



Vision Transport Planning Ltd, Dominion House, 69 Lion Lane,
Haslemere, Surrey GU27 1JL

☎ 01428 651579 ✉ info@visiontp.co.uk
🌐 www.visiontp.co.uk

TRANSPORT ASSESSMENT

06 MARCH 2017

3 Viveash Close, Hayes, UB3 4RY

for

The Elite Group

CONTENTS

- 1 INTRODUCTION
- 2 TRANSPORT POLICY
- 3 EXISTING CONDITIONS
- 4 DEVELOPMENT PROPOSALS
- 5 TRANSPORT IMPACTS
- 6 SUSTAINABLE TRANSPORT STRATEGY
- 7 SUMMARY AND CONCLUSIONS

APPENDICES

Appendix A	PTAL Report
Appendix B	PIA Data
Appendix C	Hillingdon's Officer Report
Appendix D	GLA Pre-Application Report
Appendix E	Combilift 543 Specification
Appendix F	Swept Path Analysis
Appendix G	TRICS Outputs
Appendix H	TRICS Outputs (Multi-modal)

1 Introduction

- 1.1 This Transport Assessment has been prepared by Vision Transport Planning on behalf of The Elite Group (the Applicant). Vision Transport Planning has been commissioned to assess the highway and transportation implications associated with the redevelopment of land at 3 Viveash Close, Hayes, UB3 4RY (the site).
- 1.2 The site is located within Hayes town centre and is positioned at the end of Viveash Close, which is a cul-de-sac accessed from Nestle's Avenue. The site is located to the south and adjacent to the Hayes and Harlington mainline rail track and is a circa 150 metre walk distance from Hayes and Harlington station, via the station car park. The site falls within the administrative boundary of the London Borough of Hillingdon.
- 1.3 The site includes an existing building that falls within a B8 (storage and distribution) land use, with ancillary office space. Informal on-site parking is currently provided adjacent to the building (adjacent to the north-west boundary), which is accessed directly from Viveash Close. Furthermore, the site includes a commercial service bay that is also accessed directly from Viveash Close.
- 1.4 The development proposals include the demolition of the existing buildings following which the site will be redeveloped for C3 residential and B1(a) commercial purposes. The redeveloped site will provide a total of 88 apartments and 934 sqm of B1(a) commercial floorspace. Vehicular access from Viveash Close will be retained (in modified format) and will provide access to an undercroft parking area at ground floor level.
- 1.5 A total of 50 car parking spaces will be provided within the car park, with 45 spaces allocated for the residential land use (including parking spaces for disabled drivers) and 5 spaces provided for the commercial land use. As such car parking for the residential land use will be provided at a ratio of 0.51 spaces per flat on average. Additionally, five motorcycle parking spaces will be provided along with 140 cycle parking spaces.
- 1.6 This Transport Assessment sets out highway and transportation matters relevant to the development proposals. The remainder of this report is structured as follows:
- Chapter 2 – Transport Policy
 - Chapter 3 – Existing Conditions
 - Chapter 4 – Development Proposals
 - Chapter 5 – Transport Impacts
 - Chapter 6 – Sustainable Transport Strategy
 - Chapter 7 – Summary and Conclusions.

2 Transport Policy

2.1 A review of relevant transport policy has been carried out. The key policy documents that include transport policies relevant to the development proposals are set out in the following key documents:

- National Planning Policy Framework – March 2012;
- National Planning Practice Guidance – March 2014;
- The London Plan – March 2015;
- The Hillingdon Local Plan: Part 1 – Strategic Policies – November 2012; and
- Hillingdon's Unitary Development Plan (1998) – Saved Policies (September 2007).

National Planning Policy Framework

2.2 The National Planning Policy Framework (NPPF) was published in March 2012, and sets out a presumption in favour of sustainable development. The NPPF recognises the importance of transport policies in facilitating sustainable development, and that planning decisions should have regard to local circumstances. In this regard, promoting sustainable transport forms an important element of the NPPF, which states at paragraph 29 that:

"The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas."

2.3 Similarly, paragraph 34 notes:

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

2.4 Paragraph 35 requires that:

"...developments should be located and designed where practical to:

- *accommodate the efficient delivery of goods and supplies;*
- *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;*
- *incorporate facilities for charging plug-in and other ultra-low emission vehicles; and*

- *consider the needs of people with disabilities by all modes of transport”.*

2.5 Paragraph 32 of the NPPF states:

"All developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

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

National Planning Practice Guidance

2.6 The National Planning Practice Guidance (NPPG) is a web based resource that was launched by the Department of Communities & Local Government in March 2014. The NPPG provides guidance on matters such as the need for, and the preparation of, Travel Plans, Transport Statements and Transport Assessments.

2.7 The NPPG supports national planning policy and sets out that Travel Plans, Transport Assessments and Transport Statements can positively contribute to:

- encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the need for new development to increase existing road capacity or provide new roads.

2.8 In setting out key transport issues that should be considered the NPPG confirms that the transport evidence base should:

- assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms; and
- consider the cumulative impacts of existing and proposed development on transport networks.

The London Plan - March 2015

- 2.9 The London Plan is an overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20 – 25 years. The London Plan sets out a strategic, London-wide policy context within which boroughs should set their detailed local planning policies.
- 2.10 Of relevance to the development proposals are the following car and cycle parking standards, which are set out within the Parking Addendum to Chapter 6 of the London Plan.

Land Use	Maximum Car Parking Standards	Cycle Parking Minimum Standards
B1(a) Offices	1 space per 100 – 600 sqm	Long Stay: 1 space per 150 sqm and Short Stay: 1 space per 500 sqm, thereafter 1 space per 5,000 sqm
C3 Residential 1 bedroom	Less than 1 per unit	1 space per unit
C3 Residential 2 bedrooms	Less than 1 per unit	2 spaces per unit
C3 Residential 3 bedrooms	Up to 1.5 per unit	2 spaces per unit
C3 Residential 4 or more bedrooms	Up to 2 per unit	2 spaces per unit

Table 4.2 – The London Plan – Car and Cycle Parking Standards

The Hillingdon Local Plan: Part 1 – Strategic Policies – November 2012

- 2.11 The Hillingdon Local Plan: Part 1 – Strategic Policies is Hillingdon’s key strategic planning document. It sets out the long-term vision and objectives for the Borough and sets out broad policies for steering and shaping development. The Hillingdon Local Plan: Part 1 was adopted by the Council on the 8th November 2012. Policies within the Local Plan: Part 1 that relate to highways and transport have been set out below:

2.12 Policy T1 – Accessible Local Destinations

"The Council will steer development to the most appropriate locations in order to reduce their impact on the transport network. All development should encourage access by sustainable modes and include good cycling and walking provision.

The Council will ensure access to local destinations which provide services and amenities.

The Council will promote active travel through improvements to Hillingdon's public rights of way."

