Greggs Bakery / Twickenham

Transport Assessment

Prepared by Velocity

05 August 2022

FORMER GREGGS FACTORY, TWICKENHAM
RESIDENTIAL & INDUSTRIAL
TRANSPORT ASSESSMENT

PROJECT NO. 3760 / 3760/1180 DOC NO. D002

DATE: JULY 2022

VERSION: 1.5

CLIENT: LONDON SQUARE DEVELOPMENTS LTD

Velocity Transport Planning Ltd
www.velocity-tp.com

VELOCITY
Transport Planning

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

This Transport Assessment details the transport implications and strategies associated with the proposed development of the former Greggs Bakery Site and No2 Gould Road, in Twickenham. It assesses the impacts of the proposed development on the transport networks.

The existing use of the site is for industrial purposes and includes ancillary office floorspace associated with the bakery operations that previously operated from the Site. The bakery operation is now redundant, and Greggs ceased the bakery use on the Site in 2018. Greggs have been unable to sell the facility despite a marketing exercise which commenced in February 2018.

Greggs operated on the Site since the acquisition in 1994. Agents for Greggs have advised that throughout this period it has proven problematic from an operational and asset management perspective. The buildings gave rise to an unsustainable maintenance cost resulting in the business beginning a search for alternative premises in the late 1990s as the Site was considered unfit for purpose. The business operated from the Site, unsatisfactorily and inefficiently, maintaining a difficult relationship with neighbouring residents. Alternative premises were identified in Enfield and the Bakery production and distribution has now relocated outside of the Borough to a purpose-built facility which is more operationally efficient than the Bakery premises at Gould Road.

The Proposed development is for:

> 'Demolition of existing buildings (with retention of a single dwelling) and redevelopment of the site to provide up to 97 residential units and 883 sqm industrial floorspace (Use Class E) with associated hard and soft landscaping, car parking and highways works and other associated works'

The existing vehicular accesses are proposed to be retained, and a new shared use internal road on-site is proposed to connect the accesses. The proposed development will deliver 83 residential car parking spaces (equating to 0.86 spaces per dwelling, compliant with the London Plan (March 2021)'s requirements for an Outer London site with a PTAL of 2. The proposed industrial unit will provide 18 parking spaces including five Blue Badge parking bays in front of the unit. All delivery and servicing activity generated by the residential and industrial uses will occur on-site. In accordance with The London Plan parking standards blue badge parking spaces for residents will be provided at 8% of the total number of dwellings from the outset. The site and its surrounding road network are situated within Controlled Parking Zone (CPZ) WT (West Twickenham), which restricts parking from Monday to Saturday between 08:30 to 18:30.

All delivery and servicing activity generated by the residential and commercial uses will occur on-site.

A new car club bay is proposed on Edwin Road and is expected to support a car-lite or car-free lifestyle for some prospective residents and the Site's neighbours.

Pedestrian-prioritised and landscaped footways and public realm on-site will be provided as part of the proposal. The walking experience through the site will be significantly improved with the new provision of the on-site internal road connecting to the existing surrounding road network (Edwin Road and Crane Road/Gould Road). The development has been designed to provide the best experience for cyclists travelling to/from the development to school, work and other destinations.

Cycle parking facilities will be provided which exceed The London Plan standards. A total of 196 long stay residential cycle parking will be provided distributed in stores located within each of the proposed buildings or within the demise of the houses. Six residential short stay cycle parking spaces will be provided in accessible areas. Further long-stay and short stay cycle parking will also be provided which exceeds The London Plan for the industrial use proposed on the site.

The proposed development trip generation has been forecast and related to the capacity of the transport network. As a residential-led mixed use development, the impact on the highway network is expected to be minimal and accommodated without perceptible impact to other road users.

Whilst the site was operational as Greggs Bakery, the site generated a moderate number of regular daily HGV movements, with instances of conflict where large vehicles were passing other vehicles. Anecdotal evidence from residents identifies some of the damage to property and infrastructure that occurred as a result of too many HGVs using the roads. Photograph evidence suggests Greggs HGVs frequently had to mount the footways and reverse to allow other vehicles to pass, putting the safety of other road users, especially pedestrians and cyclists, at significant daily risk.

A conflict analysis was undertaken to assess the maximum quantum of industrial land that could be provided on the development site before highway safety was compromised by excessive vehicle conflicts. This analysis concluded that the safe maximum provision of industrial use on the site is 883sqm. The additional 117sqm commercial unit provided on the site would be restricted to LGVs.

One of the key benefits in transport terms of delivering a residential-led mixed use scheme including a provision of light industrial on this site, compared to its previous use as an industrial factory, is a substantive reduction in the number of HGV movements and the associated highway safety benefits of this on the surrounding residential streets. This is a view supported by an independent Road Safety Auditor commissioned by VTP to review the routes to the site in the context of the proposals and the site's previous use.

