaces on Vincent Road and both elements of Cambridge Grove Road are included the number would increase to 1016 spaces (a ratio of 1.2 spaces per dwelling).

3.8.12 Whilst the level of parking available for the existing residents is high, there remains significant spare capacity, with the parking beat survey reflecting the 2011 census data on car ownership levels as outlined above in **Image 3.3**.

Existing Healthy Streets Indicators

3.8.13 **Table 3.5** provides a summary of the existing on-site/nearby public realm against the TfL Healthy Streets indicators to provide an overview of how the site performs within this context.

Table 3.5 Existing Healthy Streets Indicators

Indicator	Description
Choose to walk, cycle and use public transport.	CRE does not currently provide an attractive environment for walking and cycling, and the materials on the footway are failing. However public transport services in the area are of excellent quality providing an alternative to car use.
Pedestrians from all walks of life	Due to the uneven footways within the site, and vehicle crossovers disrupting the footways certain streets are not accessible and welcoming to all. The footway is quite narrow in parts. There are level differences across the estate which also make walking and cycling less attractive for residents and more difficult for pedestrians, particularly those with mobility issues or those with pushchairs for example.
Easy to cross	There are currently no formal crossings provided within the CRE estate. However, due to the low volumes of traffic, it is not difficult for people to cross the road when needed. Signalised crossings provide for trips on Cambridge Road and beyond the boundary of the site.
People feel safe	Due to the quiet nature the site, people may feel isolated while walking through it, and may choose to avoid it at night. There are existing social issues within the estate which may affect some people's perception of safety.

Things to see and do	There is very limited active frontage throughout the site, the site is not an interesting or engaging place to walk through or spend time in.
Places to stop and rest	There are limited places to stop and rest throughout the site. While there are some informal opportunities, these are not in places that are an attractive option.
People feel relaxed	Due to the low traffic on the roads, it is relatively quiet and so provides a relaxing environment to walk through in that respect. Parts of the footway within the site however do not feel well maintained and do not provide smooth and level surfaces for people walking.
Noise	The site benefits from being relatively quiet due to low traffic levels.
Clean Air	The site is well located for making walking, cycling and public transport trips quicker or more convenient than driving (for short trips), with parts of the site fronting Cambridge Rd falling just above the legal limit value of 40ug/m3 for NO2 concentration.
Shade and Shelter	While there are some limited options for people to find shade and shelter, overall, the site does not provide many options in case of need.

3.8.14 While the CRE site performs adequately in some of the Healthy Streets indicators, there is scope for improvement, particularly in the 'People Feel Safe', 'Things to See and Do', 'Pedestrians From All Walks of Life', and 'Places to Stop and Rest' indicators which the proposed development has sought to address.

3.9 Traffic Surveys

3.9.1 Automatic Traffic Counts (ATCs) were undertaken between the 16/07/19 and the 22/07/19. Some sites had to be re-surveyed (due to unreliable data and equipment being tampered with) and these occurred between the 09/09/19 and the 15/09/19. **Table 3.6** summarises the existing level of vehicular movement (all vehicles) into and out of the site at various locations.

Table 3.6 Weekday Average Trip Generation - ATC Data at Site Entrances

ATC Location	AM Peak			PM Peak			24Hr		
	In	Out	Total	In	Out	Total	In	Out	Total
Somerset Road	42	45	87	36	41	77	567	581	1148
St Peters Road	11	13	24	12	9	21	163	188	351
Burritt Road	24	36	60	33	30	62	460	449	910
Vincent Road	10	27	37	18	15	33	215	256	471
Cambridge Grove Road	4	1	4	5	2	7	78	41	119
Willingham Way	9	25	34	22	15	37	249	249	498
Total	**99**	**147**	**245**	**125**	**112**	**237**	**1732**	**1764**	**3497**

3.9.2 The above table shows that the level of vehicular activity in the AM and PM peak is approximately 245 trips in the AM peak and 237 in the PM peak with 3497 across the day.

Site Trip Distribution

3.9.3 **Table 3.7** summarises the sites vehicular trip distribution from the ATC's across the existing site.

Table 3.7 Existing Site Trip Distribution

ATC Location	Trip Distribution		
	AM Peak	PM Peak	Daily
Somerset Road	35%	32%	34%
St Peters Road	10%	9%	10%
Burritt Road	24%	26%	26%
Vincent Road	15%	14%	14%
Cambridge Grove Road	2%	3%	3%
Willingham Way	14%	16%	15%
Total	**100%**	**100%**	**100%**

3.9.4 The table above shows that Somerset Road has 34% of the daily estate traffic with Burritt Road accommodating 26%. The distribution from the site is more broadly split at 49% onto Hawks Road and 51% onto Cambridge Road.

3.10 Existing Junction Performance

3.10.1 Neither TfL nor RBK requested the modelling of any off-site junctions at the pre-application discussion stage.

3.11 Summary

3.11.1 The site is in a suitable location for residential use, with an existing PTAL of between 0 to 5. From the northern part of the site access is good to local amenities including food retail, sports facilities and also medical facilities including doctors, dentists and pharmacies. From the southern part of the site access to public transport is more difficult due to the walk distances involved (as a result of the impermeable design of the estate) and because of the level changes in part of the site.

3.11.2 The site benefits from being located near to an established bus network, which provides access to central Kingston as well as Kingston Hospital and Tooting. Kingston Town Centre is also within walking distance from the site, as is Kingston and Norbiton Railway Stations. Access to the stations provides residents with connections to the rest of the UK.

3.11.3 In summary, the site benefits from being located within an accessible location, both in terms of proximity to alternative modes of travel and essential social infrastructure, including employment, retail and education land uses. Residents of the site will not therefore be reliant on the car to travel to/from the site.

4. Development Proposals

4.1 Phasing of the Development

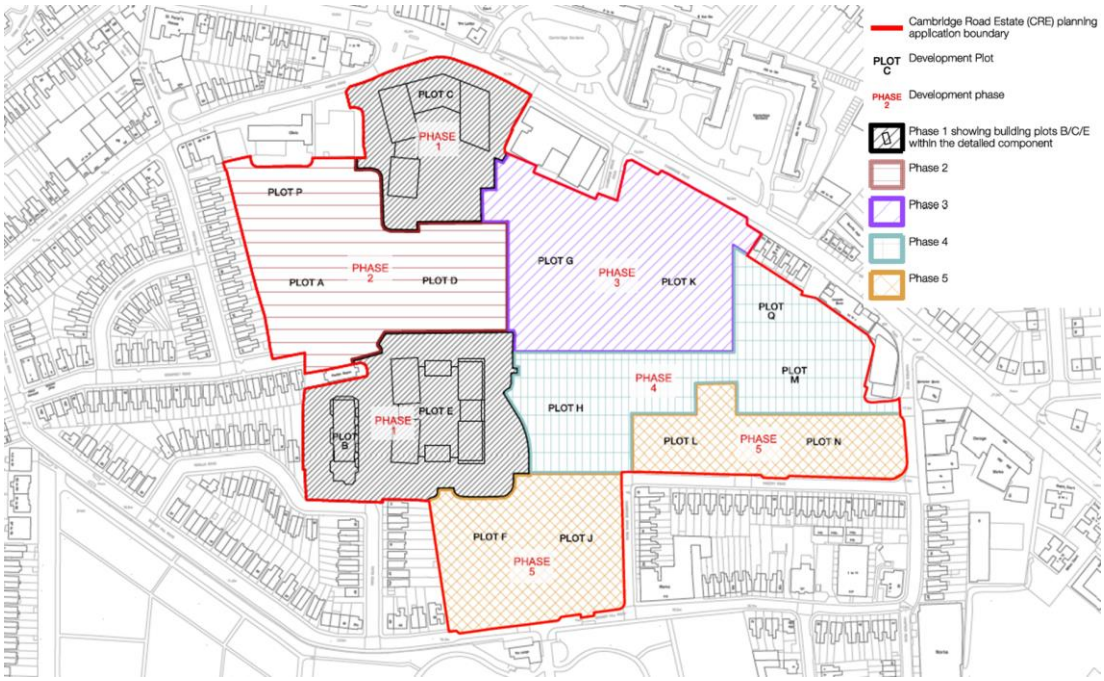
4.1.1 **Table 4.1** shows the development timescales for each of the 5 phases. Phases 2-5 are subject to detailed consents at Reserved Matters stage.

Table 4.1 Masterplan Phasing Timetable

Phase	Anticipated Construction Start	Anticipated Construction Complete
1	Jun-21	May-25
2	Sep-23	Aug-27
3	May-25	Sep-29
4	Oct-27	Dec-30
5	Apr-29	Apr-33

4.1.2 The extent and location of each phase is shown in **Image 4.1**.

Image 4.1 Phasing Plan



Source: Extract from Patel Taylor Drawing 503-PTA-MP-XX-DR-A-5407 P03

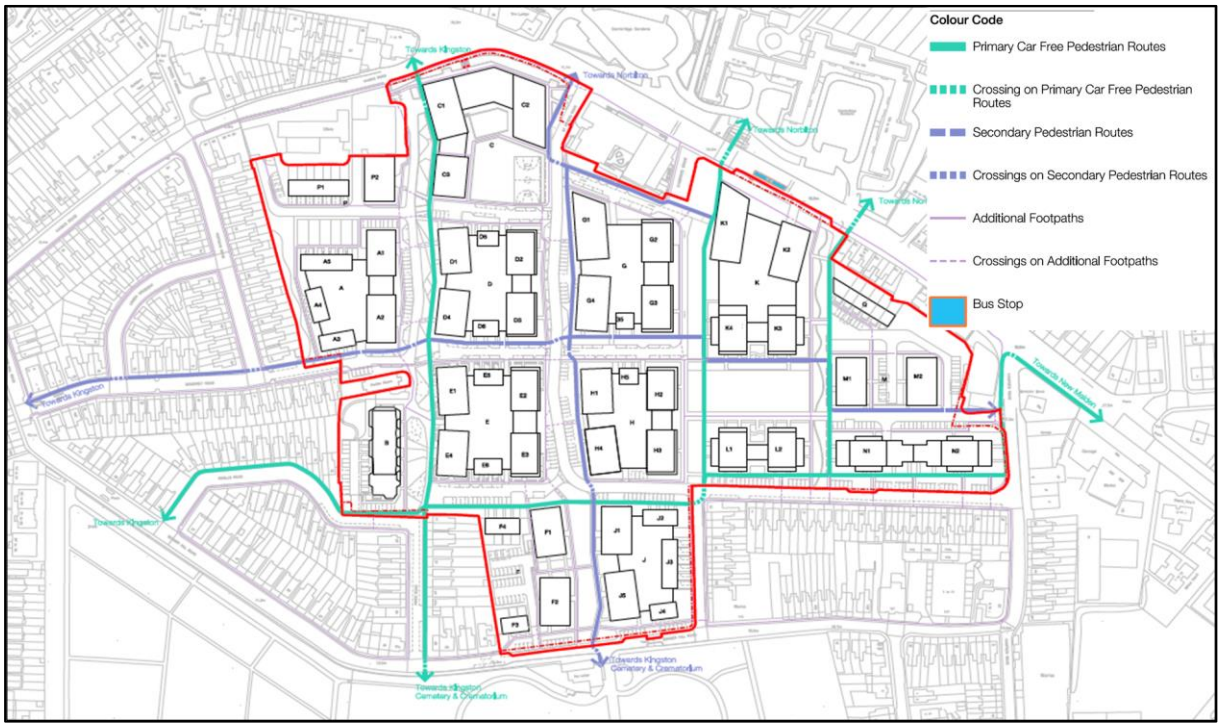
4.2 Proposed Site Access

4.2.1 The primary pedestrian routes throughout the masterplan are summarised below.

Pedestrian Access

4.2.2 The primary pedestrian routes within the site and how they connect to the surrounding network is shown in **Image 4.2**.