2.13 Policy T2 – Public Transport Interchanges

"The Council will facilitate improved public transport interchanges at Uxbridge, Hayes, West Drayton, Heathrow Airport, West Ruislip and other locations as appropriate in the future. These interchanges will accommodate measures to encourage subsequent shorter journeys to be completed on foot or by cycle."

2.14 Policy T3 – North-South Sustainable Transport Links

"The Council will improve north-south public transport links in the borough and link residential areas directly with employment areas and transport interchanges."

Hillingdon's Unitary Development Plan (1998) – Saved Policies (September 2007)

2.15 Hillingdon's Unitary Development Plan (UDP) was formally adopted on the 30 September 1998. It sets out policies that are to be used for the purposes of development control. A number of policies have been 'saved' following a direction by the Government Office for London (effective from the 27 September 2007. Highways and transport policies relevant to the development proposals have been set out below.

2.16 Policy AM1

"The local planning authority will only permit development for uses which serve or draw upon more than a walking distance based catchment area if:

(i) it is or can be made accessible by public transport from the areas from which it is likely to draw the majority of its employees, potential customers and visitors, and

(ii) the existing or proposed public transport system has sufficient capacity to absorb the additional journeys generated by people travelling to the completed development."

2.17 Policy AM2

"All proposals for development will be assessed against:

(i) their contribution to traffic generation and their impact on congestion, particularly on the principal road network as defined in paragraph 14.14 of the plan, and

(ii) the present and potential availability of public transport, and its capacity to meet increased demand."

2.18 Policy AM7

"The local planning authority will consider whether the traffic generated by proposed developments is acceptable in terms of the capacity and functions of existing and committed principal roads only, and will wholly discount any potential which local distributor and access roads may have for carrying through traffic.

the local planning authority will not grant permission for developments whose traffic generation is likely to:

(i) unacceptably increase demand along roads or through junctions which are already used to capacity, especially where such roads or junctions form part of the strategic London road network; or

(ii) prejudice the free flow of traffic or conditions of general highway or pedestrian safety; or

(iii) diminish materially the environmental benefits brought about by new or improved roads; or

(iv) infiltrate streets classed as local roads in the borough road hierarchy unless satisfactory traffic calming measures can be installed."

2.19 Policy AM9

"The Council will:-

(i) provide a network of well signposted cycle routes throughout the borough to promote safer cycling and better conditions for cyclists, using predominantly either quiet roads or purpose built cycleways; particular attention will be paid to the provision of suitable routes to schools, and contributing additions to the London-wide strategic cycle route network;

(ii) take account of the needs of cyclists in the design of highway improvement schemes;

(iii) promote secure, attractive and adequate cycle parking facilities in the borough's town centres, public transport interchanges and at other major attractions, and will require development proposals to include clearly visible, well-designed, covered, secure and accessible bicycle parking for users of the development and, where appropriate, for the general public."

2.20 Policy AM14

"New development will only be permitted where it is in accordance with the council's adopted car parking standards as set out in Annex 1."

2.21 Policy AM15

"All car parks provided for new development shall contain conveniently located reserved spaces for disabled persons in accordance with the council's adopted car parking standards, as set out in Annex 1."

Parking Standards

- 2.22 As referred to above, Hillingdon's adopted car and cycle parking standards are set out within Appendix 1 of the Unitary Development Plan. The adopted car parking standards are expressed as a maximum and (unless stated) visitor parking forms part of the standard. Cycle parking standards are expressed as a minimum. Car and cycle parking standards relevant to the development proposal are set out within Table 2.2. below.

Land Use	Maximum Car Parking Standards	Cycle Parking Minimum Standards
B1(a) Offices	1 space per 100 sqm	1 space per 50 sqm
C3 Residential. Flats and Houses without individual curtilages. Dwellings with 1 – 2 bedrooms	1.5 spaces per dwelling	1 space per dwelling
C3 Residential. Flats and Houses without individual curtilages. Dwellings with more than 2 bedrooms	1.5 spaces per dwelling	2 spaces per dwelling

Table 2.2 – Hillingdon's Parking Standards (Appendix 1 of UDP)

- 2.23 The following sections of this Transport Assessment determine that the development site is located within a highly accessible location and that the proposals are provided with appropriate pedestrian, cycle and servicing facilities. The proposals provide car and cycle parking in accordance with adopted guidance and in accordance with advice received from the Local Planning Authority and the Greater London Authority. As such it is concluded that the proposals accord with the relevant transport policies and guidance that has been set out above.

3 Existing Conditions

Existing Site Uses

- 3.1 The site covers an area of approximately 2,400 sqm and includes a detached commercial building that falls within a B8 (storage and distribution) land use, with ancillary office space. The building is currently utilised in connection with a food distribution business, which operates from the site.
- 3.2 Informal on-site parking is currently provided adjacent to the building (adjacent to the north-west boundary), which is accessed directly from Viveash Close. Furthermore, the site includes a commercial service bay that is also accessed directly from Viveash Close.
- 3.3 The existing building has a gross internal floor area of 1,820 sqm, which includes 205 sqm of ancillary office accommodation. A photo of the existing building is provided below.



Photo of Existing Building (3 Viveash Close)

Site Location

- 3.4 The site is located within Hayes town centre and is positioned at the end of Viveash Close, which is a cul-de-sac accessed from Nestle's Avenue. The site is located to the south and adjacent to the Hayes and Harlington mainline rail line and is a circa 150 metre walk distance from Hayes and Harlington station, via the station car park.
- 3.5 The site is located on the east side of Viveash Close. Viveash Close is a single carriageway street, which is subject to a 30 mph speed limit and benefits from a system of street lighting. Viveash Close has a carriageway width of circa 7.6 metres and has footways of 1.8 metres on both sides of the carriageway.
- 3.6 Viveash Close provides access to Nestle's Avenue (to the south), via a simple priority junction. On street parking, within Viveash Close, is generally unrestricted, with the exception of 'day-time' restrictions that are in place at the junction with Nestle's Avenue.
- 3.7 Figure 3.1 below, indicates the location of the site and its relationship to the local highway network.