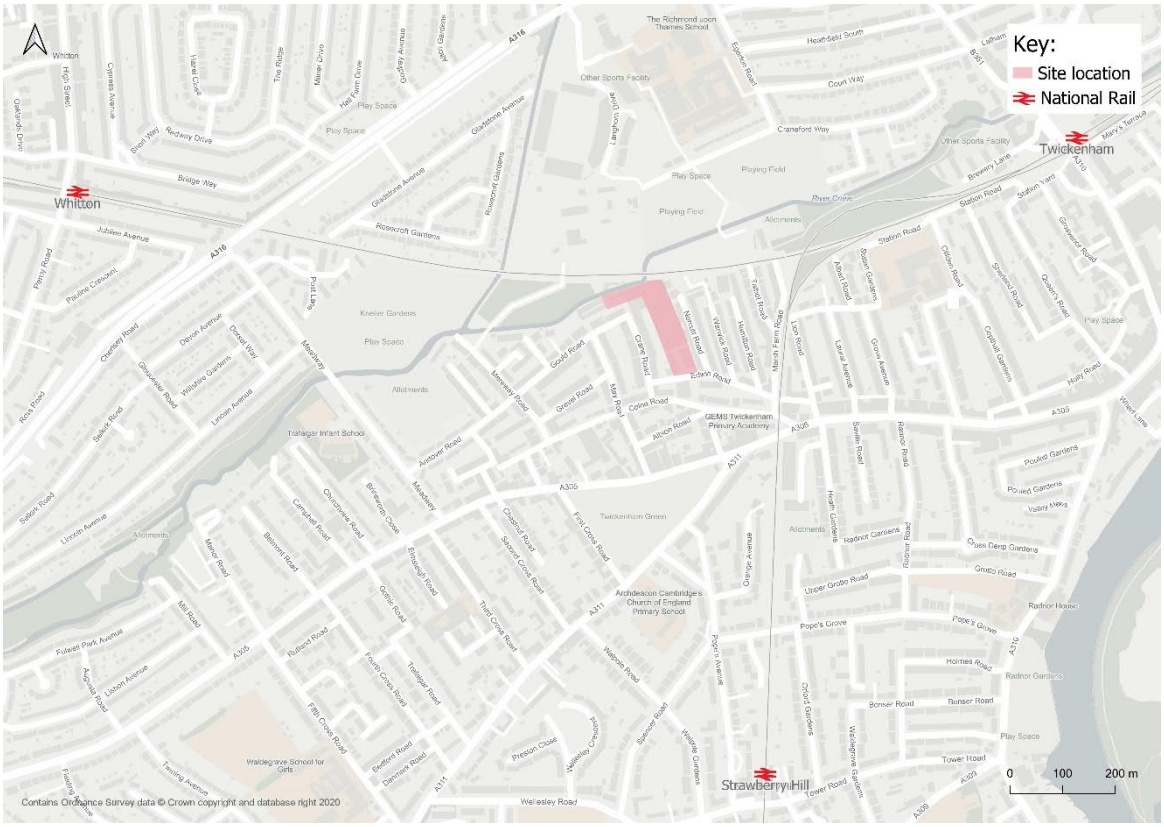
1 INTRODUCTION

1.1.1 This Transport Assessment (TA) has been prepared by Velocity Transport Planning to accompany a detailed planning application for the redevelopment of the former Greggs Bakery Site and No2 Gould Road, Twickenham, TW2 6RT. The land referred to herein as 'the site', to which the planning application pertains, is located within the administrative boundary of the London Borough of Richmond upon Thames (LBRuT).

1.2 SITE LOCATION

1.2.1 Figure 1-1 illustrates the location of the site. The existing Site comprises the former Greggs Bakery Site in Twickenham and no.2 Gould Road, within the London Borough of Richmond Upon Thames. The Site is L shaped and is bound by the River Crane to the north and railway line beyond, residential properties on Norcutt Road to the east, Edwin Road to the south, residential properties on Crane Road to the west and further residential properties on Crane Road/ Gould Road and at Crane Mews to the north west.

Figure 1-1: Site location and local context



1.2.2 The surrounding area is predominantly residential in character comprising rows of terraced streets. Crane Mews to the west comprises as mixed-use building of small commercial units and residential. To the south of the Site there is a small workshop in light industrial use.

1.2.3 Lockcorp House on Norcutt Road to the east of the Site comprises an office building which has been the subject of various applications and have resulted in planning permission being granted for residential use.

The most recently received approval for 15 affordable flats (mix of one, two and three bedroom units). Norcutt Road comprises mews type properties with small rear gardens with adjoin the Site. Craneford Way Depot to the north of the Site beyond the River Crane and railway line comprises a large, underdeveloped waste Site.

1.2.4 The north of the Site is adjacent to the River Crane. The river and land beyond to the north of the Site is designated as Metropolitan Open Land (MOL). The Hamilton Road Conservation Area is located to the east of the Site with the boundary running between the back gardens of the properties on the east side of Norcutt Road.

1.2.5 Twickenham Railway Station, operated by Southwestern Railway, provides a number of services to and from London Waterloo and destinations in the southwest. In addition, several bus services are accessible within 550m walk of the site along Heath Road.

1.2.6 The site has a PTAL of 2, indicating a poor level of public transport accessibility. As a result of the site being situated within an Outer London area with lower-than-average accessibility to public transport services, higher maximum car parking standards apply, as set out in the London Plan (March 2021).

1.2.7 The site and its surrounding road network are situated within Controlled Parking Zone (CPZ) WT (West Twickenham), which restricts parking from Monday to Saturday between 08:30 to 18:30.

1.3 EXISTING SITE USE

1.3.1 The existing Site comprises the former Greggs Bakery Site in Twickenham and no.2 Gould Road, within the London Borough of Richmond Upon Thames. The Site is L shaped and is bound by the River Crane to the north and railway line beyond, residential properties on Norcutt Road to the east, Edwin Road to the south, residential properties on Crane Road to the west and further residential properties on Crane Road/ Gould Road and at Crane Mews to the north west.

1.3.2 There are a range of buildings covering the majority of the Site which comprises an area of 1.1ha. The majority of the Greggs Bakery Site is covered by a single storey industrial shed alongside large extract equipment. There are also a number of associated two and three storey commercial buildings across the remainder of the Site which have developed in a piecemeal way over time. The existing buildings have reached the end of their life cycle. The application site also includes no. 2 Gould Road, a two-storey end of terrace house.

1.3.3 Due to the current plot coverage, the total floorspace across the Site is 9,051 sqm existing Greggs industrial GIA and 75 sqm existing residential house GIA. The existing structures are built up to the boundaries with the gardens of the properties at Norcutt Road and Crane Road.

1.3.4 The Site is highly constrained and is accessed via Edwin Road to the South and via Gould Road at the north of the Site. There is a small yard to the south of the Site accessed from Edwin Road which is where HGVs access the Site. A limited amount of car parking associated with the existing bakery is located within the Site accessed off Gould Road to the north of the Site. Staff from Greggs Bakery were previously able to park on the surrounding streets prior to parking restrictions associated with to the introduction of the 'West Twickenham CPZ' which came into force in May 2018.

1.3.5 The existing use of the site is for industrial purposes and includes ancillary office floorspace associated with the bakery operations that previously operated from the Site. The bakery operation is now redundant, and

Greggs ceased the bakery use on the Site in 2018. Greggs have been unable to sell the facility despite a marketing exercise which commenced in February 2018.

1.3.6 Greggs operated on the Site since the acquisition in 1994. Agents for Greggs have advised that throughout this period it has proven problematic from an operational and asset management perspective. The buildings gave rise to an unsustainable maintenance cost resulting in the business beginning a search for alternative premises in the late 1990s as the Site was considered unfit for purpose. The business operated from the Site, unsatisfactorily and inefficiently, maintaining a difficult relationship with neighbouring residents. Alternative premises were identified in Enfield and the Bakery production and distribution has now relocated outside of the Borough to a purpose-built facility which is more operationally efficient than the Bakery premises at Gould Road.