Image 4.2 Primary Pedestrian Routes



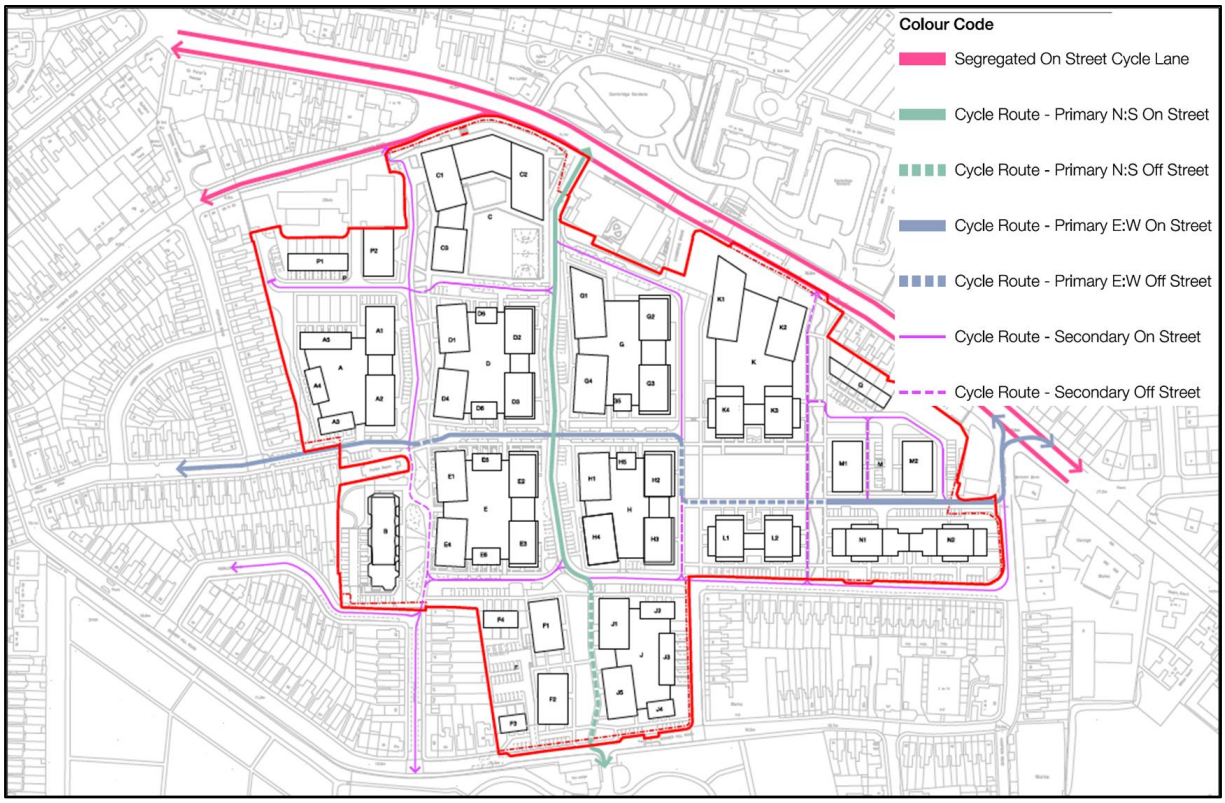
Source: Extract from Patel Taylor Drawing (503-PTA-MP-00-DR-A-1235 P01

4.2.3 As the image above shows the pedestrian routes throughout the site are based on north/south and east/west grid system which provides direct linkages throughout the estate and excellent connections to the surrounding network.

Cycle Access

4.2.4 **Image 4.2** shows the primary cycle routes within the site and how they connect to the surrounding network.

Image 4.3 Primary Cycle Routes



Source: Extract from Patel Taylor Drawing (503-PTA-MP-00-DR-A-1231 P01

4.2.5 As the image above shows the cycle routes throughout the site, are based on north/south and east/west grid system which provides direct linkages throughout the estate and excellent connections to the surrounding network. These routes allow for cycling whether for leisure, commuting, or servicing & deliveries.

Vehicular Access

4.2.6 The majority of the existing vehicle access will be retained across the site, with some being amended, others closed and the creation of new vehicular accesses as well. **Table 4.2** summarises what is changing under the proposed masterplan.

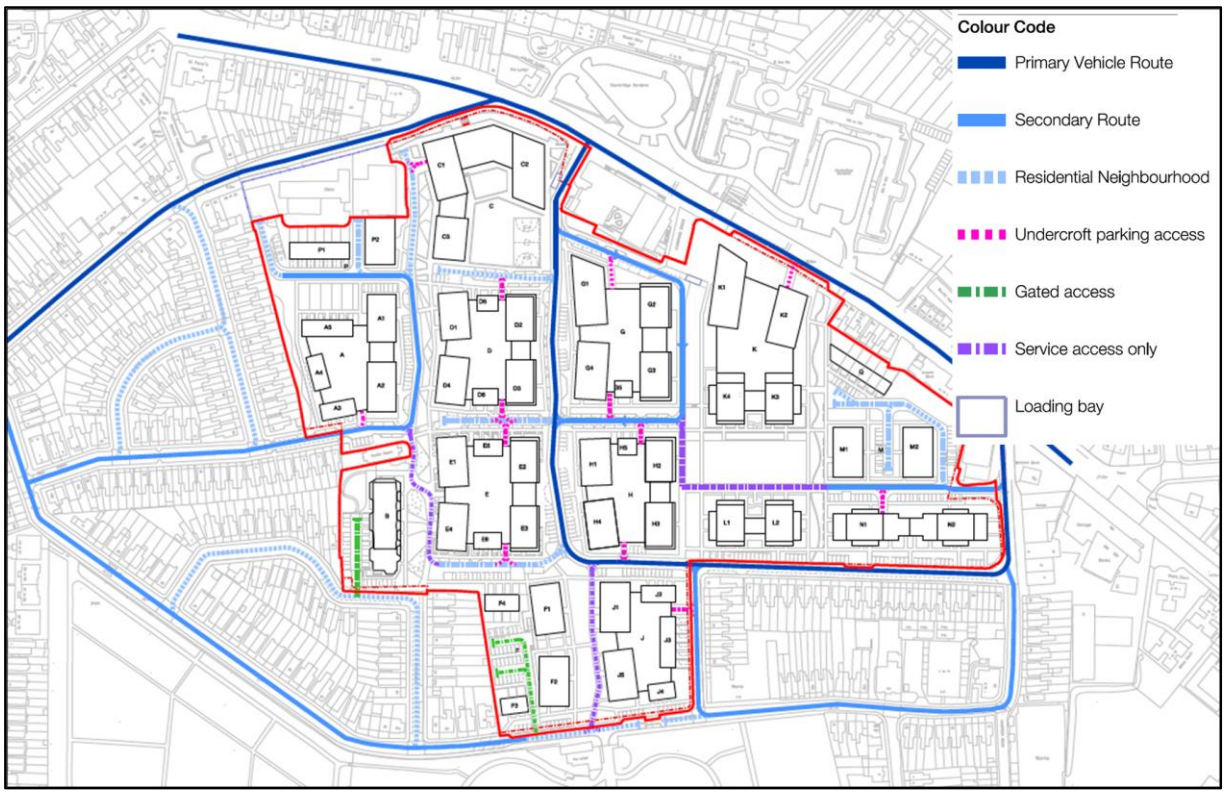
Table 4.2 Changes to Vehicular Accesses

Vehicular Access Locations	Retained / Amended	New	Closed
St Peters Road	✓		
Cambridge Grove Road (jct with Cambridge Road)	✓		
Hampden Road	✓		
Burritt Road	✓		
Stapleford Close			✓
Cambridge Grove Road (to the north of its junction with Vincent Road)			✓

Willingham Way			
Rowlls Road / Piper Road		✓	✓
Somerset Road	✓	✓	
Bonner Hill Road		✓	
Creation of new T-Junction with Vincent Rd / Cambridge Grove Road		✓	

4.2.7 **Image 4.4** shows the vehicular access routes throughout the masterplan and connections within the wider road network.

Image 4.4 Primary and Secondary Vehicular Access Routes



Source: Extract from Patel Taylor Drawing (503-PTA-MP-00-DR-A-1225 P03

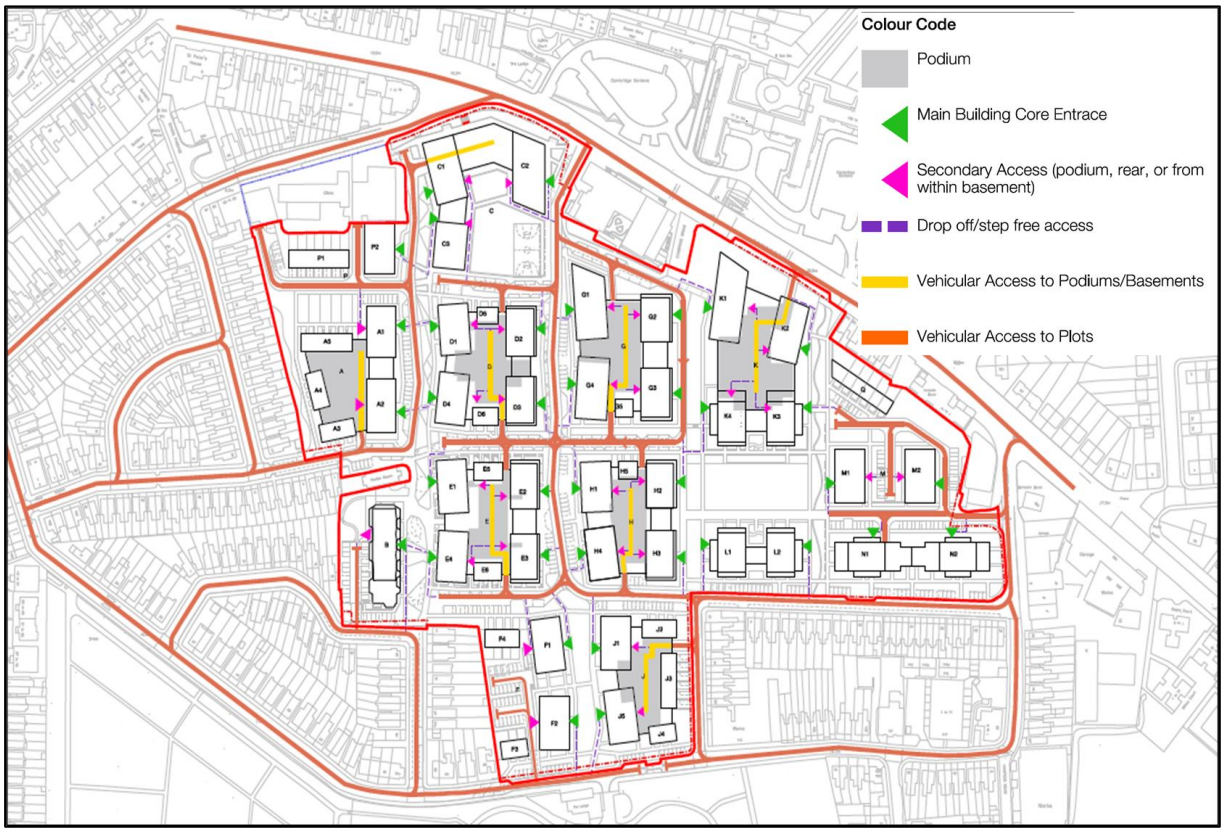
4.2.8 The image above shows the vehicular access points and routes throughout the site. Crucially the plan demonstrates that the masterplan does not allow for rat-running through the estate between Cambridge Road and Hawks Road which keep traffic levels low through the existing neighbourhood roads.