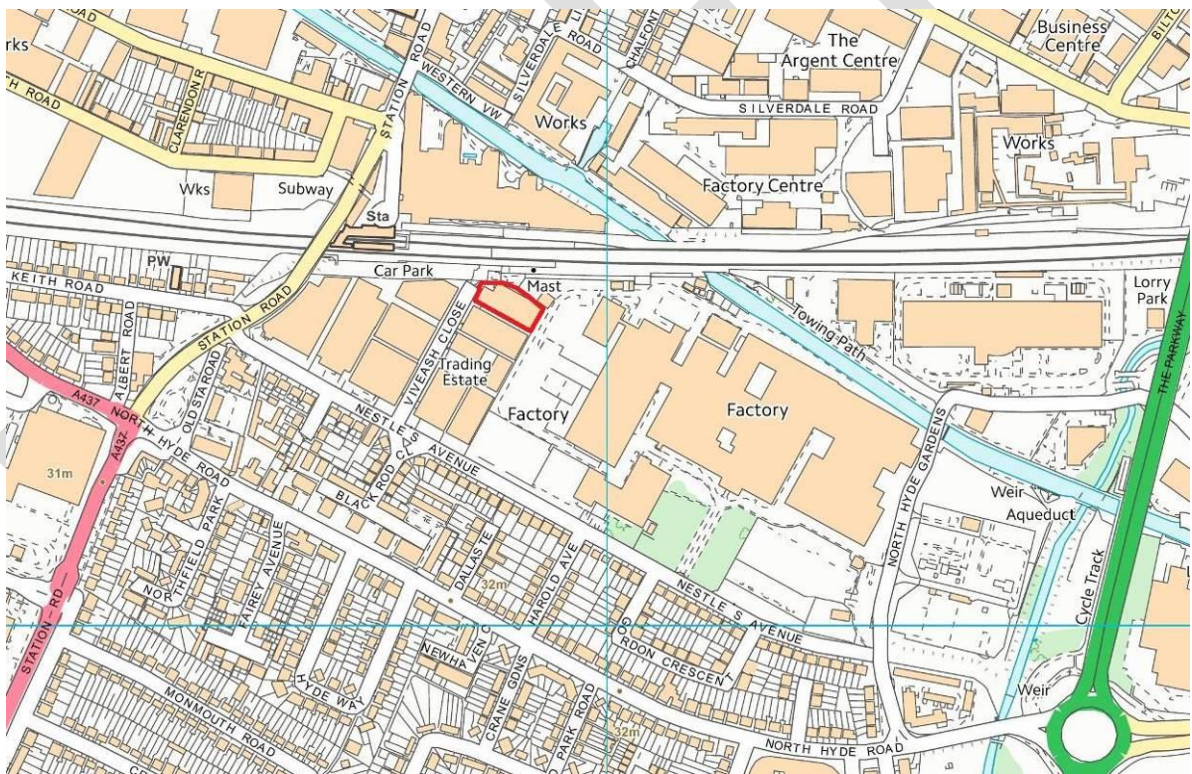


Figure 3.1 – Location Plan, Local Highway Network

- 3.8 The surrounding highway network is characterised as streets that serve commercial, retail and residential land uses and are subject to a 30 mph speed limit and benefit from street lighting and a good standard of pedestrian facilities. Nestle's Avenue provides direct access to Station Road (via priority junction) to the west. Station Road provides access to Hayes and Harlington rail station and Hayes town centre (to the north).

- 3.9 Nestle's Avenue provides access to North Hyde Road (to the south) via Harold Avenue. North Hyde Road is a local distributor road that provides a link between the A437 Station Road (to the west) and the A312 The Parkway (to the east). The A312 forms part of the Principal Road Network and provides access to Junction 3 of the M4 (to the south) and the A40 (to the north). Figure 3.2 below, indicates the location of the site and its relationship to the wider highway network.

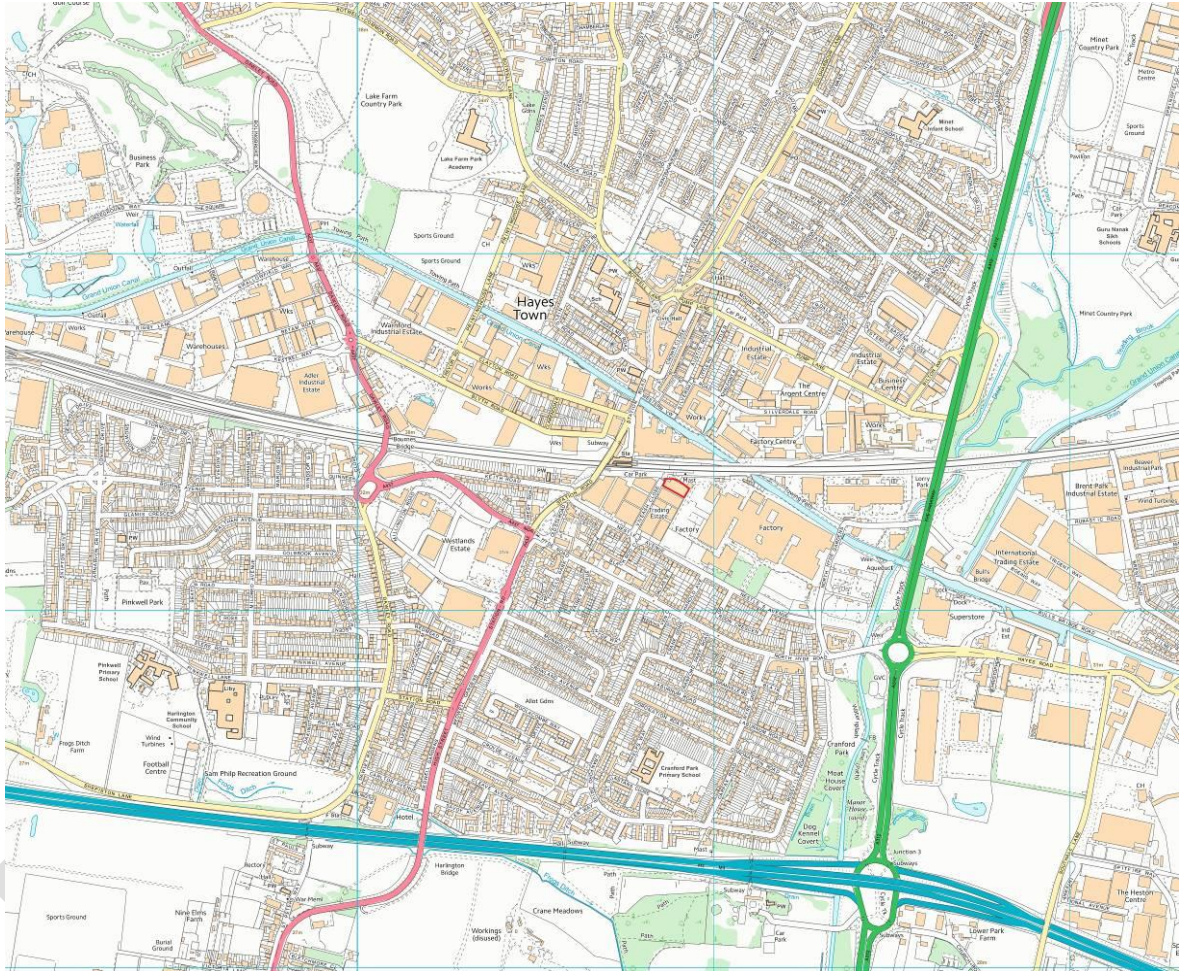


Figure 3.2 – Location in Respect to the Wider Highway Network

Existing Access Arrangements

- 3.10 The site is currently accessed directly from Viveash Close, with two existing vehicular accesses. A single vehicle access provides access to a parking area to the north of the existing building, whilst a second access provides vehicular access to the commercial service bay that runs alongside the southern boundary of the site. An existing footway runs across the front of the building and provides pedestrian access to the main building.