1.4 WHAT IS BEING BUILT?

1.4.1 The description of the proposed development is as follows:

> 'Demolition of existing buildings (with retention of a single dwelling) and redevelopment of the site to provide up to 97 residential units, 883 sqm industrial floorspace (Use Class E) and 117 sqm commercial floorspace with associated hard and soft landscaping, car parking and highways works and other associated works'

1.4.2 The development quantum is summarised in Table 1-1 and Table 1-2.

Table 1-1: Proposed Development Accommodation Schedule

DWELLING TYPE	NO. OF UNITS
1-bedroom	33
2-bedroom	33
3-bedroom	31
Total	97

Table 1-2: Proposed Employment Floorspace

EMPLOYMENT USE CLASS	FLOOR AREA (GIA)
E (g)(iii)	883sqm
E (c) or (g)	117sqm

1.4.3 In summary, the proposed development is seeking detailed planning permission for:

- Demolition of existing industrial buildings across the Site with the retention of an existing two storey end of terrace dwelling house on Gould Road.
- Redevelopment of the Greggs Bakery Site through the provision of a variety of buildings ranging from 2 – 5 storeys, comprising delivery of mews housing, apartment buildings to the north of the Site fronting the River Crane and the delivery of an employment building fronting Edwin Road.
- Delivery of 97 x residential units (Use Class C3) (33 x 1 bed, 33 x 2 bed, 31 x 3 bed) including 20 Affordable Housing units (equating to 20% of residential provision by unit or 19% by habitable room).
- Provision of 883 sqm of commercial floorspace (Use Class E) designed for light industrial usage.
- Provision of 117 sqm of employment floorspace (Use Class E) designed for affordable workspace.

- Creation of new street within the site.
- Car parking provision on site including 83 residential spaces, 18 employment and 1 public on-street car club parking space.
- 202 residential cycle parking spaces and 12 employment spaces.
- 4 loading bays for the industrial.

1.4.4 The proposed access, parking and servicing arrangements are illustrated in Figure 1-2.

Figure 1-2: Proposed Development Plan and Access Strategy

1.4.5 Detailed plans of the proposed development are contained within APPENDIX A.

1.5 WHY IS THE DEVELOPMENT PROPOSED?

1.5.1 The proposal would redevelop a currently vacant site to provide housing and industrial space. It will contribute towards the delivery of much-needed housing and provide new employment opportunities.

1.5.2 The proposed development would deliver new housing and employment uses in an area close to several local amenities. It is being built to meet local and London-wide needs as follows:

- Table 3.1 of the London Plan (March 2021) sets a target for 315 new homes per year in Richmond upon Thames, and the proposed development will contribute towards this target.
- The provision of industrial and commercial floor space will provide employment opportunities.

1.6 WHEN IS THE DEVELOPMENT PROPOSED?

1.6.1 Planning for demolition and construction is understandably at a preliminary stage and may be subject to review and modification during detailed construction planning. Subject to the timing of planning determination, it is envisaged that construction would commence in January 2024, with works taking around 122 weeks and completion in May 2026. Further information is provided in Section 7 - Construction.

1.7 TRANSPORT DESIGN AND PLANNING PROCESS

1.7.1 This Transport Assessment has been prepared in accordance with the requirements of the National Planning Practice Guidance and TfL's Transport Assessment guidance.

1.7.2 A planning application was submitted for the redevelopment of the site (planning ref: 19/0646/FUL) in February 2019 and was refused permission in August 2020. The reasons for the refusal were not transport-based, and parking provision and highways impacts were acceptable.

1.7.3 The development is to provide employment floor area, and this has influenced the scheme layout whilst minimising the highway safety impacts of large vehicles on the local road network.

1.7.4 The project team has collaborated to create a scheme that prioritises active and sustainable travel. The development provides car and cycle parking to London Plan standards. The site has been designed to provide attractive landscaping and public realm while accommodating vehicle use, including servicing and refuse vehicles.

1.8 PLANNING HISTORY

1.8.1 A planning application was submitted for the redevelopment of the site (planning ref: 19/0646/FUL) in February 2019 and was refused permission in August 2020. The previous scheme provided 116 homes including 40% affordable, 100 residential car parking spaces, 228 cycle parking spaces and a 175sqm B1 class office.

1.8.2 All aspects were supported aside from two reasons for refusal which were:

> Reduction of industrial floorspace at a site designated as Locally Important Industrial Land and Business Park; and
>
> Lack of binding obligation to secure early and late stage reviews relating to affordable housing provision.

1.8.3 The response from Highways (transport) within the decision is below:

> No objection following amendments, subject to unilateral undertaking clauses surrounding restriction on CPZ parking permits, car club membership, highway works at the access points, and provision of new car club bay on Edwin Road, Traffic Management Orders.

1.8.4 On car parking:

> on balance, the total number of parking spaces for residential properties is considered acceptable for this type of development.

The development is located within a CPZ. The applicant has agreed to enter into a Unilateral Undertaking to preclude residents and employees of the site from purchasing residential and business parking permits within the CPZ. In addition, as part of the s106 agreement, the applicant will be required to provide 5 year memberships to the car club.

1.8.5 On cycle parking:

As such the proposed cycle parking is in accordance with standards set out in the Draft London Plan.

1.8.6 The proposed application has reduced the housing quantum and affordable housing provision but increased the employment provision on the site to address part of the reasons the previous scheme was refused. The scheme retains elements from the previous planning application that were found acceptable.

1.9 STRATEGIC POLICY DELIVERY

1.9.1 This section considers how the development will deliver strategic transport policy.

NATIONAL PLANNING POLICY FRAMEWORK

1.9.2 The National Planning Policy Framework (NPPF) was adopted in July 2018 and updated in July 2021. It sets out the Government's planning policies for England. At its heart, the NPPF sets out a presumption in favour of sustainable development (Paragraph 11).

1.9.3 The NPPF promotes sustainable transport. It notes that transport issues should be considered at the earliest stages of development proposals.

1.9.4 The proposed development supports the NPPF through:

- Its location in an area with good public transport access;
- Promoting sustainable transport by providing a significant number of cycle parking spaces; and
- Not having significant adverse impacts on the transport network or on highway safety.

LONDON PLAN (2021)