4.2.9 The final junction design of St Peters Road and Hampden Road with Cambridge Road will be determined at the RMA stage but the intention is that they will be as per RBK's Go Cycle design, St Peters Road would been widened to 6.5m in width to accommodate a potential bus route at the request of TfL. The masterplan has been designed to allow for emergency vehicles to access all areas and routes within the site.

4.2.10 It should be noted that, with the exception of Phase 1 the exact design/nature/layout of the vehicular routes throughout the estate is not known, and these will be determined through the respective RMAs.

4.2.11 Car parking will be provided throughout the site, on-street, in parking courts and within basement and podium parking within the curtilage of individual building plots. **Image 4.5** shows the location of each vehicular access for every plot across the masterplan.

Image 4.5 Vehicular Access to each Plot



Source: Extract from Patel Taylor Drawing (503-PTA-MP-00-DR-A-1230 P03

4.2.12 Vehicular access to each plot is demonstrated in the image above, with secondary access achievable from the podium / basement car parks. Pedestrian access points for each Plot are also shown.

4.2.13 It should be noted that, with the exception of Phase 1 any new/amended vehicular access or closure of existing accesses will be a matter for the RMA.

4.3 Pedestrian Level of Comfort Assessment

4.3.1 A Pedestrian Comfort Assessment has been undertaken in accordance with TfL's Pedestrian Comfort Guidance for London (2019) document. Using the Pedestrian Comfort Level Guidance Spreadsheet, eight proposed footways within the masterplan were selected for assessment. At this stage no street furniture has been assumed.

4.3.2 Eight of the key footway locations within the masterplan were assessed using the AM peak hour pedestrian flows (including: pedestrians, train / underground users, and bus users). The site-wide total number of expected pedestrians generated by the site in the AM peak hour has been used to assess each of the eight locations, rather than the number of pedestrians for each block. This ensures that the assessment is overly robust.

Image 4.6 Pedestrian Level of Comfort Analysis

4.3.3 As the image above shows, in each case the assessment returned a score of A, A- or A+. This is a result of the ample footway widths provided within the masterplan, that will be embedded into the outline consent. Further details and the spreadsheet outputs can be found in a Technical Note included in **Appendix F** .

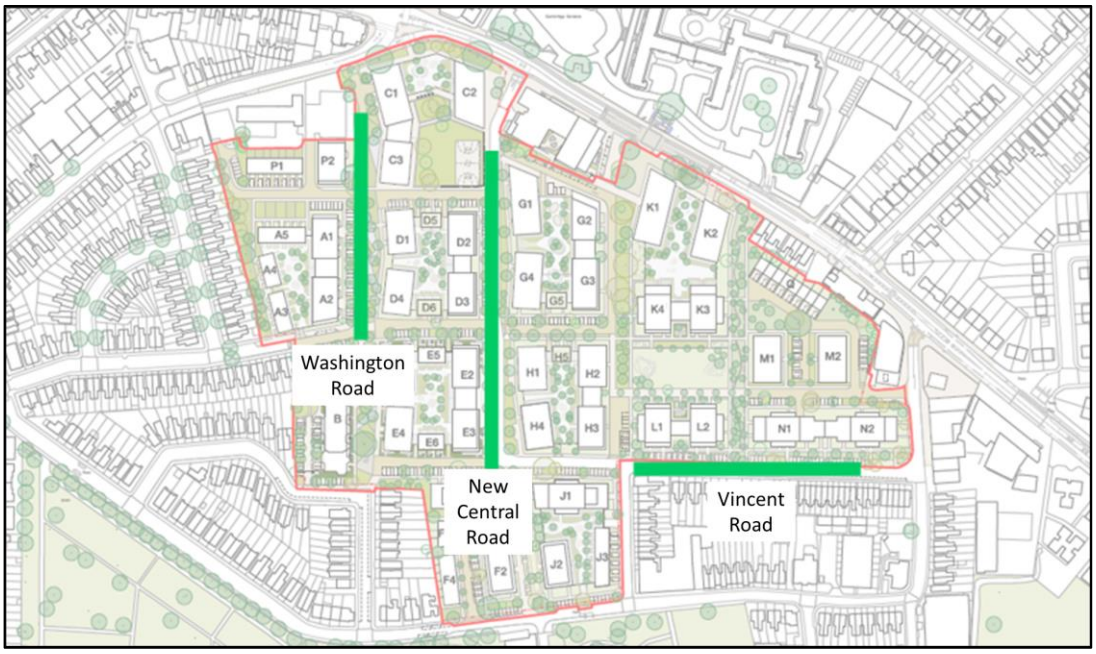
4.4 Healthy Street Assessment

4.4.1 Policy T2 Healthy Streets of The Draft London Plan states that development proposals should demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators, reduce the dominance of vehicles on London's Streets and provide permeable walking and cycling connections.

4.4.2 Whilst the healthy streets assessment holds no formal status in guidance and decision making it is a useful tool in decision making which helps inform people on how a project fits with in with TfL's Healthy Streets Policy.

4.4.3 **Image 4.7** shows three locations within the masterplan where a Healthy Streets Assessment has been undertaken to quantify the change in design of the streets between the existing and proposed

Image 4.7 Location of Healthy Street Assessment



4.4.4 Two of the streets assessed above are existing streets, Washington Road and Vincent Road. In addition, the new Central Road has been assessed. **Table 4.3** summarises the results of the Healthy Street assessment for those three locations.

Table 4.3 Results of Healthy Street Assessment

Criteria	Vincent Road		Washington Road		New Central Road
	Existing Layout	Proposed Layout	Existing Layout	Proposed Layout	Proposed Layout
Pedestrians from all walks of life	64	85	65	87	87
Easy to cross	83	90	90	97	97
Shade and shelter	50	83	50	100	100
Places to stop and rest	47	73	40	80	80
Not too noisy	67	80	80	100	100
People choose to walk, cycle and use public	64	85	65	87	87
People feel safe	62	83	63	86	86
Things to see and do	42	83	42	92	92
People feel relaxed	61	83	63	86	86
Clean Air	58	75	75	100	100
Overall Healthy Streets Check score	**63**	**83**	**65**	**88**	**88**
Number of 'zero' scores	0	0	0	0	0

4.4.5 The table above shows that the proposed layout results in a high score for all three of the assessed streets. Whilst the estate currently scores quite well in certain aspects, the new design increases the scores across the 'People Feel Safe', 'Things to See and Do', 'Pedestrians

from All Walks of Life', and 'Places to Stop and Rest' indicators. This reflects the design principles developed by the design team which looks to significantly improve the overall balance of the streetscape. As demonstrated in the table above, in terms of Healthy Streets the proposals would result in significant improvements. Further details can be found in a Technical Note included in **Appendix F**

4.5 Proposed Cycle Parking

4.5.1 Cycle parking for the development will be provided in accordance with the Draft London Plan standards, with the proposed parking provision for Phase 1 and the Masterplan shown in **Table 4.4**.

Table 4.4 Proposed Cycle Parking Provision

Land Use	Phase 1		Masterplan	
	Long Stay	Short Stay	Long Stay	Short Stay
Residential (C3)	821	14	3902	56
Office (B1)	4	1	4	1
Flexible Retail / Commercial	4	20	8	42
Community Use		13		13
Additional cycle parking spaces		10		
Total	**829**	**58**	**3914**	**112**

4.5.2 The table above shows that additional visitor cycle spaces are proposed above the Draft London Plan standard.

4.5.3 Details of the type, and location of the cycle parking will be provided under each RMA. The types of cycle storage will include semi-vertical racks, hydraulic stacking racks and standard hoops. In line with TfL guidance 5% of spaces will provide for larger cycles, such as cargo bikes, family bikes for child transport and accessible bikes e.g. hand cycles for wheelchair users.

4.5.4 External cycle racks will be 'Sheffield' type stands to maximise the ease for users as identified in the London Cycle Design Standards (LCDS).

4.6 Proposed Car Parking

4.6.1 The development proposes the removal of all the existing car parking spaces on site and reprovision on a plot by plot basis. The applicant proposes a total of 848 car parking spaces within the site, which is a ratio of 0.4 spaces per dwelling. This complies with both TfL and RBK's comments during the pre-application discussions, and also complies with Parking Standards provided in Table 10.3 of the Draft London Plan. Car parking will be provided both on-street, on-plot surface parking and in podium/basement car parks.

4.6.2 **Table 4.5** shows the illustrative number of parking spaces per plot and the corresponding ratio.

Table 4.5 Parking Provision for Each Plot

Plot	Dwellings	No. Parking Spaces	Ratio
A	118	49	0.4
B	44	18	0.4
C	202	40	0.2
D	222	58	0.3
E	206	68	0.3
F	94	46	0.5
G	285	98	0.3
H	228	93	0.4
J	92	40	0.4
K	279	180	0.6
L	87	18	0.2
M	127	38	0.3
N	125	76	0.6
P	55	20	0.4
Q	6	6	1.0
Total	**2170**	**848**	**0.4**

4.6.3 As shown above, the parking provision across individual plots will vary, this is a result of site specific design constraints within that plot. However, overall, the provision on a site wide basis will be 0.4 spaces per unit. It should be noted that with the exception of Phase 1 the number of spaces provided, and the design and layout of car parking will be confirmed at the subsequent RMA stage.

Disabled Car Parking

4.6.4 To accommodate the needs of Blue Badge holders the applicant proposes providing 3% of all spaces as accessible parking bays. It is intended that each accessible space is located as close as possible to building entrances i.e. the most convenient location for Blue Badge holders either living, working or visiting the proposed buildings.

4.6.5 As the application is in outline the location and design the parking spaces will be determined at the appropriate RMA stage.

4.6.6 In line with the Draft London Plan, it is intended that each RMA will demonstrate that an additional 7% of spaces has the potential to be provided throughout the masterplan should they be required. This will likely be achieved by converting landscaped areas into accessible parking spaces.

Electric Vehicle Charging Points

4.6.7 In accordance with the Draft London Plan, 20% of all spaces will be active Electric Vehicle Charing Points (EVCP), and 80% of all spaces will have passive EVCP, thus future proofing the expected switch to electric cars.

Management of Car Parking Spaces

4.6.8 Whilst the extent of adoption will be determined at a later stage it is intended that all roads will be constructed to adoptable standards. It is proposed that RBK implement a new CPZ within the site boundary. This will result in the following benefits for management of car parking provision:

- The removal of traffic which currently uses the estate for daytime parking. Further detail is provided on this in Chapter **5.9**.
- Overspill parking will not occur into any other existing CPZ, because returning and new residents will not be allowed to purchase a permit for any other zone except the new zone created for the site.

4.6.9 RBK will manage the allocation of permits as per their policies and procedures.

4.6.10 For spaces located within basement/undercroft or private parking areas, these will be managed by the landowner. A right to park will operate whereby an applicant can purchase the right to use a parking space.

4.6.11 Further details on the management of parking spaces is provided in the Car Park Management Plan which accompanies this TA.

Car Club Spaces

4.6.12 The development will also be supported by additional car club spaces to allow residents access to a car without the need of owning one. They play an active part in reducing car ownership and encouraging active travel.