Parking and Servicing

- 3.11 The existing site includes an area of hardstanding, alongside the northern boundary of the site, that is utilised for car parking, but which is not formally laid out as a car park. Furthermore, informal parking occurs to the front of the main building, within Viveash Close. There are no existing parking restrictions within Viveash Close, within the vicinity of the site. There is no secure cycle parking currently provided on site.
- 3.12 The commercial building includes a service bay, adjacent to the southern boundary of the site, that is accessed directly from Viveash Close and provides access to the main building via a roller shutter door. Loading/unloading can currently occur within the service bay or internally within the building (via the service bay).

Accessibility

- 3.13 Public Transport Access Level (PTAL) is a measure which rates locations by distance from frequent public transport services and is the most widely recognised way to measure the connectivity of a site's location to the public transport network in London. Sites are ranked between 1 and 6 (with sub-divisions of 1a & 1b, and 6a & 6b), with 1 representing areas with low accessibility to public transport and 6 indicating areas that have excellent access to public transport.
- 3.14 The site is located in an area that has a PTAL rating of 4, representing an area that has a 'good' level of public transport accessibility. A copy of the PTAL report is included as [Appendix A](#).
- 3.15 The Department for Transport's 'Manual for Streets' (MfS) recognises that walking "*offers the greatest potential to replace short car trips, particularly those under 2 km*" and encourages development in locations where the daily needs of residents are within walking distance, thereby reducing the need to travel by car. MfS refers to 'walkable neighbourhoods' as being typically characterised by having a range of facilities within 10 minutes' (up to about 800 metres) walking distance of residential areas, which residents may access comfortably on foot.
- 3.16 The site is particularly well located in terms of accessibility to local services, being located within 500 metres of Hayes town centre. A good standard of footway provision exists within the existing highway network, which generally benefits from wide footways on both sides of the carriageway and pedestrian crossing facilities at junctions. Dedicated cycle facilities also exist within Station Road, providing safe and convenient cycle access between the site and Hayes town centre. As such the site is within the immediate vicinity of an extensive range of local services and facilities that are available within Hayes town centre.
- 3.17 Furthermore, the site is located a 200 metre walk distance from Hayes and Harlington mainline rail station, which can be accessed via the station car park. Hayes and Harlington station provides direct rail services to London Paddington (21 minutes) as well as a range of destinations including Heathrow Airport, Southall, Hanwell, West Ealing, Ealing Broadway, West Drayton, Slough, Maidenhead, Reading and Oxford. The station also provides 18 secure cycle parking spaces plus 120 car parking spaces.

- 3.18 The nearest bus stops to the site are located within Station Road, adjacent to Hayes and Harlington station. The bus stops within Station Road benefit from having shelters, seating and timetable information, and are located within a 200 metre walk distance from the site, via the station car park, or 500 metres via Viveash Close, Nestle's Avenue and Station Road. The bus stops provide access to services E6, H98, U4, U5, 90, 140, 195, 350, 696, 698. These services provide frequent bus services to various local destinations. Further bus stops are also available within North Hyde Road, which is within a 450 metre walk distance of the site and provide access to bus service 195.
- 3.19 In summary, the application site is located within immediate proximity to an extensive range of facilities and services that are within an easy walking distance from the site. Furthermore, the site benefits from convenient access to Hayes and Harlington mainline rail station and a comprehensive range of bus services, all of which are within a 200 metre walk distance from the site. As such it is concluded that the site is located in a highly accessible location and has the potential to reduce reliance upon the private car. In this regard, it is considered that the location of the application site accords with the guiding principles of the National Planning Policy Framework and local policy.

Road Safety

- 3.20 A review of the road safety record of the neighbouring highway network has been undertaken. A copy of the Personal Injury Accident (PIA) records has been obtained from Transport for London for the five year period 1st August 2011 to 31st July 2016. Figure 3.3 below details the roads and junctions included within the study area.