1.9.5 The proposed development has been reviewed against the current London Plan in Table 1-3.

Table 1-3: London Plan Compliance

POLICY	REQUIREMENTS	DEVELOPMENT CONTEXT
T2	Policy T2 relates to 'Healthy Streets' and seeks development that delivers patterns of land use that facilitate residents making shorter, regular trips by walking or cycling. The Healthy Streets Approach recognises the importance of promoting and facilitating active modes of travel by making developments permeable and highly connected by foot and cycle, with reduced vehicle dominance.	The proposed development is permeable and well-connected to key destinations by foot and cycle.
T3	Policy T3 states that development proposals should provide adequate protection for transport schemes, not remove vital transport functions or limit their necessary expansion without suitable alternative provisions. Proposals should also support capacity, connectivity and other improvements to the bus network, ensuring it can operate efficiently.	The proposed development does not impact safeguarded transport schemes and is not expected to impact the bus network.
T4	Policy T4 identifies that development proposals should reflect and be integrated with current and planned transport access, capacity and connectivity. Transport Assessments are required to support development proposals assessing any impacts on the capacity of the transport network and should focus on embedding the Healthy Streets approach within and in the vicinity of new development.	This Transport Assessment has been prepared in accordance with TfL's Healthy Streets TA Guidance.
T5	Policy T5 sets out that development should encourage cycling and provide new cycle parking standards. Cycle parking and cycle parking areas should allow easy access and provide facilities for disabled cyclists. In places of employment, supporting facilities are recommended, including changing rooms, maintenance facilities, lockers and shower facilities (at least one shower per ten long-stay spaces is recommended).	The proposed level of cycle parking is in accordance with the minimum standards.
T7	Development proposals should facilitate sustainable deliveries and servicing, including through the provision of adequate space for servicing, storage and deliveries off-street.	The development can accommodate all servicing trips, and vehicle types forecast off street.
	Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way that reflects the scale and complexities of developments.	The planning application is supported by a Delivery and Servicing Plan.
	Developments should be designed and managed so that deliveries can be received outside of peak hours and in the evening or nighttime. Appropriate facilities are required to minimise additional freight trips arising from missed deliveries and thus facilitate efficient online retailing.	This TA includes a section that summarises the expected construction logistics, and a separate Construction Logistics Plan has been prepared by London Square.

HEALTHY STREETS

1.9.6 The development will provide a high-quality environment with enhanced space for walking and cycling.

1.9.7 This TA has been prepared in accordance with TfL's Healthy Streets TA Guidance, including an Active Travel Zone (ATZ) assessment of routes to key active travel destinations in the local area.

VISION ZERO

1.9.8 The proposed development will contribute to a large reduction in site traffic generated by Heavy Goods Vehicles (HGVs) due to its change of land use from B2 to a mix of residential and light industrial. The generous provision of cycle facilities for the site in conjunction with a Travel Plan will seek to encourage a mode shift from private vehicles to walking and cycling where possible.

1.9.9 The Active Travel Zone assessment includes analysis of Killed or Serious Injury (KSI) collisions along routes to key active travel destinations and suggests changes to make these areas safer using the Healthy Streets approach.

THE MAYOR'S TRANSPORT STRATEGY

1.9.10 The Mayor's Transport Strategy (MTS) was published in March 2018 and sets out the Mayor's policies and proposals to reshape transport in London over the next 25 years. The central aim of the MTS is for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041.

1.9.11 Three key themes are at the heart of the strategy:

1. Healthy Streets and healthy people
2. A good public transport experience
3. New homes and jobs

1.9.12 The MTS sets out Good Growth principles for the delivery of new homes and jobs that use transport to:

- Create high-density, mixed-use places; and
- Unlock growth potential in underdeveloped parts of the city.

1.9.13 The proposed development would deliver the transport principles of Good Growth through:

- Providing a mixed-use development on an underutilised and vacant site.
- Facilities that will encourage walking and cycling such as landscaped areas and cycle parking.
- Inclusive and accessible design enabling access for everyone travelling to and from the development.
- Promoting efficient freight by preparing a Delivery and Servicing Plan to be secured by planning.

2 TRANSPORT PLANNING FOR PEOPLE

2.1.1 This section summarises who the development will be for, and when and why they will travel. Census data and TfL's Transport Classification of Londoners' demographic segments are presented.

2.2 WHO THE DEVELOPMENT IS FOR?

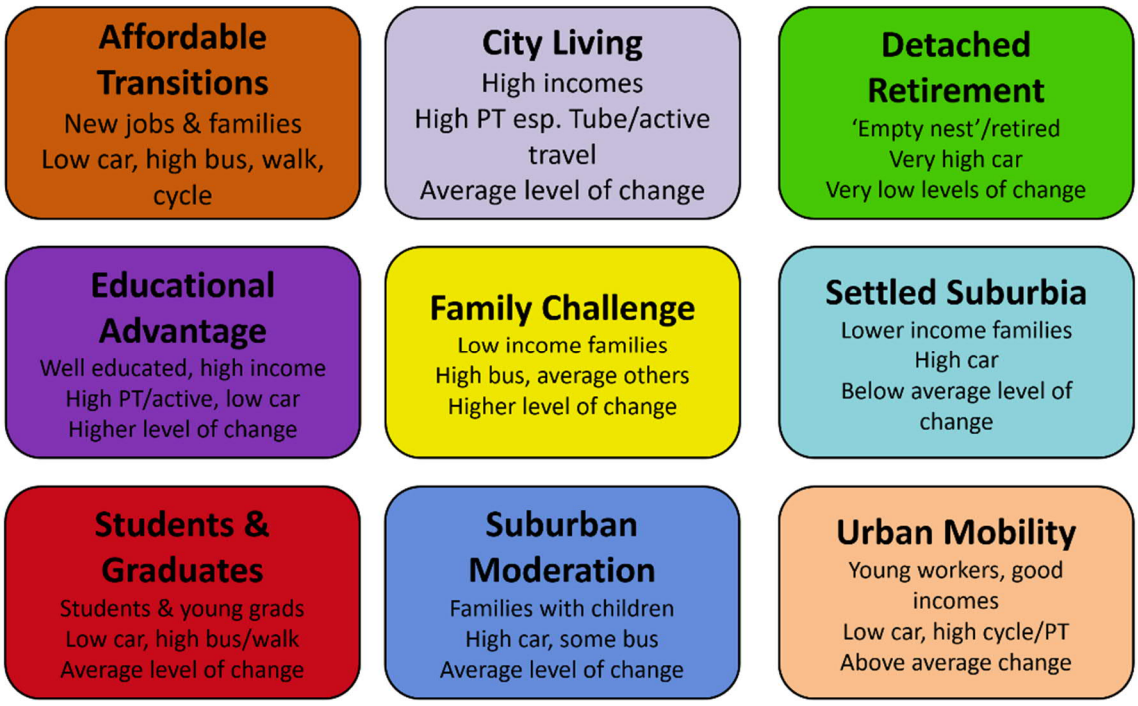
2.2.1 The proposed development will primarily be for residents and their visitors, and staff of the employment space. There will also be an element of visitors to the employment space.

TRANSPORT CLASSIFICATION OF LONDONERS

2.2.2 The Transport Classification of Londoners (TCoL) is a multi-modal segmentation tool developed by TfL that has been designed to categorise Londoners based on the travel choices they make and the motivations for making those decisions. Understanding these behaviours and motivations is expected to assist with the effective planning of London.