4.6.13 The applicant has been in contact with Zipcar who have been operating within RBK since 2006, and operate the existing car club spaces nearby as outlined in section **3.7**. They have confirmed that they are willing to provide 2 zip cars in Phase 1 (2021-2025). Further vehicles will be provided throughout the regeneration of the estate and this will be monitored and discussed with Zipcar as each phase is developed.

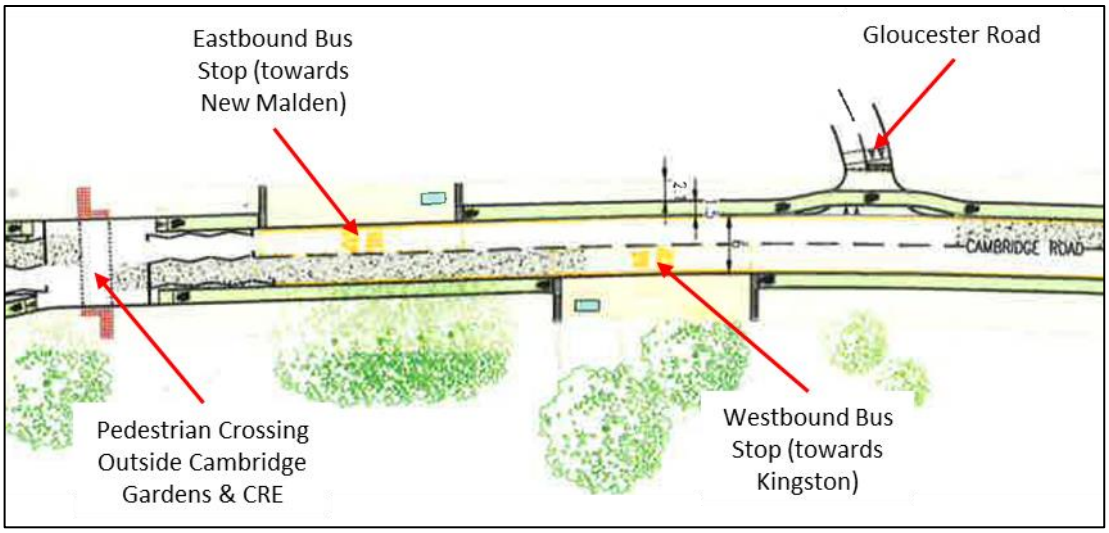
4.6.14 In addition, the applicant is willing to fund a 3-year membership for each new home. Zipcar will also give each home £50+VAT of driving credit.

4.7 Impact of Masterplan on Go Cycle Scheme

Cambridge Road Bus Stops

4.7.1 The proposed bus stop location under the Go Cycle Eastern Route proposals are located on Cambridge Road, immediately to the east of the signalised crossing outside Cambridge Gardens. The bus stops are orientated as such that the buses face each other when both stops are utilised. **Image 4.8** shows the RBK proposal.

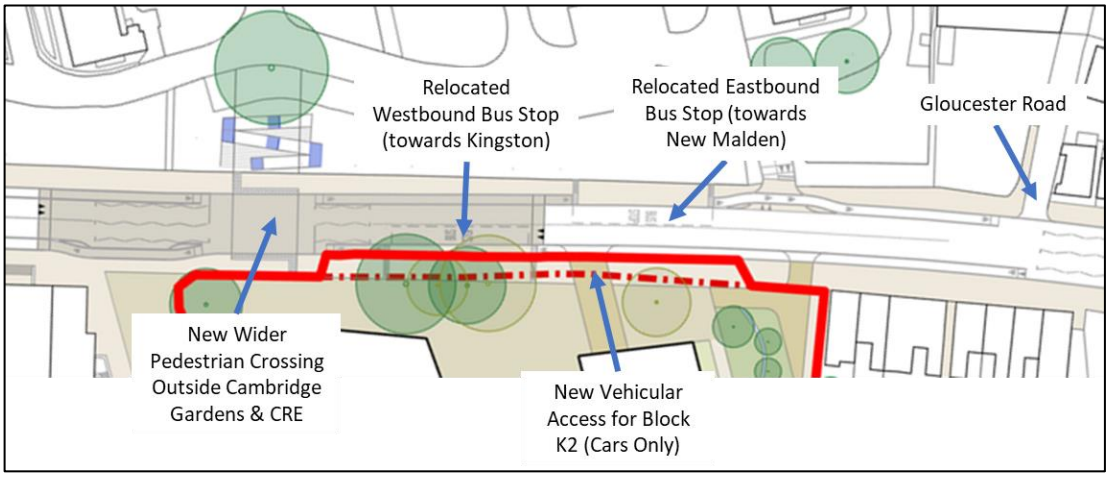
Image 4.8 RBK – Bus Stop Location on Cambridge Road



Source: Extract from RBK Go Cycle Eastern Route Drawing K-NM-70014694-GA-05_Consult Rev D

4.7.2 Under the proposed development the location of the access for Block K2 has been revised to provide a better public realm. As a result, the vehicular access to K2 (proposed as a simple vehicular crossover (not a bellmouth) to provide greater priority to pedestrians and cyclists) has been relocated further west, resulting in the relocation of the bus stops on Cambridge Road. **Image 4.9** shows the relocated vehicular access for Block K and the repositioned Bus Stops on Cambridge Road.

Image 4.9 Proposed Amended Bus Stop Location



Source: Extract form 503-PTA-MP-RF-DR-A-1201_S2-P24 P24

4.7.3 In order to accommodate the new vehicular access, the proposed bus stops have been switched, resulting in the tails of the buses being closest when both stops are occupied which is in accordance with TfL's bus stop guidelines. Otherwise the design of Cambridge Road will remain the same as that proposed under the Go Cycle Scheme.

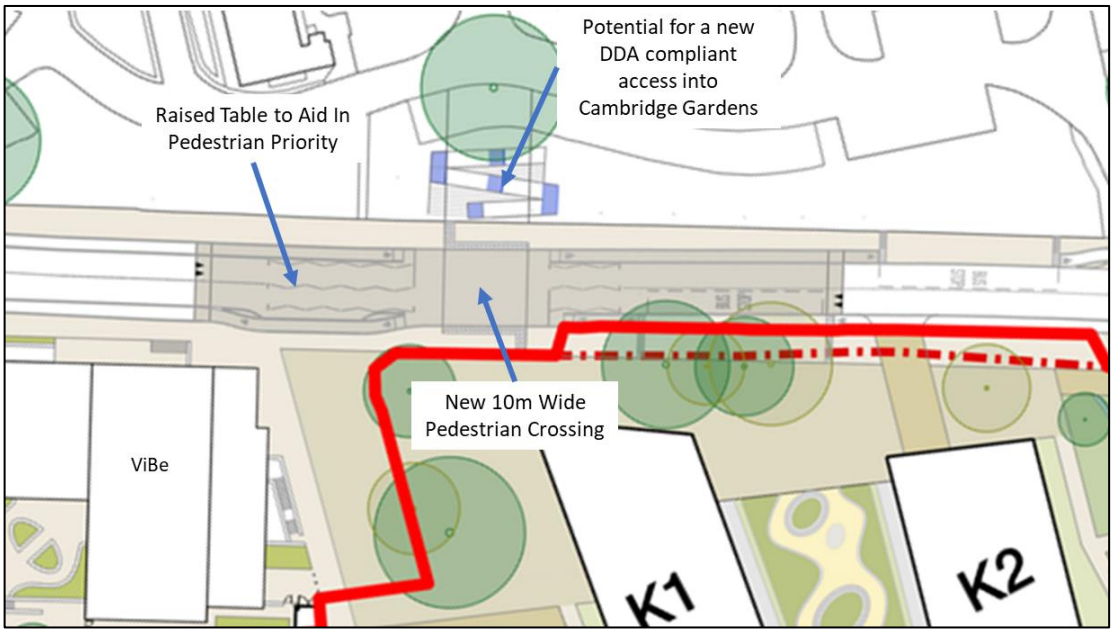
4.7.4 The above changes to the Go Cycle scheme along Cambridge Road were outlined in the second Pre-Application technical note. RBK raised no in-principle concerns but requested

detailed plans. However as this would come under the outline element of the application it is suggested that these items are considered in more detail at the appropriate RMA stage with the offsite highway works to be agreed as part of the S106 legal agreement.

Pedestrian Crossing

4.7.5 The proposed development seeks to create better connections to the north including Norbiton station. The proposals include a 10m wide crossing, with a raised table outside Plots K1 and K2 and Cambridge Gardens (just to the west of the bus stops) as indicated in **Image 4.10**.

Image 4.10 Proposed Cambridge Road Crossing



Source: Extract form 503-PTA-MP-RF-DR-A-1201_S2-P24 P24

4.7.6 The raised table is proposed to be constructed with different materials (not standard 'blacktop') in order to enhance the public realm and assist in reducing vehicle speeds. As above it is suggested that the crossing is considered in more detail at the appropriate RMA stage with the offsite highway works to be agreed as part of the S106 legal agreement.

4.8 Proposed Public Realm & Local Highway Amendments

4.8.1 To facilitate access to the proposed development, a number of significant improvements to the public realm in and around the immediate vicinity of the site are proposed. These will include:

- The creation of new public spaces that will allow people to spend time, sit and relax.
- New pedestrian routes linking throughout the masterplan increasing pedestrian and cycle permeability.
- A significant increase in the number of active frontages, on all new internal streets increasing the natural surveillance of public space within the vicinity of the site.

- New streets and footways with carefully selected and designed materials to align with the new public space.
- The provision of short stay cycle parking evenly distributed throughout the site to encourage cycling.

4.8.2 **Table 4.6** provides a summary of the proposed on-site/nearby public realm against the TfL Healthy Streets indicators to provide an overview of how the site will perform within this context.

Table 4.6 Proposed Development Healthy Street Indicators

Indicator	Description
Choose to walk, cycle and use public transport	The new footway layout thought the site, as well as the newly introduced public realm will provide an attractive environment for walking and cycling. The new short and long stay cycle parking will also ensure people cycling can easily stop and secure cycles at convenient locations for accessing shops and services.
Pedestrians from all walks of life	The newly introduced public realm will be an accessible and welcoming place for all, as it will provide smooth and level pavement. The new wide footways within the site will ensure that it will support a range of activities.
Easy to cross	Dropped kerbs and tactile paving along with good levels of visibility so that people crossing can see oncoming traffic and be seen provide safer routes for pedestrians.
People feel safe	The new public realm areas will ensure that the site will have a lot of active frontage overlooking the pavement, and people will regularly be going in and out of buildings and passing by. This will ensure people feel safe in the vicinity of the site.
Things to see and do	The introduction of office and retail units at the ground floor level will make the site an interesting and engaging place to walk and spend time. There are also lots of opportunities to use plantings and lighting to make the site more interesting and engaging.
Places to stop and rest	The new public realm areas will provide numerous opportunities for people to sit down and rest.
People feel relaxed	The proposed development will make the site feel well maintained, with high quality paving throughout and widened footways ensuring people feel relaxed. High quality plantings will also support in creating a peaceful environment.
Not too noisy	The noise levels are expected to continue to be low due to the low volume of vehicles.
Clean Air	A Delivery & Servicing Plan (DSP) has been produced for the site, which will require the estate management team to encourage vehicles to switch off their engines immediately when stationary, as well as encouraging deliveries to be consolidated and vehicles to be backloaded, reducing the overall number of vehicles attending the site. Additional planting will also benefit air quality.
Shade and Shelter	The proposed tree planting will provide a canopy providing shelter in the case of rain or sun.