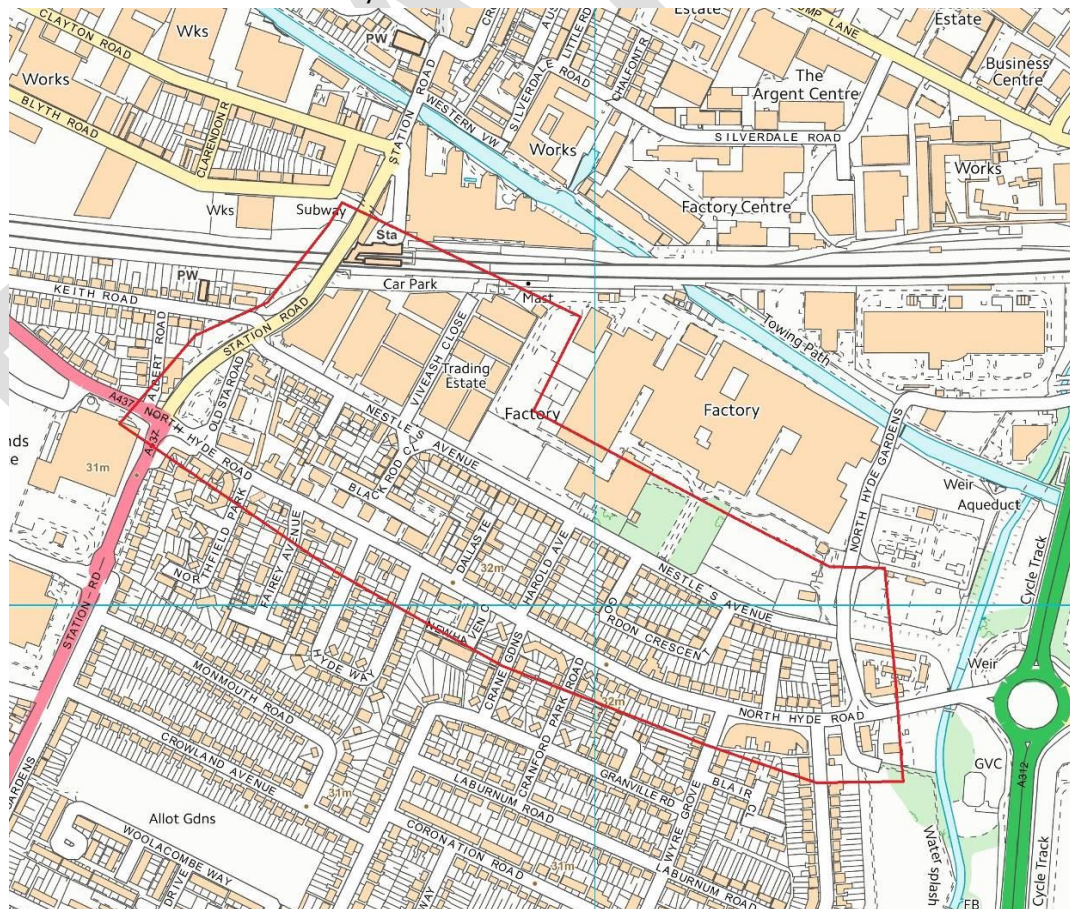


Figure 3.3 – PIA Study Area

- 3.21 The PIA data received from TfL indicates that there has been a total of 72 injury accidents that have been recorded within the study area within the most recent five-year period. Sixty-five PIAs were classified as 'slight', with seven classified as 'serious'. There were no recorded 'fatal' PIAs within the study area.
- 3.22 All the PIAs occurred within the two main arteries, North Hyde Road and Station Road. There were no recorded PIAs within Viveash Close, Nestle's Avenue or Harold Avenue, indicating a good road safety record within streets that are most likely to be impacted by any changes in traffic as a result of the development proposals.
- 3.23 A copy of the PIA map (provided by TfL) is provided as **Appendix B**. In summary, having reviewed the available PIA data it is apparent that there are no PIAs, within the latest five year period, that relate in any way to Viveash Close or Nestle's Avenue, and it is concluded that the development proposals will not prejudice road safety within the neighbouring highway network.

DRAFT

4 Development Proposals

- 4.1 The development proposals include the demolition of the existing buildings following which the site will be redeveloped for C3 residential and B1(a) commercial purposes. The redeveloped site will provide a total of 88 apartments and 934 sqm of commercial (B1(a)) floorspace. A breakdown of the residential units is provided below:

Private Units

• 1 bedroom apartments	21 units
• 2 bedroom apartments	27 units
• 3 bedroom apartments	9 units
Total 'Private' Units	57 units (65%)

Affordable Units

• 1 bedroom apartments	7 units
• 2 bedroom apartments	7 units
• 3 bedroom apartments	17 units
Total 'Affordable' units	31 units (35%)

Access

- 4.2 Vehicular access from Viveash Close will be retained (in modified format) and will provide access to the undercroft parking area at ground floor level. The proposed access will be 3 metres wide and will run adjacent to the southern boundary of the site. The existing accesses to Viveash close will be permanently closed and as such there will be a single vehicular access to the site.
- 4.3 The access forms a simple priority junction with Viveash Close, with the access being located at the end of the cul-de-sac. As such, Viveash Close, in the vicinity of the proposed access, is not subject to through traffic, rather it provides vehicular access to a number of existing private drives/accesses including the station car park.
- 4.4 The proposed access has been designed in accordance with the local context, where speeds are particularly restrained and where there are direct accesses. Vehicular access to the parking court will be controlled by a barrier, which has been set back from the highway, whilst the front of the site has been kept open to ensure adequate visibility between the access and Viveash Close.

Parking

- 4.5 Relevant parking guidance is set out within Hillingdon's Unitary Development Plan (Appendix 1) and The London Plan. The following standards (from both documents) that are relevant to the development proposals have been set out below.

Land Use	Maximum Car Parking Standards	Cycle Parking Minimum Standards
B1(a) Offices	1 space per 100 sqm	1 space per 50 sqm
C3 Residential. Flats and Houses without individual curtilages. Dwellings with 1 – 2 bedrooms	1.5 spaces per dwelling	1 space per dwelling
C3 Residential. Flats and Houses without individual curtilages. Dwellings with more than 2 bedrooms	1.5 spaces per dwelling	2 spaces per dwelling

Table 4.1 – Hillingdon's Parking Standards (Appendix 1 of UDP)

Land Use	Maximum Car Parking Standards	Cycle Parking Minimum Standards
B1(a) Offices	1 space per 100 – 600 sqm	Long Stay: 1 space per 150 sqm Short Stay: 1 space per 500 sqm, thereafter 1 space per 5,000 sqm
C3 Residential 1 bedroom	Less than 1 per unit	1 space per unit
C3 Residential 2 bedrooms	Less than 1 per unit	2 spaces per unit
C3 Residential 3 bedrooms	Up to 1.5 per unit	2 spaces per unit
C3 Residential 4 or more bedrooms	Up to 2 per unit	2 spaces per unit

Table 4.2 – The London Plan – Car and Cycle Parking Standards

Review of Hillingdon's Car Parking Standards

- 4.6 Hillingdon's car parking standards are expressed as a maximum and visitor parking forms part of the standard. The standards clarify that *"All of the standards are maximum (unless otherwise stated) allowing for flexibility to enable developers to provide fewer car parking spaces where this is appropriate, particularly in locations which are accessible to those walking, cycling or arriving by public transport"*.
- 4.7 Hillingdon was consulted on the development proposals at an early stage in the design process. The formal response (set out in the Officers Report) received from Hillingdon considered the level of residential parking and Hillingdon's standard of 1.5 spaces per unit. However, the response clarified that *"In areas with moderate to high Public Transport Accessibility Levels (PTAL) a lower ratio can be supported"*. The response from Hillingdon also stated that "...you would need to ensure through appropriate tracking diagrams that the spaces are actually accessible and usable." A copy of Hillingdon's pre-planning Officers Report is attached as **Appendix C**.
- 4.8 Hillingdon's parking standard of 1.5 spaces per dwelling applies to all dwellings (flats and houses) without individual curtilages and with communal parking. Given the nature of the development proposal (all flats) it is considered that a lower parking ratio would be appropriate. Furthermore, given the site's high level of accessibility to public transport and local facilities and the site's PTAL rating of 4, it is considered that a materially lower parking provision that includes an element of parking restraint would be appropriate and indeed necessary. Such a strategy would assist in minimising transport impacts whilst promoting and encouraging the use of viable alternative modes of sustainable transport.
- 4.9 Hillingdon's standards also specify that 10% of all parking spaces should be provided to mobility standards and that motorcycle/moped parking should be provided at sites requiring 20 or more car parking spaces at the rate of 1 space per 20 car parking spaces.
- 4.10 In respect to parking for a B1(a) office use, Hillingdon's standards specify a ratio of 1 space per 100 sqm as a maximum parking provision (which would be applied across the borough). Given the site's accessible location it is again considered that an element of parking restraint should be included to promote sustainable travel in respect to the proposed commercial uses. As such it is considered a materially lower parking provision would be appropriate in this instance.