2.2.3 Figure 2-1 summarises the high-level tier demographic segments identified by TCoL.

Figure 2-1: TCoL demographic segments



2.2.4 The existing demographics at the borough level are shown in Table 2-1.

Table 2-1: Existing demographic classifications within Richmond Upon Thames

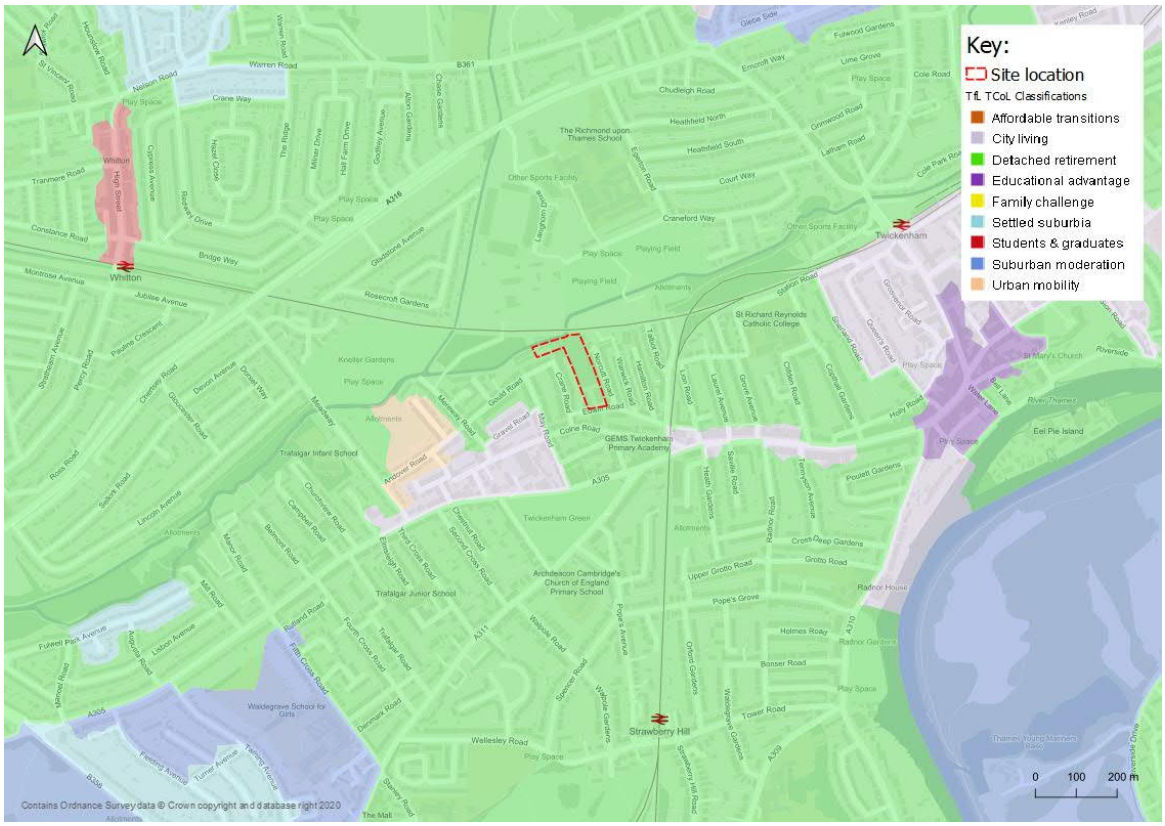
AFFORDABLE TRANSITIONS	CITY LIVING	DETACHED RETIREMENT	EDUCATIONAL ADVANTAGE	FAMILY CHALLENGE	SETTLED SUBURBIA	STUDENTS & GRADUATES	SUBURBAN MODERATION	URBAN MOBILITY
0.0%	15.0%	66.0%	1.0%	1.0%	7.0%	2.0%	6.0%	2.0%

2.2.5 Most residents in Richmond Upon Thames are classified within two segments: Detached Retirement and City Living.

TRANSPORT CLASSIFICATION NEAR THE SITE

2.2.6 Further spatial analysis of local demographics is shown in Figure 2-2. The site is situated within an area that is mainly categorised as 'Detached Retirement', with some nearby areas categorised by 'City Living and 'Urban Mobility'.

Figure 2-2: TCoL demographic segments - TfL



2.2.7 TfL's segment profile for 'Detached Retirement' is set out within Figure 2-3. It indicates that existing residents have very high levels of car use relative to other modes; this is reflective of car ownership levels where 53% own one car and 29% own two or more cars.

Figure 2-3: Detached Retirement Segment Profile

Detached Retirement
'Empty nest'/retired
Very high car
Very low levels of change

Share of London population: 21%

Ethnicity: 83% White, 10% Asian, 3% Black

80% of over 16s hold a driving licence (average = 63%)

Car ownership: 19% no car, 53% 1 car, 29% 2 or more cars

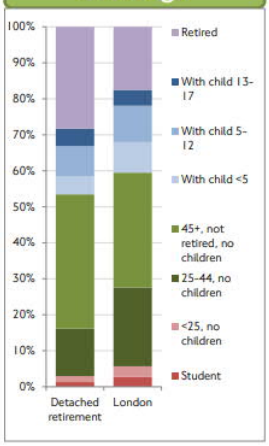
Annual HH Income: £55,700

Current mode use	
Car driver	Well above average
Bus	Well below average
Rail	Average
Tube	Well below average
Walk	Below average
Cycle	Below average

Attitudes	
Car travel is stress-free	Below average
Cycling is safe	Well below average
Cycling is stress-free	Well below average

Propensity to change behaviour	
Any change	Well below average
Reduce car	Well below average
Increase walking	Well below average
Increase cycling	Well below average

Lifestage



Motivations for behaviour change:
1. Changes to roads and driving
2. Health & fitness
3. Changes to PT
4. Lifestyle changes
5. Money

2.2.8 The segment profile indicates that existing residents living near the site have a low propensity to change travel behaviours, particularly in terms of increasing walking and cycling and for any change (including reduction) in driving/travel by car. Residents are less likely to make changes leading to healthy and sustainable travel patterns.

2.2.9 However, the existing data does not consider different demographic segments that may emerge as a result of new developments coming forward in the area (such as the proposed development site) and the subsequent shift in travel behaviours/modes of the new/emerging demographic segments. In particular, the typology and nature of the proposed development are different to much of the current typology and associated demographic behaviours.

2.2.10 The proposed development will provide a mixture of tenures and dwelling sizes. Table 2-2 sets out the most likely future residents at the development based on the demographic segment profiles and their propensity to change travel behaviour.