4.8.3 The proposed development will significantly improve on all of the Healthy Streets indicators, in particular for ‘People feel safe’, ‘things to see and do’, ‘pedestrians from all walks of life’, and ‘places to stop and rest’.

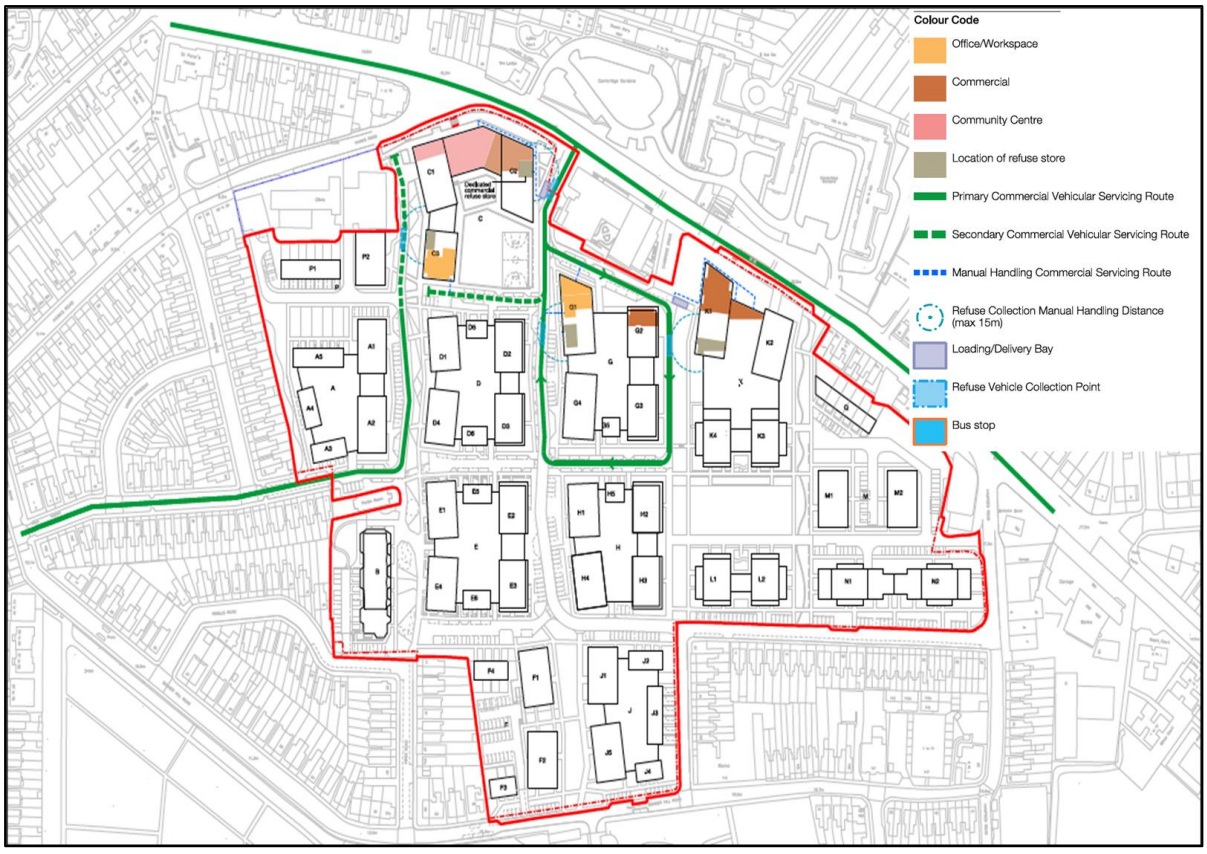
4.9 Proposed Servicing Strategy

4.9.1 The development is supported by a comprehensive Delivery and Servicing Plan (DSP) which accompanies this TA. The DSP contains the detail of how the site will be serviced for all land uses, with a summary provided below.

Commercial Servicing

4.9.2 **Image 4.11** shows the main routes for commercial servicing.

Image 4.11 Commercial Servicing and Delivery Routes



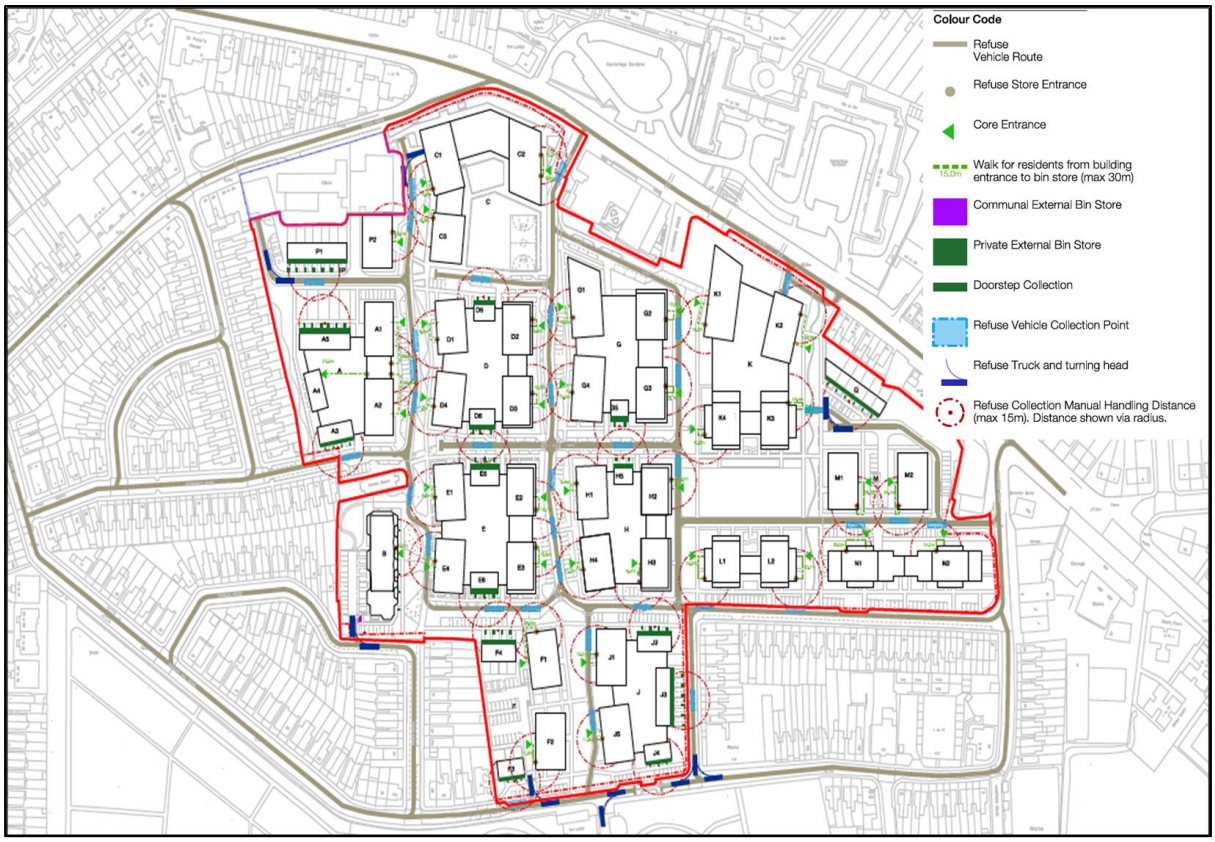
Source: Extract from Patel Taylor Drawing 503-PTA-MP-00-DR-A-1227 P04

4.9.3 Three loading bays are proposed within the site. All bays can accommodate a 12m rigid vehicle. Vehicle tracking will be provided for each RMA demonstrating that each phase can accommodate refuse vehicles.

Residential Refuse Collection

4.9.4 Residential refuse collection will occur on-street with **Image 4.12** showing the routes, stopping locations and the proximity to the bin store.

Image 4.12 Residential Refuse Collection Routes



Source: Extract from Patel Taylor Drawing 503-PTA-MP-00-DR-A-1228 P03

4.9.5 The above plan shows the location of communal and private bin stores, the refuse vehicle collection point and the proposed turning head.

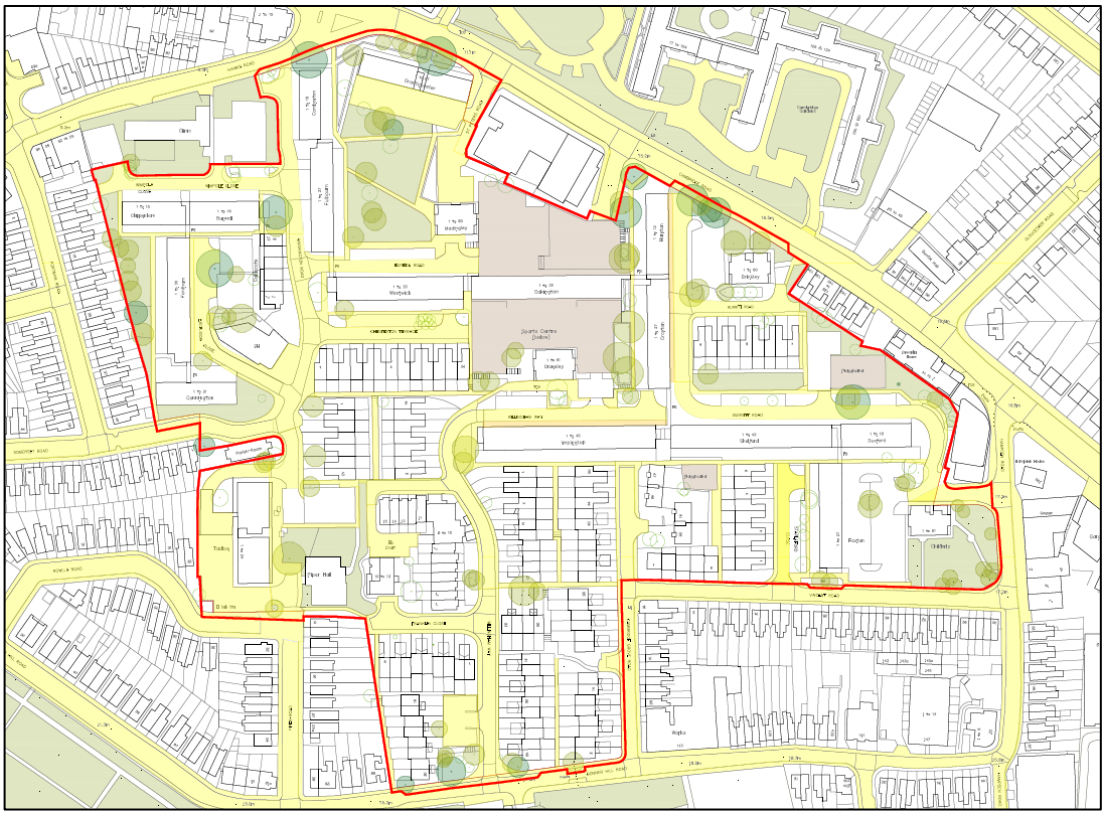
4.9.6 Vehicle tracking will be provided for each RMA demonstrating that each phase can accommodate refuse vehicles.

4.10 Stopping Up of Public Highway

4.10.1 The regeneration of the CRE will require the stopping up of existing public highway in order to deliver the proposed development.

4.10.2 **Image 4.13** is an extract of **Drawing 19157-MA-XX-XX-DR-C-0050** (found in full at the end of this report) which shows the extent of the existing public highway within the site.