Review of The London Plan Car Parking Standards

- 4.11 The car parking standards set out within The London Plan are expressed as a maximum standard. In respect to car parking The London Plan standards set a lower parking ratio when compared to the standards set out within Hillingdon's Unitary Development Plan. Furthermore, The London Plan states that *"All developments in areas of good public transport accessibility (in all parts of London) should aim for significantly less than 1 space per unit."*

- 4.12 The Greater London Authority (GLA) has been formally consulted on the development proposals. Further to a pre-planning meeting the GLA set out advice within their formal response (dated 4th November), which included advice on parking provision. A copy of the formal pre-application response received from the GLA has been attached as **Appendix D**. In respect to 'Transport' the GLA stated, *"The quantum of car parking is yet to be finalised, however, TfL has made clear that the development should include no more than 0.5 spaces per dwelling – given the good level of access to public transport enjoyed by the site. TfL is seeking similar car parking restraint more generally across the Hayes Housing Zone – in order to minimise the likelihood of adverse traffic impacts on the adjoining highway network."*
- 4.13 Additionally, the GLA confirmed that *"The development must also include electric vehicle charging points at the levels set out in the London Plan. Further, the applicant should consider car club provision as part of the parking strategy"*.
- 4.14 For residential development, The London Plan specifies that *"20 per cent of all spaces must be for electric vehicles with an additional 20 per cent passive provision for electric vehicle in the future."*
- 4.15 In respect to employment land uses The London Plan specifies a parking ratio of 1 space per 100 – 600 sqm of B1(a) employment floorspace (for Outer London locations) and that *"20 per cent of all spaces must be for electric vehicles with an additional 10 per cent passive provision for electric vehicles in the future."*

Proposed Vehicle Parking Strategy

- 4.16 All car parking for the redeveloped site will be provided beneath the main buildings, within an undercroft parking area, at ground floor level. The parking area will be accessed from Viveash Close.
- 4.17 A total of 50 car parking spaces will be provided within the car park, with 45 spaces allocated for the residential land use (including 5 spaces for disabled drivers) and a further 5 spaces provided for the commercial land use.
- 4.18 To maximise the efficient use of the available floor area, two rows of car stackers are proposed that will accommodate 40 car parking spaces (for the residential uses). A specification of the car stackers (Combilift 543) has been attached as **Appendix E**. Car stackers provide an efficient use of available floorspace, whilst providing parking that is both secure and convenient for future residents. Swept path analysis has been undertaken to demonstrate that adequacy of the parking layout and to ensure sufficient manoeuvring space is provided to enable vehicles to access the parking spaces and car stackers. Copies of the swept path analysis have been attached as **Appendix F**.
- 4.19 Parking spaces for disabled drivers have been provided in accordance with Hillingdon's Car Parking Standards, which require 10% of spaces to be provided to mobility standard.
- 4.20 With a total of 45 car parking spaces (including spaces for disabled drivers), residential car parking has been provided at a ratio of 0.51 spaces per flat. As such the level of residential car parking is fully in accordance with The London Plan and Hillingdon's maximum parking standards, and meets the requirement specified by TfL within the GLA's pre-planning response (0.5 spaces per flat).

- 4.21 As such it is considered that the proposed level of residential parking has been provided at an appropriate level that will minimise transport impacts whilst promoting and encouraging the use of viable alternative modes of sustainable transport.
- 4.22 A total of five parking spaces will be provided for the commercial uses, which equates to a provision of 1 space per 187 sqm (within the London Plan's specified range of 1 space per 100 – 600 sqm). This level of parking takes into account the accessible nature of the site and the need to promote sustainable transport and minimise transport impacts. The provision of 5 spaces is in accordance with Hillingdon's maximum parking standards and the standards set out within The London Plan.
- 4.23 A total of 5 motorcycle/moped parking spaces have also been provided within the car park, which exceeds the minimum requirements set out within Hillingdon's parking standards, which require a motorcycle/moped space for every 20 car parking spaces.
- 4.24 Electric charging points will be provided within one bank of car stackers (20 spaces). As such 20 of the 45 residential parking spaces (44%) will be designed for electric vehicles, which is in excess of the requirements set out within The London Plan, which requires a minimum of 20% of all car parking spaces to be designed for electric vehicles with an additional 20% passive provision for electric vehicles in the future. Charging points will also be provided for two of the five commercial car parking spaces. As such, parking for electric vehicles is provided in accordance with the standards set out within The London Plan.
- 4.25 Having considered relevant parking guidance, it is concluded that on-site car parking, motorcycle parking, disabled parking and parking for electric vehicles is all provided in accordance with the standards set out within The London Plan and Hillingdon's Unitary Development Plan, as well as being in accordance with the pre-planning advice received from both the GLA and Hillingdon.

Cycle Parking

- 4.26 A total of 140 cycle parking spaces are provided across the development, with 118 spaces for the residential uses, 12 secure cycle parking spaces for the commercial land use and a further 10 short term cycle parking spaces that are provided to the front of the building.
- 4.27 Hillingdon's cycle parking standards are expressed as a minimum and specify 1 space per 1 or 2 bed flat and 2 spaces for flats with three bedrooms or more. Based on the breakdown of 1, 2 and 3 bedroom units, the development proposals would require a total of 114 cycle parking spaces. A total of 118 secure cycle parking spaces are provided within two secure cycle stores (108 spaces) and within cycle racks located within the ground floor car park, which provided a further 10 spaces for the residential uses. As such cycle parking for the residential land use is in excess of the standards set out within Hillingdon's UDP.
- 4.28 Twelve secure cycle parking spaces will be provided for the commercial floorspace within the ground floor car park. A further 10 cycle parking spaces will be provided to the front of the building, which will provide an element of short-term cycle parking for the development. The provision of cycle parking spaces for the commercial floorspace is in accordance with the minimum cycle parking standards set out within Hillingdon's UDP and The London Plan.

- 4.29 It is considered that cycle parking is provided in accordance with the minimum standards set out within adopted parking guidance and provides a level of cycle parking that will encourage future residents and employees to utilise cycling as a means of transport.

Servicing

- 4.30 Refuse storage is provided within three refuse storage areas along the northern boundary of the site, with separate storage for the residential blocks (Block A and Block B) and for the commercial floorspace. Refuse collection will continue to take place from Viveash Close in accordance with the existing refuse collection strategy.

DRAFT

5 Transport Impacts

Traffic Impact

- 5.1 An assessment has been carried out of the likely traffic impact consequences of the redevelopment proposals. The TRICS database is an industry standard computer software package that is used to quantify the trip generation properties of various land uses. A TRICS based assessment has been carried out for both the existing B8 (storage and distribution) land use and the proposed (C3) residential and B1(a) Office land uses.
- 5.2 It is recognised that the trip generation properties of development are highly influenced by the accessibility of the location (i.e. proximity to town centre and public transport facilities, rather than location nationally) and the availability of parking. These factors have been taken into account when selecting sites, with 'town centre' sites being selected and inappropriate sites (such as sites with zero parking being removed). Where insufficient 'town centre' sites are available (for a particular land use) 'edge of town centre' sites have also been used.