Table 2-2: Residents at the proposed development

SEGMENT	PEOPLE	AT THE PROPOSED DEVELOPMENT	CURRENT MODE	PROPENSITY TO CHANGE	PROPENSITY TO CHANGE BY MODE
City Living	High incomes	1-2 and 3–4-bedroom units	High public transport	Average	Reduce car – below average Increase walking – below average Increase cycling – average
Urban Mobility	Young professionals	1–2-bedroom units	Low car/high public transport	Above average	Reduce car – well above average Increase walking – well above average Increase cycling – well above average
Educational advantage	Higher-income	1-2 and 3–4-bedroom units	Low car/high public transport	Above average	Reduce car – well below average Increase walking – above average Increase cycling – above average

2.2.11 Overall, the likely demographic profile segments of the proposed development represent a good opportunity to maintain and even reduce car use and to seek to increase active travel amongst prospective residents.

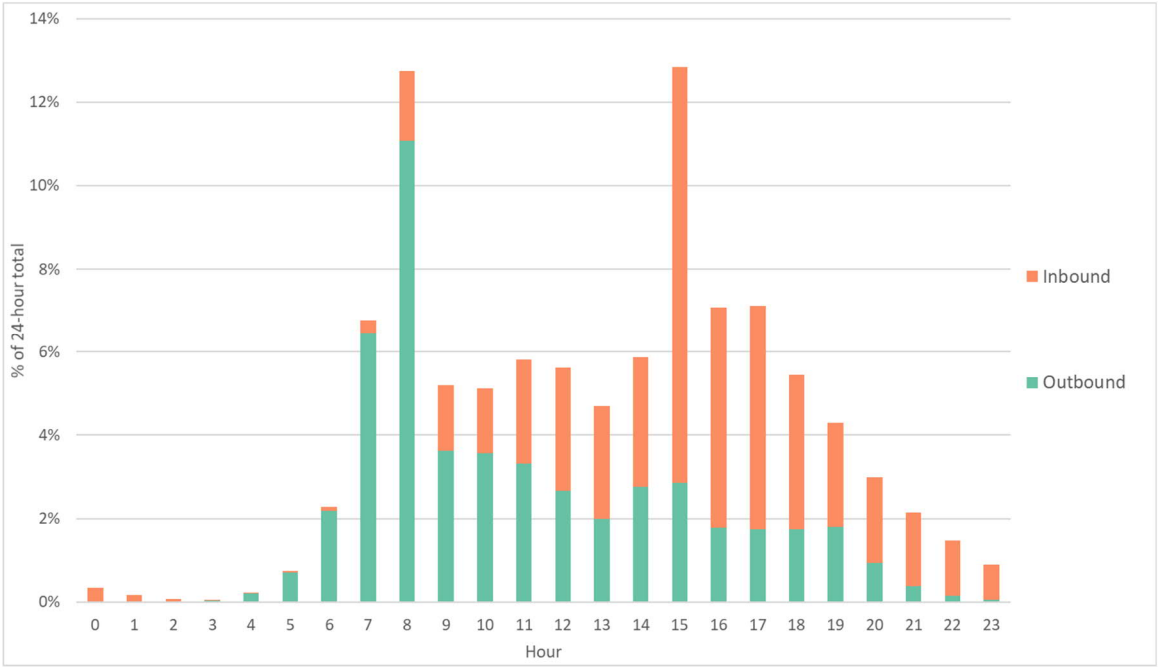
2.3 WHEN WILL PEOPLE TRAVEL?

2.3.1 Data from the `London Travel Demand Survey`(LTDS) has been analysed to indicate when future residents and employees may travel. Journeys to/from Outer London boroughs has been reviewed to reflect the site location.

RESIDENTS

2.3.2 A daily profile of journeys to and from home (for all journey purposes) is shown in Figure 2-4. The highest proportion of residential trips is undertaken between 15:00 and 16:00.

Figure 2-4: Trips by start time (weekday) - Residents

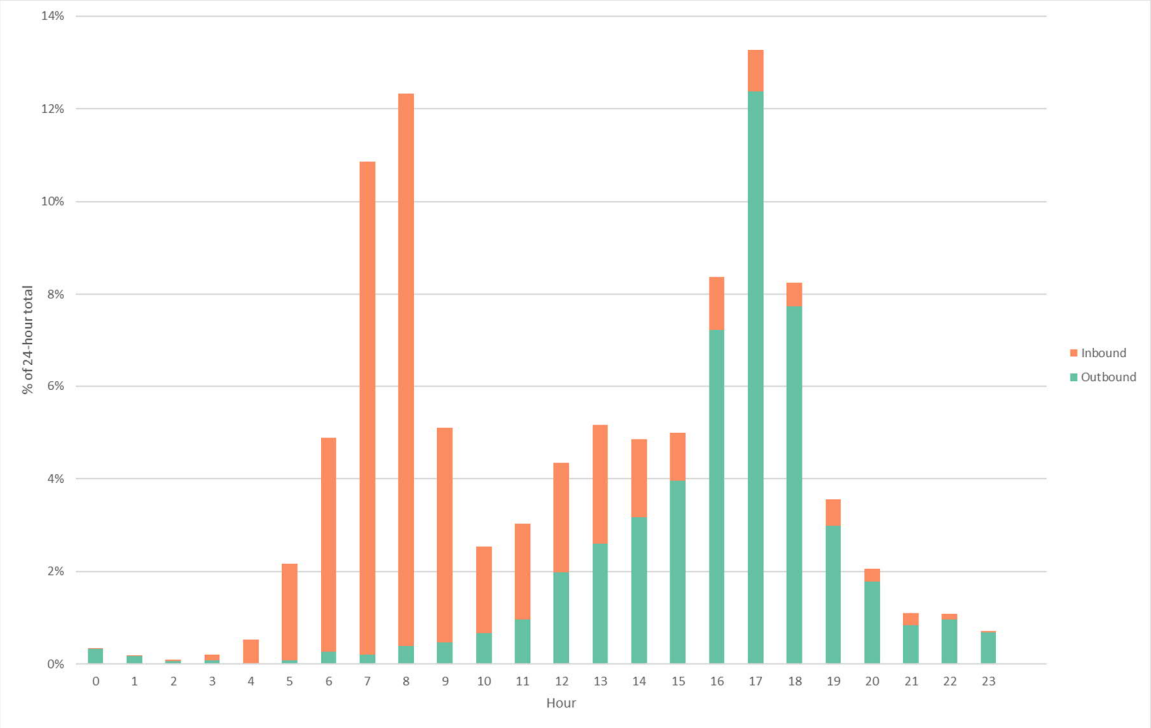


2.3.3 Figure 2-4 shows a tidal profile of outbound/inbound movements, with the majority of outbound movements occurring in the morning hours and the majority of inbound trips occurring between 15:00 and 16:00 in the afternoon.