Image 4.13 Extent of Existing Public Highway



Source: Extent of Public Highway taken from RBK's website

4.10.3 In order to understand what areas, need to be stopped up the existing public highway has been overlaid onto the illustrative masterplan. The areas proposed to be stopped up are shown in **Image 4.14** which is an extract of **Drawing 19157-MA-XX-XX-DR-C-0051** (found in full at the end of this report).

Image 4.14 Extent of Public Highway to be Stopped Up

4.10.4 The image above shows that all the public highway within the estate is required to be stopped up. It is intended that the stopping up will be undertaken using S247 of the Town and Country Planning Act 1990.

Re-provision of Public Highway

4.10.5 It is anticipated that new roads and footways within the site will be offered for adoption to RBK as the site is developed. It is expected that any adoptions will take place under S38 of the Highways Act 1980 and will be agreed with RBK at the appropriate time during / following approval of each RMA. The applicant would welcome further discussion regarding the coordination of Stopping Up and Adoption works at an appropriate time.

4.10.6 The stopping up and re-provision of public highway has been discussed with RBK within the initial meetings who were supportive of the principles in order to facilitate the estates regeneration.

4.11 Phase 1 Detailed Elements

Development Proposals

4.11.1 Phase 1 contains many of the existing non-residential uses within the site which include: The Bull and Bush Hotel, Piper Community Hall, Tadlow House (Housing Management) CRERA Office, CRERST Office, and the Surbiton Rifle Club.

4.11.2 **Table 4.7** shows the existing and proposed development schedules.

Table 4.7 Phase 1 Development Schedule (Existing and Proposed)

Land Use	Existing	Phase 1	Difference (+/-)
Residential (C3)	129 Units	452 Units	+ 323 Units
Flexible Office (E)	N/A	290 sqm	290 sqm
Flexible Retail / Commercial (E)	N/A	395 sqm	395 sqm
Community (F1/F2)	290 sqm	1250 sqm	960 sqm
Total Non-Residential Uses	1948 sqm	1935 sqm	- 13 sqm

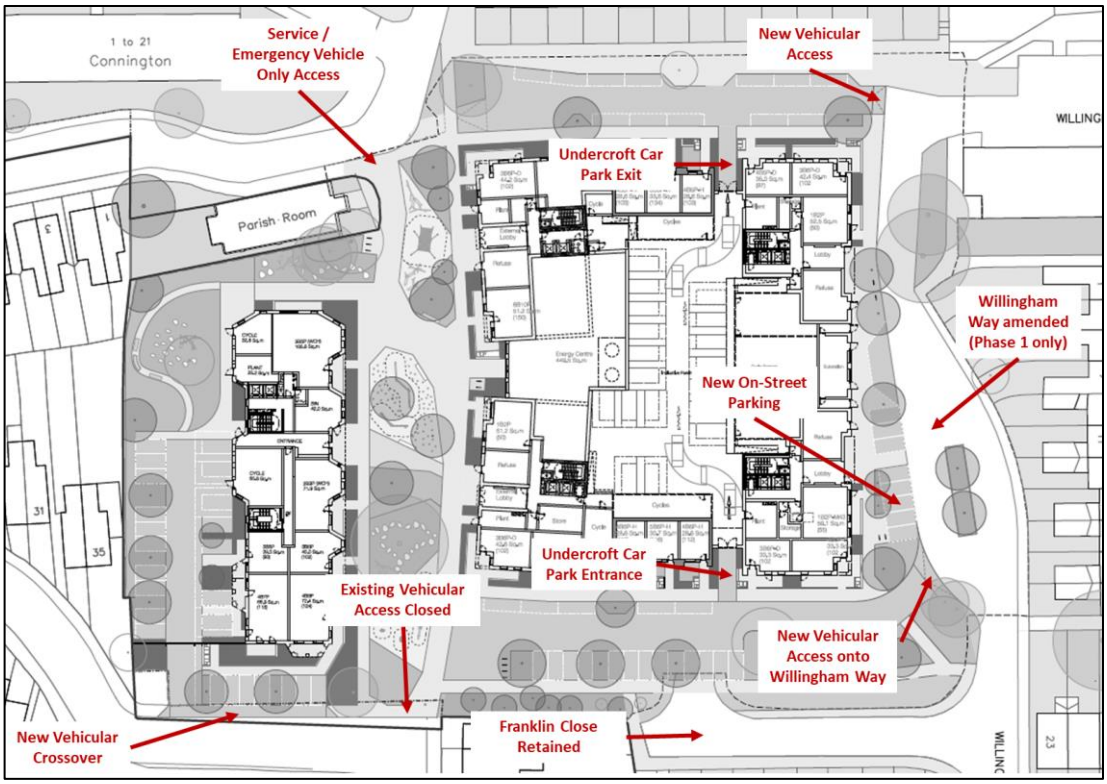
Blocks B and E Access and Parking

4.11.3 Blocks B and E will benefit from new pedestrian infrastructure in and around the blocks providing access to existing footways on Washington Road, Rowlls Road and Willingham Way. A new pedestrian route running north / south linking Washington Road and Rowlls Road is also proposed. This will also provide emergency vehicle access as well as access for service / refuse vehicles only.

4.11.4 Vehicular access to Block B will be served from Rowlls Road, via a new access and parking directly from the road. Block E will be served from Willingham Way. A new vehicular access is proposed from Willingham Way which will serve on-street parking to the south of Block E and the entrance to the undercroft car park. The undercroft parking exits to the north of Block E which becomes a new street with on-street parking served from a new access onto Willingham Way.

4.11.5 **Image 4.15** shows the site layout for Blocks B and E.

Image 4.15 Block B and E Site Layout



Source: Extract from Patel Taylor Drawing 503-PTA-PH1-00-DR-LA-4301 P01

4.11.6 New on-street parking is provided on the western side of Willingham Way, with the alignment of Willingham Way temporarily altered (under Phase 1 before the masterplan is completed in Phases 4 and 5) in order to retain access to the residential properties to the east of Block E and to retain access to the parking area between Graveley and Impington Court.

4.11.7 As the above image shows, the existing vehicular access at the corner of Rowlls Road and Piper Road is closed off to allow the creation of a green walking /cycling route. All of the existing dwellings will retain vehicular access to their properties.

4.11.8 It is expected that the proposed vehicular accesses within the detailed element will be agreed through conditions with the detail design and construction agreed as part of a highway licence application or S278 agreement.

Block C Access and Parking

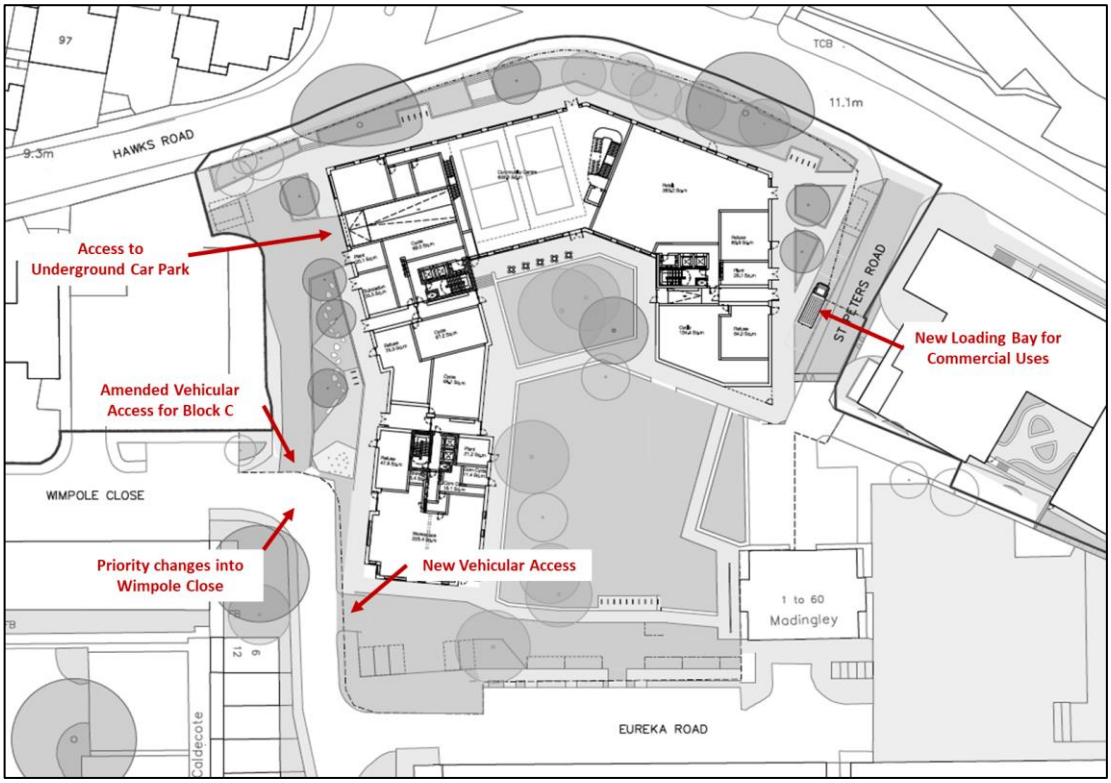
4.11.9 Block C will benefit from new pedestrian infrastructure from the residential, retail/workplace and community uses on all sides of the block and provides improved access to existing infrastructure on Washington Road, Hawks Road, Cambridge Road and St Peters Road. New footways give access to the new green space and link to Madingley, and Eureka Road.

4.11.10 The northern end of Washington Road is amended to provide vehicular access to an underground car park which will serve Block C. The turning head will be amended in line with

the masterplan vision. Loading for the commercial uses will occur from St Peters Road with a loading bay provided on the western side of the road.

4.11.11 **Image 4.16** shows the site layout for Block C.

Image 4.16 Block C Site Layout



Source: Patel Taylor 503-PTA-PH1-00-DR-LA-4300 P01

4.11.12 As the above image shows access to Wimpole Close and the Heath Centre is retained under the Phase 1 proposals, with the priority changing as Washington Road bends westwards into Wimple Close. With a priority junction for the section of Washington Road which will serve the Block C.

4.11.13 A new vehicular access is created to serve a parking area to the south of Block C.

Phase 1 Cycle Parking

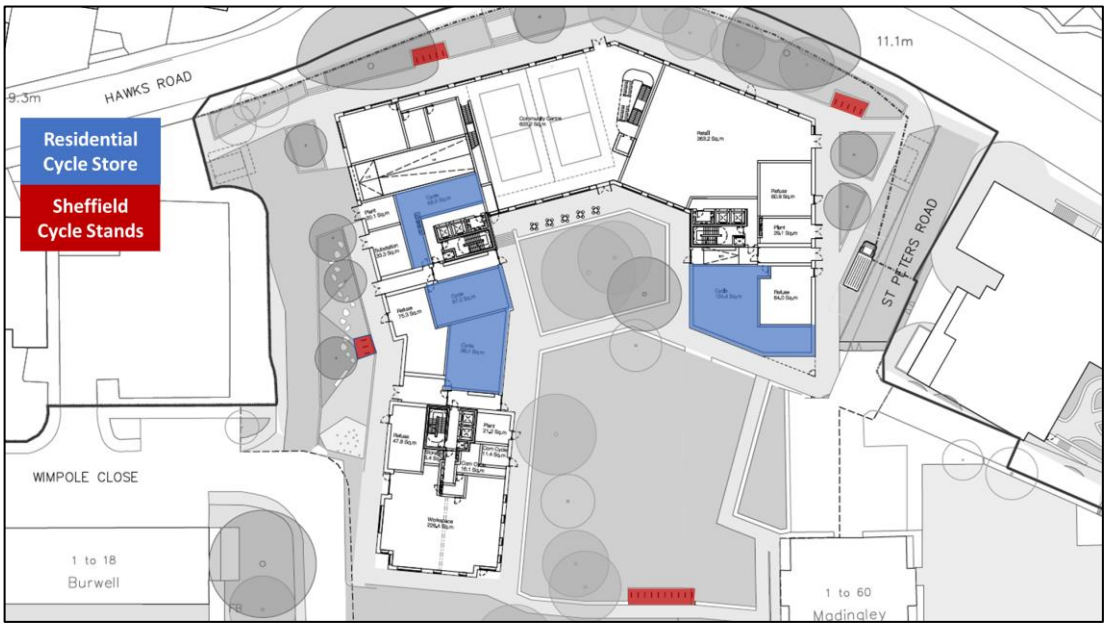
4.11.14 Cycle parking for Phase 1 will be provided in accordance with the Draft London Plan standards, with **Table 4.8** outlining the required stands for each use.