Assessment of Existing (B8) Land Use

- 5.3 To assess the likely traffic impact associated with the established land use the TRICS database has been interrogated and sites have been selected based on the following search criteria:
- Land Use – Employment, Warehousing (Commercial)
 - Regions – England, with Central London boroughs removed
 - Site Locations – Town Centre and Edge of Town Centre
 - Data Range – January 2008 onwards.
- 5.4 Trips rates have been extracted and applied to the existing floor area of 1820 sqm. A summary of the trip rates and associated traffic attraction for the existing commercial land uses, has been set out within Table 5.1 below, whilst copies of the TRICS outputs are provided as [Appendix G](#).

B8 (Storage and Distribution) Land Use	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
Trip rate (per 100 sqm)	0.189	0.085	0.114	0.218	2.122	2.140
Total trips (1820 sqm)	3	2	2	4	39	39

Table 5.1 – Vehicular trip rates and trips associated with existing (B8) land use

- 5.5 As can be seen from Table 5.1 above, it is estimated that the established land use would attract circa 5 to 6 vehicular trips during the am and pm peak periods and circa 78 trips across the course of a day.

Assessment of Proposed Land Uses

- 5.6 A similar TRICS assessment has been carried out for the proposed land uses. The assessment has been carried out with reference to TRICS land use categories B1(a) 'Office', C3 'Flats Privately Owned' and C3 'Flats Affordable'.
- 5.7 To assess the likely traffic impact associated with the B1(a) office land use the TRICS database has been interrogated and sites have been selected based on the following search criteria:
- Land Use – Employment
 - Regions – England, with Central London boroughs removed
 - Site Locations – Town Centre
 - Data Range – January 2008 onwards.
- 5.8 A summary of the trip rates and associated traffic attraction, based on 934 sqm of B1(a) floorspace, are provided within Table 5.2 below, whilst copies of the TRICS outputs are provided at [Appendix G](#).

B1(a) Office	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
Trip rate (per 100 sqm)	0.468	0.026	0.026	0.482	1.452	1.408
Total trips (934 sqm)	4	0	0	5	14	13

Table 5.2 – Vehicular trips associated with B1(a) Office land use

- 5.9 To assess the likely traffic impact associated with the C3 land use 'Flats Privately Owned' the TRICS database has been interrogated and sites have been selected based on the following search criteria:
- Land Use – Residential, Flats Privately Owned
 - Regions – England, with Central London boroughs removed
 - Site Locations – Town Centre
 - Data Range – January 2008 onwards.

- 5.10 A summary of the trip rates and traffic attraction associated with 57 'private' flats are provided within Table 5.3 below, whilst copies of the TRICS outputs are provided at [Appendix G](#).

C3 Flats Privately Owned	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
Trip rate (per dwelling)	0.023	0.041	0.044	0.035	0.361	0.363
Total trips (57 flats)	1	2	3	2	21	21

Table 5.3 – Vehicular trips associated with C3 land use 'Flats Privately Owned'

- 5.11 To assess the likely traffic impact associated with the C3 land use 'Flats Affordable' the TRICS database has been interrogated and sites have been selected based on the following search criteria:

- Land Use – Residential, Affordable/Local Authority Flats
- Regions – England, with Central London boroughs removed
- Site Locations – Town Centre
- Data Range – January 2008 onwards.

- 5.12 A summary of the trip rates and traffic attraction associated with 31 'affordable' flats are provided within Table 5.4 below, whilst copies of the TRICS outputs are provided at [Appendix G](#).

C3 Flats Affordable	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
Trip rate (per dwelling)	0.037	0.065	0.065	0.074	0.613	0.538
Total trips (31 flats)	1	2	2	2	19	17

Table 5.4 – Vehicular trips associated with C3 land use 'Flats Affordable'

- 5.13 The above trip predictions (for the proposed land uses) have been summarised within Table 5.5 below, to enable a total traffic attraction associated with the proposed land uses to be quantified.

Land Use	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
B1(a) Office (934 sqm)	4	0	0	5	14	13
Private Flats (57 flats)	1	2	3	2	21	21
Affordable Flats (31 flats)	1	2	2	2	19	17
Total Trips (Proposed land-uses)	6	4	5	9	54	51

Table 5.5 – Total vehicular trips associated with proposed land uses

Net Impact

- 5.14 To consider the net impact of the redevelopment proposals, the trip predictions for the proposed land uses have been compared to the trip predictions for the established land uses. The net impact of the redevelopment proposals is set out within Table 5.6 below.

	AM Peak (0800-0900)		PM Peak (1700-1800)		Daily	
	Arr	Dep	Arr	Dep	Arr	Dep
Existing land uses	3	2	2	4	39	39
Proposed land uses	6	4	5	9	54	51
Net Impact	3	2	3	5	15	12

Table 5.6 – Net traffic impact of redevelopment proposals

- 5.15 It can be seen from Table 5.6 that the redevelopment of the site for C3 residential and B1(a) commercial purposes will be likely to result in circa 5 additional trips during the am peak period, 8 trips during the pm peak period and 27 trips across the course of a typical weekday.
- 5.16 Such impacts are considered immaterial in terms of the impact on the surrounding highway network, with an addition vehicular movement every 12 minutes (am peak) and circa every 7.5 minutes (pm peak) when compared to the established land use.

- 5.17 Once the identified impacts are distributed on the highway network, and impacts on the Principal Highway Network are considered (in accordance with Policy AM2 and AM7) the impacts set out above will be imperceptible. It is concluded, therefore, that the identified impacts would have an immaterial impact on the operation of the highway network and do not require further assessment.
- 5.18 Furthermore, the redevelopment of the site, for principally residential uses, would result in a material reduction in OGV trips. Table 5.7 below sets out daily OGV trips for the established and proposed land uses, which have been taken from the TRICS Outputs, attached as [Appendix G](#).

Land Use	OGV Daily Trip Rate	Daily Trips
B8 Storage and Distribution (1820 sqm)	1.328 (per 100 sqm)	24
Total Existing Land Use		24
B1(a) Office (934 sqm)	0.016 (per 100 sqm)	0
Private Flats (57 flats)	0.018 (per dwelling)	1
Affordable Flats (31 flats)	0.000 (per dwelling)	0
Total Proposed Land Uses		1
Net Impact OGV Trips		-23

Table 5.7 – Net impact in OGV trips

- 5.19 It can be established that the B8 land use would be expected to generate circa 24 OGV trips across the course of a day, whilst the combined proposed land uses would be expected to attract circa 1 OGV trip per day. As such the redevelopment proposals will bring a welcome reduction of circa 23 commercial/goods vehicle trips across the course of a typical weekday.
- 5.20 It is concluded, that the redevelopment proposals will not result in any material residual impacts in terms of vehicular trips and can be accommodated without prejudicing existing highway conditions. Furthermore, the removal of B8 commercial activities will result in a material reduction in OGV traffic associated with the site, providing a positive benefit to highway conditions.