EMPLOYEES

2.3.4 The employment unit is anticipated to operate within the typical office/workplace working hours (i.e., from 08:00 and 18:00), which is likely to mean outbound resident trips will coincide with inbound workspace employee trips during the morning peak period, and inbound residential trips will occur concurrently with outbound workspace employee trips in the evening. Figure 2-5 shows that the highest number of employee trips is undertaken between 08:00 and 09:00 (trips to work) and between 17:00 and 18:00 (trips from work).

Figure 2-5: Trips by start time (Weekday) - Employees



2.4 WHY WILL THEY TRAVEL?

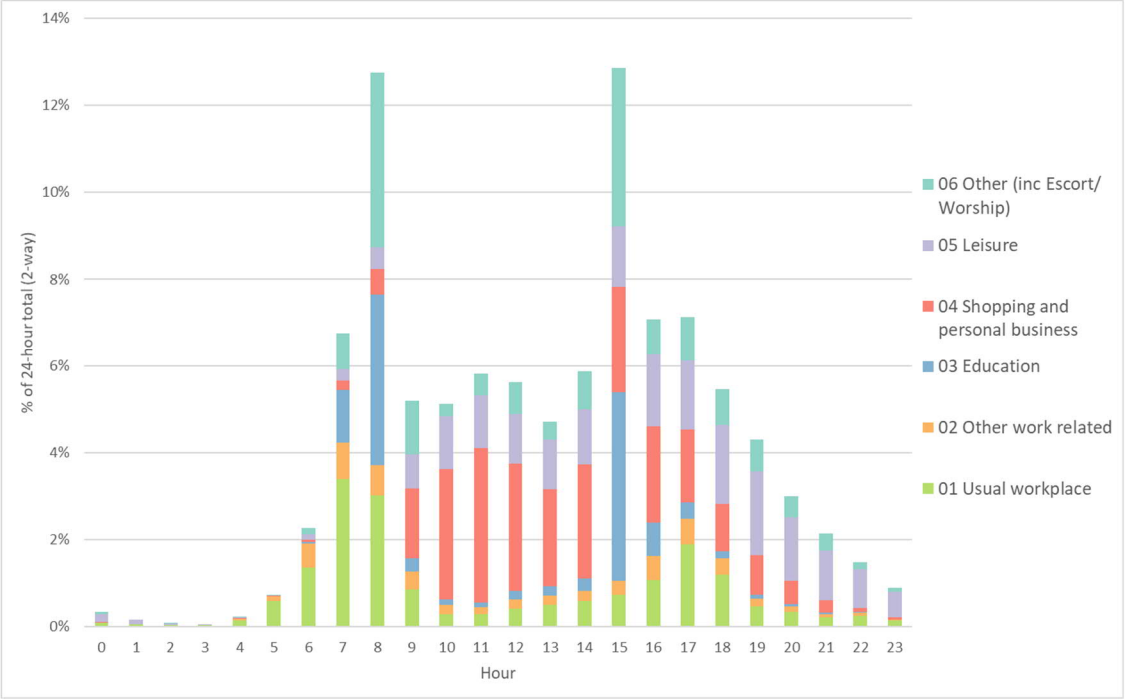
RESIDENTS

2.4.1 LTDS data for the following trip purposes were used to determine the likely distribution of journeys in an average 24-hours period based on trips from home to:

- Usual workplace;
- Other work-related;
- Shopping and personal business;
- Leisure, and
- Other (incl. place of worship).

2.4.2 The journey purpose of residents across a weekday is shown in Figure 2-6.

Figure 2-6: Trips by time and journey purpose (Weekday) – residents



2.4.3 The LTDS data shows that the majority of trips generated by residents in the afternoon during 15:00 and 16:00 as a result of trips from school and associated parent escorts. It should be noted that these journeys are on average much shorter than journey mode for the purpose of work, so generally have less impact on the highway and public transport network.

2.4.4 The proportion of residents' journeys by purpose is shown in Table 2-3.

Table 2-3: Residents journey purpose

JOURNEY PURPOSE	DAILY	08:00 - 09:00 (AM PEAK)	15:00 -16:00 (SCHOOL PM PEAK)	17:00 - 18:00 (WORK PM PEAK)
Usual workplace	9%	35%	3%	11%
Other work related	5%	5%	3%	4%
Education	21%	46%	61%	8%
Shopping and personal business	22%	5%	14%	21%
Leisure	31%	7%	13%	37%
Other (inc. Escort/ Worship)	12%	1%	7%	18%

EMPLOYEES

2.4.5 Employees will travel for the purpose of work as a destination and for work-related matters such as attending meetings.