Table 4.8 Proposed Cycle Parking Provision

Land Use	Phase 1	
	Long Stay	Short Stay
Residential (C3)	821	14
Office (B1)	4	1
Flexible Retail / Commercial	4	20
Community Use		13
Additional cycle parking spaces		10
Total	**829**	**48**

4.11.15 Cycle parking is accessed at grade from the street level are and distributed throughout each plot. **Image 4.17** show the location of the residential and visitor (Sheffield stands) cycle parking for Plot C.

Image 4.17 Location of Cycle Parking Plot C



4.11.16 Long term storage cycle parking will be provided by the tenant within the demise of each commercial unit alongside the provision of lockers, showers and changing rooms.

4.11.17 **Image 4.18** shows the residential cycle parking for Plots B and E and the location of the residential and visitor (Sheffield stands) cycle parking around Plots B and E.

Image 4.18 Location of Cycle Parking Plots B and E

Phase 1 Car Parking

4.11.18 Phase 1 will provide 126 parking spaces across the three blocks, with 18 provided for Block B, 40 spaces for Block C, and 68 spaces at Block E. These will be managed in accordance with Section **4.6** of this report and the accompanying Car Park Management Plan.

4.11.19 In line with the Draft London Plan 3% of all spaces will be accessible spaces. 20% of all spaces will have active electric vehicle charging points and 80% will have passive infrastructure provided.

4.11.20 Two parking spaces will be provided for car club spaces.

Vehicle Tracking

4.11.21 Vehicular tracking has been undertaken for the Phase 1 which are shown in the following drawings provide at the end of this report.

- Drawing 19157-MA-XX-XX-DR-C-0101 – P01: Refuse Vehicle (Blocks B & E)
- Drawing 19157-MA-XX-XX-DR-C-0102 – P01: 7.5t Box Van (Blocks B & E)
- Drawing 19157-MA-XX-XX-DR-C-0103 – P01: Panel Van (Blocks B & E)
- Drawing 19157-MA-XX-XX-DR-C-0104 – P01: Fire Appliance (Blocks B & E)
- Drawing 19157-MA-XX-XX-DR-C-0106 – P01: Refuse Vehicle (Blocks C)
- Drawing 19157-MA-XX-XX-DR-C-0107 – P01: 10 & 12m Rigid (Blocks C)
- Drawing 19157-MA-XX-XX-DR-C-0108 – P02: 7.5t Box & Panel Van (Blocks C)
- Drawing 19157-MA-XX-XX-DR-C-0109 – P01: Carriageway Amendments (Blocks C)

4.11.22 The drawings show that the proposed layout can accommodate the expected type of vehicles associated with Phase 1.

5. Active Travel Zone Assessment

5.1 Preamble

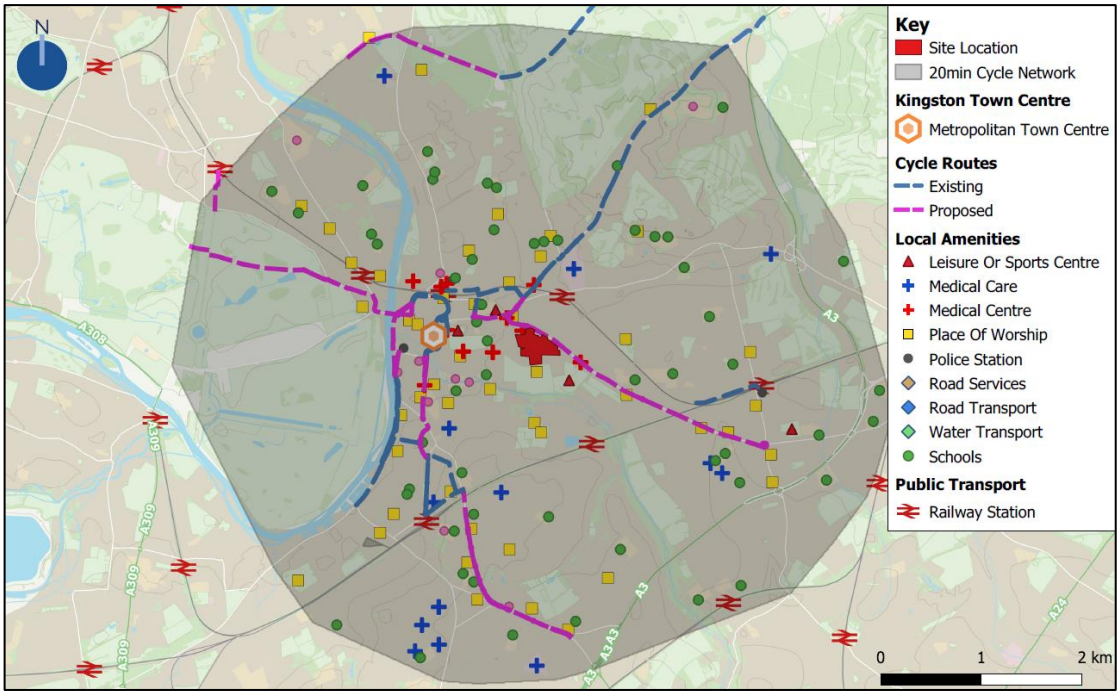
5.1.1 This section of the report outlines the accessibility of the site in terms of walking and cycling, as well as assessing the key routes between the site and the most likely trip generators by active modes. It also examines the site in the context of the local area and its access to services, including local greenspace, and the permeability of local road. This assessment has been undertaken in accordance with the latest TfL Transport Assessment guidance dated June 2019.

5.2 The Active Travel Zone

5.2.1 The Active Travel Zone (ATZ) represents an area that is inclusive of all destination which can be reached within a 20-minute cycle from the site, including public transport access points, cycle infrastructure and key land uses such as schools, health centres and places of worship.

5.2.2 **Figure 5.1** illustrates the ATZ which is based upon a 20-minute cycle from the site.

Figure 5.1 Active Travel Zone



5.3 Local Services and Facilities

5.3.1 The site benefits from being located within close proximity to a range of social infrastructure that act as typical trip attractors for residential use, including education, food retail, leisure and health land uses, ensuring residents would not be wholly reliant on travel by private car to access essential goods and services.

5.3.2 Examples of this social infrastructure, and their associated walk/cycle distance from the centre of the site, are detailed below in **Table 5.1**.

Table 5.1 Walking distance to trip Attractors from Edge of the Site

Attractor Land Use	Site	Assumed Travel Route	Distance	Walk Time (mins)	Cycle time (mins)
Railway Stations	Norbiton Railway Station	Gloucester Road	850m	9	3
	Kingston Railway Station	Cambridge Road	1.6km	21	7
Bus Stops	Cambridge Grove	Cambridge Road	500m	7	3
Health Facility	Hawks Road Clinic	Hawks Road	200m	2	1
	Simply Crown and Bridge Dental Laboratory	Cambridge Road	700m	9	3
	Hawks Pharmacy	Hawks Road	350m	4	1
Supermarket	SPAR	Cambridge Road	800m	10	4
	Costcutter	Cambridge Road	650m	8	3
	Hawks Local	Hawks Road	500m	6	2
Education	The FeatherNest Nursery	Hawks Road	800m	10	3
	King Athelstan Primary School	Hawks Road	750m	9	3
	Tiffin School	Cambridge Road	1.1km	14	5

5.3.3 The reasonable proximity demonstrated in **Table 5.1** ensures that these trip attractors can be accessed by modes other than the private car and realistically on foot by most able-bodied residents. This reflects fundamental requirements of national and local policy for creating sustainable communities.

5.4 Classification of Key Services

5.4.1 **Table 5.2** classifies the key destinations from low to high priority in terms of active travel and the likelihood of users of the proposed development travelling to other key destinations from the development.

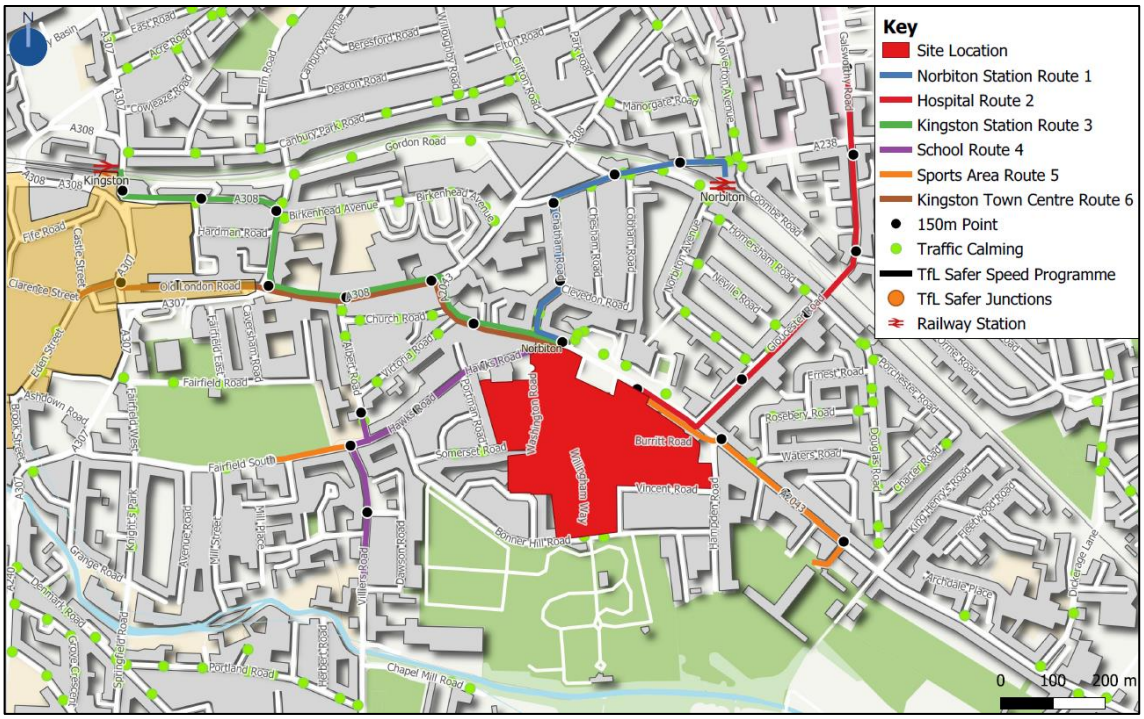
Table 5.2 Classification of Key Destinations in the ATZ

Key Destination	Priority	Justification
Rail Station	High	The travel mode share for people travelling to and from the proposed development is high (27%) and therefore rail stations would be key destinations and are therefore classified as high priority.
Bus Stops	High	High bus mode share for people travelling to and from the proposed development (14%). Therefore, bus stops would be key destinations and are classified with high priority.
Town Centre	High	Given the proximity of the town centre to the site, and the range of services and amenities offered there, the town centre has been considered a high priority destination as it is likely to attract a significant number of trips from the development.
Supermarkets	High	Local supermarkets and other food stores will be a necessity for residents of the proposed development, thereby justifying their high priority classification.
Schools	Medium	The development is comprised of up to 2170 residential dwellings of mixed sizes, including larger family units. It is likely therefore that some of these units will be occupied by residents with school-age children. The medium priority has been awarded to schools as not all flats may have children that need to travel to school.
Parks or Open Spaces	Medium	As the development does not offer a significant amenity space for residents, they may wish to go to a nearby park or open space on a nice day, particularly if they have children. Parks or open spaces have therefore been classified as a medium priority.
Medical Centres	Medium	Over time, it is likely that residents at the development will need to visit a medical centre, be it a GP surgery or pharmacy. Given the anticipated demographics thought to inhabit the development (young - middle-aged couples, possibly with children), it is not envisioned that medical centres will be a daily requirement for most residents, so they have been classified as a medium priority.
Leisure Centres	Low	Some residents at the development may wish to join a leisure centre, but this facility is unlikely to be a necessity for most residents. Therefore, leisure centres have been classified as a low priority.
Places of Worship	Low	Some residents at the development may wish to visit a place of worship, but this facility is unlikely to be a necessity for most residents. Therefore, places of worship have been classified as a low priority.
Higher Education Facilities	Low	Some residents at the development may attend higher education facilities but given the demographic of people thought to be living in the development, it is not thought that higher education facilities would comprise a significant share of residential trips. Therefore, higher education facilities have been classified as a low priority.