Modal Split

- 5.21 A TRICS based multi modal trip assessment has been carried out to provide an estimate of the future modal split for travel to and from the site. Sites have been selected based on the following search criteria:
- Land Use – Residential, Mixed Private/Affordable Housing
 - Regions – England
 - Site Locations – Town Centre
 - Data Range – January 2008 onwards.
- 5.22 It should be noted that using the above selection process results in the selected sites being 'flatted development' sites only, which have been used to provide representative modal split data for future residential trips to and from the site. A copy of the TRICS Outputs are attached as [Appendix H](#). A breakdown of the modal split for travel to and from the site has been calculated. The transport modal splits are summarised within Tables 5.8 below.

Mode of Transport	Modal Split
Vehicles	12.4%
Vehicle Occupants	15.1%
Cyclists	4.9%
Pedestrians	40.5%
Bus	28.3%
Rail	11.2%

Table 5.8 – Travel modal split

- 5.23 The travel modal splits identified above have been used to inform Travel Plan targets that are included within the Travel Plan that has been submitted to support the planning application.

6 Sustainable Transport Strategy

- 6.1 As set out within Chapter 2 of this assessment the NPPF clarifies that all developments which generate significant amounts of movement should be required to provide a Travel Plan. A Travel Plan is a long-term management strategy for a site that seeks to deliver sustainable travel objectives through actions, monitoring and review.
- 6.2 The NPPG supports national planning policy and recognises that Travel Plans can positively contribute to encouraging sustainable travel; lessening traffic generation and its detrimental impacts; reducing carbon emissions and climate impacts; creating accessible, connected, inclusive communities; improving health outcomes and quality of life; improving road safety; and reducing the need for new development to increase existing road capacity or provide new roads.
- 6.3 A Travel Plan has been prepared for the site, which has been submitted as part of the planning submission. The main objective of the Travel Plan will be to provide a long-term strategy for encouraging future residents and employees to reduce dependency on travelling as single occupancy car drivers in favour of alternative sustainable modes of transport.
- 6.4 The Travel Plan has been prepared in accordance with Transport for London's Guidance on Travel Plans as well as national guidance on Travel Plans. In this respect the Travel Plan sets out targets, actions and monitoring, and states when future reviews should be undertaken to ensure adequate measures are in place to meet agreed targets for reducing single occupancy car trips.
- 6.5 The Travel Plan will be administered by a Travel Plan Coordinator who will oversee the implementation of the Travel Plan and act as a point of contact for future residents, employees and the Highway Authority.

7 Summary and Conclusions

- 7.1 This Transport Assessment has been prepared by Vision Transport Planning on behalf of The Elite Group (the Applicant). Vision Transport Planning has been commissioned to assess the highway and transportation implications associated with the redevelopment of land at 3 Viveash Close, Hayes, UB3 4RY (the site).
- 7.2 The site is located within Hayes town centre and is positioned at the end of Viveash Close, which is a cul-de-sac accessed from Nestle's Avenue. The site is located to the south and adjacent to the Hayes and Harlington mainline rail track and is a circa 150 metre walk distance from Hayes and Harlington station, via the station car park.
- 7.3 The site includes an existing building that falls within a B8 (storage and distribution) land use, with ancillary office space. Informal on-site parking is currently provided adjacent to the building (adjacent to the north-west boundary), which is accessed directly from Viveash Close. Furthermore, the site includes a commercial service bay that is also accessed directly from Viveash Close.
- 7.4 The development proposals include the demolition of the existing buildings following which the site will be redeveloped for C3 residential and B1(a) commercial purposes. The redeveloped site will provide a total of 88 apartments and 934 sqm of B1(a) commercial floorspace. Vehicular access from Viveash Close will be retained (in modified format) and will provide access to an undercroft parking area at ground floor level.
- 7.5 A total of 50 car parking spaces will be provided within the car park, with 45 spaces allocated for the residential land use (including parking spaces for disabled drivers) and 5 spaces provided for the commercial land use. Additionally, five motorcycle parking spaces will be provided along with 140 cycle parking spaces.
- 7.6 Having assessed relevant matters relating to highways and transport it is concluded that:
- The site benefits from convenient access to Hayes and Harlington mainline rail station and a comprehensive range of bus services, all of which are within a 200 metre walk distance from the site.
 - The site is located in a highly accessible location and has the potential to reduce reliance upon the private car.
 - Having reviewed Personal Injury Accident (PIA) records it is apparent that there were no recorded PIAs within Viveash Close, Nestle's Avenue or Harold Avenue, indicating a good road safety record within streets that are most likely to be impacted by any changes in traffic as a result of the development proposals.
 - The proposed access has been designed in accordance with the local context, where speeds are particularly restrained and where there are direct accesses.
 - On-site car parking, motorcycle parking, disabled parking and parking for electric vehicles are all provided in accordance with the standards set out within The London Plan and Hillingdon's Unitary Development Plan, as well as being in accordance with the pre-planning advice received from both the GLA and Hillingdon.

- Cycle parking is provided in accordance with the minimum standards set out within adopted parking guidance and provides a level of cycle parking that will encourage future residents and employees to utilise cycling as a means of transport.
- Refuse collection will continue to take place from Viveash Close in accordance with the existing refuse collection strategy.
- The redevelopment of the site will be likely to result in circa 5 additional trips during the am peak period, 8 trips during the pm peak period and 27 trips across the course of a typical weekday.
- When the identified impacts are distributed on the highway network, and impacts on the Principal Highway Network are considered (in accordance with Policy AM2 and AM7) the identified transport impacts will be imperceptible and will have an immaterial impact on the operation of the highway network.
- The removal of B8 commercial activities will result in a material reduction in OGV traffic associated with the site, providing a positive benefit to highway conditions.
- A Travel Plan has been prepared for the site, which will provide a long-term strategy for encouraging future residents and employees to reduce dependency on travelling as single occupancy car drivers in favour of alternative sustainable modes of transport.

7.7 In summary, it is concluded that the development proposals accord with the guiding principles of the NPPF and accord with relevant transport policy. On the basis of the assessment carried out it is concluded that the proposals can be accommodated without detriment to the operation of the local highway network and that there is no reason why the development proposals should be resisted for reasons relating to highways or transport.

Appendix A
PTAL Report

DRAFT

Appendix B
PIA Data

Appendix C
Hillingdon's Officer Report

Appendix D
GLA Pre-Application Report

Appendix E
Combilift 543 Specification

Appendix F
Swept Path Analysis

Appendix G
TRICS Outputs

Appendix H
TRICS Outputs (Multi-modal)