3 SITE AND SURROUNDINGS

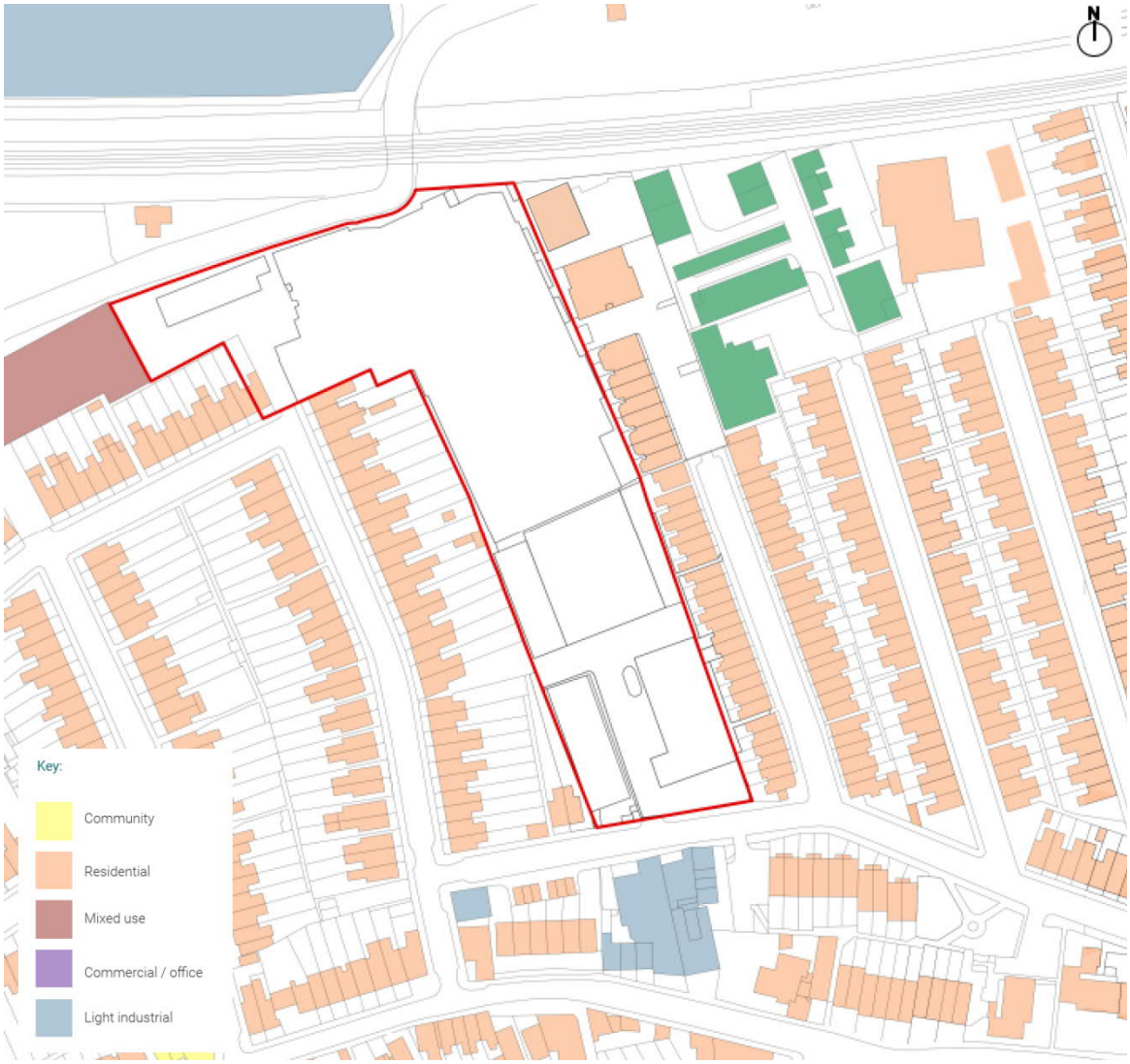
3.1 INTRODUCTION

3.1.1 This section sets out the transport conditions before and after the proposed development is built. It considers the site itself and its immediate surroundings.

3.2 SURROUNDING LAND USES

3.2.1 The immediate surrounding area to the site is predominantly residential, with pockets of industrial and light industrial buildings, shown in Figure 3-1.

Figure 3-1: Existing surrounding land uses



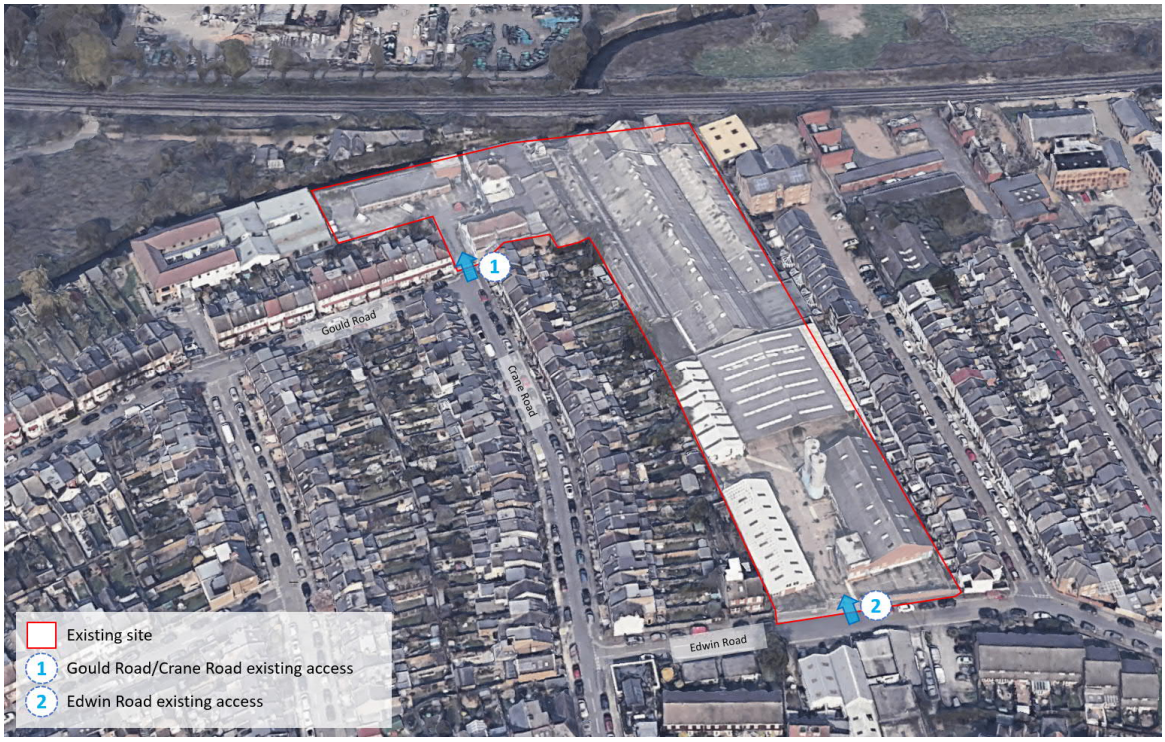
Source: Assael document

3.2.2 The proposed development will provide new residential units (houses and flats) between the neighbouring residential properties on Crane Road and Norcutt Road and industrial use at the southern end of the site accessed from Edwin Road, opposite the existing light industrial uses.

3.3 ACCESS – EXISTING

3.3.1 The site's immediate local highway network and existing vehicular accesses are shown in Figure 3-2.

Figure 3-2: Existing site access



3.3.2 There are currently two vehicular access points to the site: one from Edwin Road to the south (shown in Figure 3-11) and one to the north from the corner of Gould Road and Crane Road (shown in Figure 3-3). The former was primarily used to accommodate larger operational HGVs associated with the site's former industrial use, and the latter was generally used for employee and visitor parking.

Figure 3-3: Existing access on Crane Road/Gould Road

3.3.3 Whilst the site was operational as Greggs Bakery, it generated a moderate number of regular daily HGV movements, with instances of conflict where large vehicles were passing other vehicles. Highway safety was compromised when the site was occupied, primarily because of the conflicts created by the number of larger sized service vehicles using the local roads.

3.3.4 On the A305 The Green, this is not an issue, but, on the residential roads surrounding the site, this has led to:

- Damaged footways and kerbs;
- Concerns about safety for other road users and pedestrians;
- Local complaints of noise and poor air quality (particularly important as the site is not subject to any restrictions and can operate 24 hours a day); and
- Damage to parked cars

3.3.5 Due to the site's residential setting, the adjoining network of roads does not lend themselves to moderate-volume HGV movements. Carriageways are in parts narrow and often flanked by parked cars. There have been regular instances of vehicles mounting the kerb, as illustrated by the condition of the pavement and kerb along Marsh Farm Road (which is the route HGVs used to take between the site and the A305 and is indeed reinforced by signage identifying other routes as being unsuitable for HGVs). Evidence of damage is shown in Figure 3-4 and Figure 3-5.