5.5 Neighbourhood Active Travel Zone

5.5.1 Based on the range of local facilities offered nearby and the priority of key destinations outlined in **Table 5.1** and **Table 5.2**, with **Figure 5.2** illustrating the walking and cycling routes to the nearest facilities.

Figure 5.2 Neighbourhood Active Travel Zone



5.6 Vision Zero Analysis

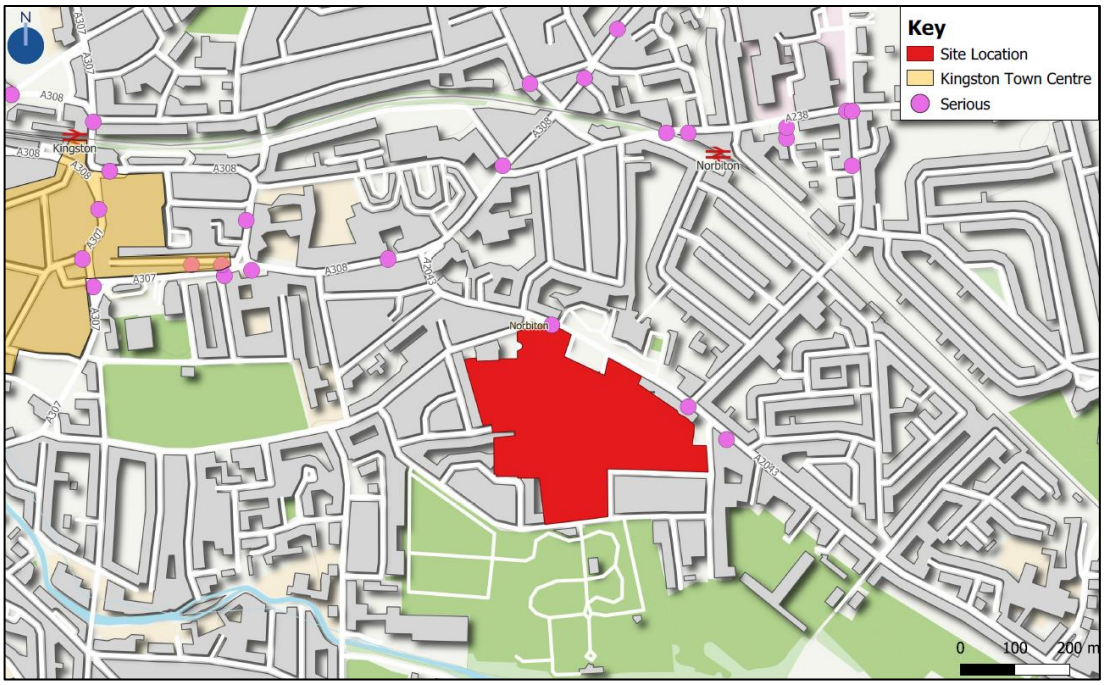
5.6.1 The Mayor's Transport Strategy is committed to Vision Zero to end deaths and serious injury on London roads and transport networks. The strategy sets out the goal that, by 2041, all deaths and serious injuries would be eliminated from London's roads and transport network.

5.6.2 Within the vicinity of the site, casualty data obtained from TfL's London Collision Map for the 5-year period 2014-2018 has been obtained. A review of those casualties has been undertaken to determine the number of incidents which has resulted in people being killed or seriously injured (KSI) on the important walking and cycling routes illustrated in **Figure 5.3.**

5.6.3 This review also aims to identify whether there are any routes where there appears to be a clustering of KSI casualties. A cluster is defined as two or more serious casualties, or one or more fatal casualties.

5.6.4 Of the KSI casualties within proximity to the site, the figure demonstrates that there have been no fatal crashes within the vicinity of the site in the past 5 years. Therefore, there have only been serious crashes. **Figure 5.3** highlights that there are several clusters of KSI's, those being located along Cambridge Road itself at the junction for Gloucester Road/Harpenden Road/Cambridge Road, along the A328 at the junction for Norbiton Railway Station and along the A307.

Figure 5.3 KSI by Severity



5.6.5 **Table 5.3** lists the location of clusters where there have been two or more serious incidents along the routes in this assessment, along with suggestions for making the area safer using the Healthy Streets Approach.

Table 5.3 Vision Zero Analysis

Location	Suggested Improvements
Jemmett Close/A238	**KSI: 2**
	Set pedestrian crossing further back from junction on main road (A238). Provide additional signage highlighting crossroads and the pedestrian crossing. Introduce anti-skid on the approaches to the crossroads on the A238
Coombe Road (A238)/Gloucester Road	**KSI: 2**
	Improve sight lines, as the foliage on the right-hand side of this carriageway blocks any vehicle movement turning right onto Coombe Road. This is shown in the image to the left of this text. Provide a dedicated pedestrian phase within the junction and ensure each crossing has dropped kerbs and tactile paving.

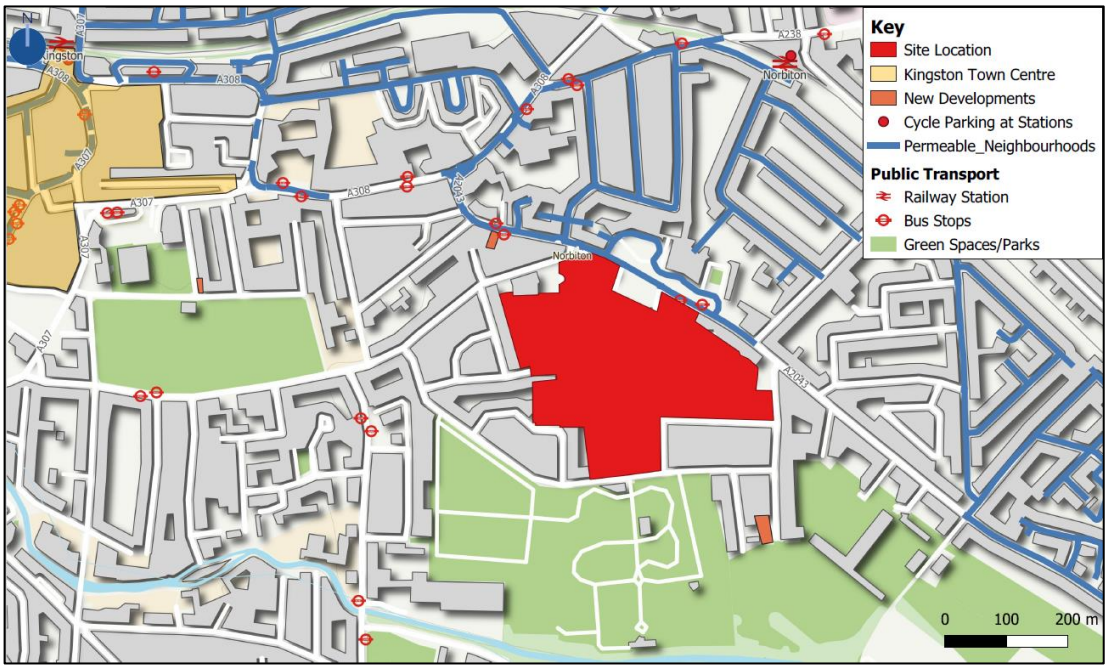
Location	Suggested Improvements
A308/Fairfield North	**KSI: 2**
	Improve clarity of signage and road marking. It is noted that this junction has already been improved as part of the Go Cycle infrastructure. Where new pedestrian and cycle facilities have been provided.

5.7 Healthy Neighbourhood Characteristics

5.7.1 The Healthy Neighbourhood Characteristics map is shown as **Figure 5.4**, illustrating:

- Street Density
- Public Transport Facilities
- Green Spaces
- Nearby Developments/planning approvals

Figure 5.4 ATZ Neighbourhood Health Characteristics Check



5.7.2 A number of new developments have been proposed within the vicinity of the site, two of which are located less than 200m from the site. These vary in type, with a number of residential, commercial and mixed-use applications. These schemes do not significantly alter the permeability of the area; however, they are likely to provide an upgrade to existing frontages, thus improving active frontages, natural surveillance and therefore the wider active travel environment.

5.7.3 In general, there is no critical deficiency in facilities in the area, with public transport access considered to be excellent. In addition, a range of services and amenities can be accessed easily on foot or by cycle. Generally, the speeds and volumes of traffic on the local highway network within the neighbourhood area allow for crossing the roads without difficulty, with crossing facilities aiding such movements on busier roads such as the high road.

5.8 Active Travel Zone Assessment

5.8.1 An active travel zone assessment was conducted on Wednesday 18th March 2020 along with 6 pre-determined routes within the neighbourhood area. These routes linked the site with the key destination identified earlier in this report and include the following:

- Route 1: Site – Chatham Road – A283 - Norbiton Railway Station
- Route 2: Site – Gloucester Road - Kingston Hospital
- Route 3: Site – A308 - Kingston Railway Station
- Route 4: Site – Hawks Road - King Athelstan Primary School
- Route 5: Site – A2043 - Kingsmeadow Athletics and Fitness Grounds
- Route 6: Site – Cambridge Road – Old London Road - Kingston Town Centre

5.8.2 The assessment involved the assessor walking along each of the routes, from the site to the key destination, and taking a photograph every 150m along the route. Each of the 6 routes are illustrated with up to 6 photographs, taken during the assessment, from the route and these have been provided through the route and are labelled accordingly.

5.8.3 The worst part of each journey has been identified in **Table 5.4** to **Table 5.9**, which also provide a brief description as to why the area shown in the relevant photograph does not meet each of the Healthy Streets indicators 3-10. The table also makes recommendations about measures that could be adopted to improve this situation.

5.8.4 Please note that the Key Route Assessments have been undertaken in compliance with the ATZ assessment guidance published by TfL (2019), whilst the assessment provides an overview of improvements to each element identified they do not present proposed mitigation measures to be provided on behalf of the applicant unless specifically identified.