Merchant Land Investments Limited

Manor Lodge, Northwood

Transport Statement

April 2023

Project Code: 06181

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Version Control and Approval

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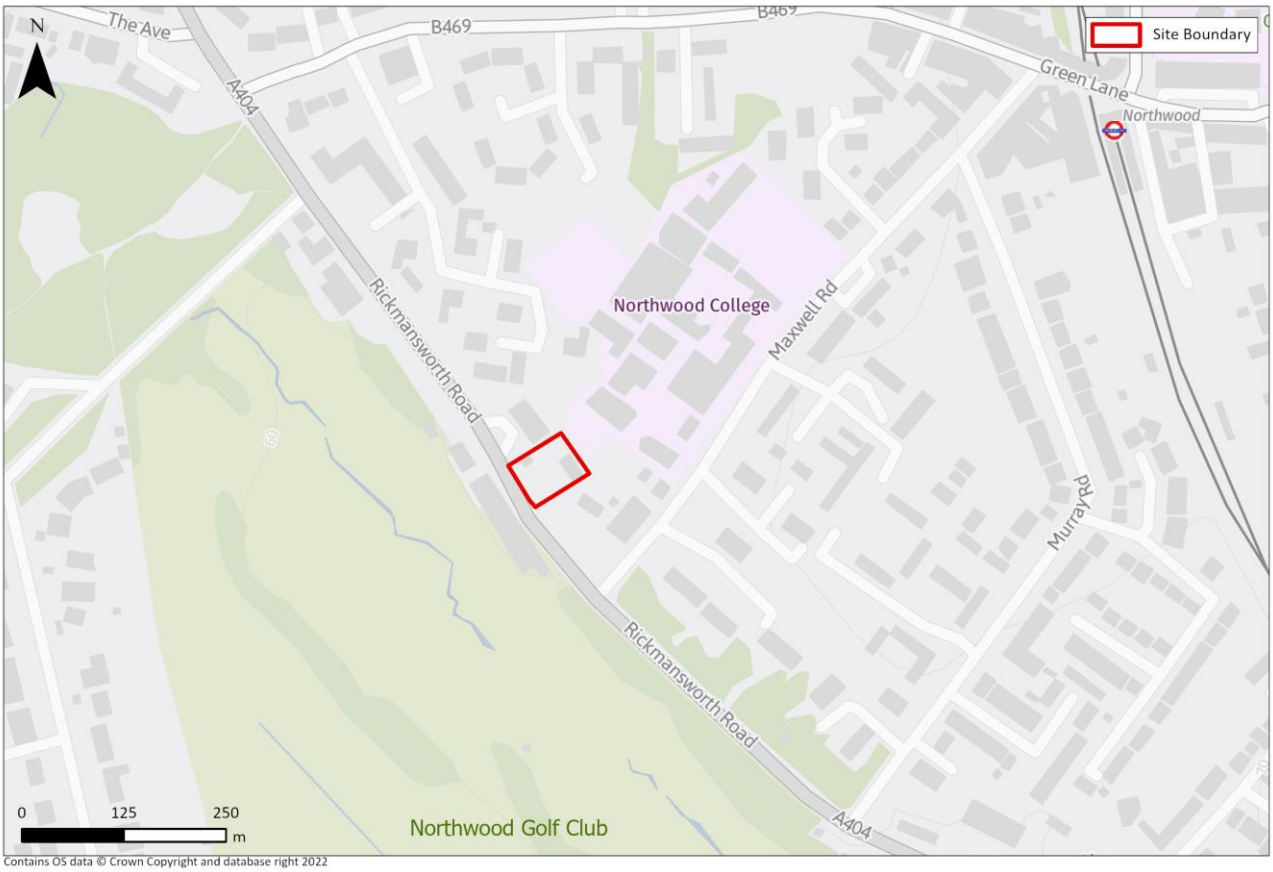
1 Introduction

1.1 Overview

1.1.1 This Transport Statement (TS) has been prepared by PJA on behalf of Merchant Land Investments Limited in association with the proposed redevelopment of a site at Manor Lodge, Rickmansworth Road, Northwood, Hillingdon.

1.1.2 The development proposals comprise the *'Demolition of the existing structures and creation of 6 family residential units together with means of access and associated parking and landscaping'*. A site location plan is shown in Figure 1-1.

Figure 1-1: Site Location Plan



1.1.3 This TS provides a comprehensive review of the existing transport conditions and sets out the anticipated impacts of the development proposals on the surrounding highway network.

1.1.4 Throughout this report 'the site' refers to the land located at the aforementioned address and 'the development' refers to the buildings that are proposed to be constructed in the future.

1.2 Report Structure

1.2.1 Following the Introduction, this TS is comprised of the following sections:

- **Section 2** provides an overview of national, regional and local transport and land use planning policy relevant to the proposed development.
- **Section 3** applies the TfL Healthy Streets approach and provides an Active Travel Zone (ATZ) Assessment of the site and surrounding area.
- **Section 4** describes the existing highway layout in the vicinity of the development site.
- **Section 5** provides a summary of the Site's accessibility by non-car modes of travel.
- **Section 6** summarises the proposed development scheme.
- **Section 7** quantifies the development Site's trip generation, through a vehicle trip assessment from surveys of comparable sites, extracted from the TRICS database.
- Finally, **Section 8** provides a summary and conclusion.

2 Policy Review

2.1 Overview

2.1.1 This section of the report sets out the key national, regional and local transport policy requirements relevant to the proposed development.

2.2 National Policy

2.2.1 The revised National Planning Policy Framework (NPPF) was published in March 2012 and updated in July 2021 and sets out the government's planning policies for England and how these are expected to be applied.

2.2.2 Paragraph 113 notes that *"all development that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed".* This TS has been prepared to satisfy this requirement.

2.2.3 Paragraph 110 of the NPPF states that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *safe and suitable access to the site can be achieved for all users;*
- *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.2.4 Furthermore, Paragraph 111 states:

"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

2.2.5 As set out in Paragraph 112, within this context, applications for development should:

a *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public*

transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*

c *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*

d *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

e *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

2.2.6 As detailed in the following sections of this TS, the site is located in close proximity to public transport services and local amenities, supporting sustainable development of the site.

2.3 Regional Policy

London Plan (2021)

2.3.1 The London Plan is a statutory spatial development strategy for the whole of London that is written by the Mayor of London and published by the Greater London Authority. The current London Plan was published and adopted in March 2021 and Chapter 10 sets out policies relating to transport.

2.3.2 Policy T1 – Strategic approach to transport states the following:

"(a) Development proposals should facilitate:

1 The delivery of the Mayor's strategic target of 80 per cent of all trips in London to be made by foot, cycle or public transport by 2041.

2 The proposed transport schemes set out in Table 10.1

(b) All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated."

2.3.3 This Transport Statement has been prepared to address the requirements set out within Policy T4 – Assessing and mitigating transport impacts', which states:

"Transport assessments/statements should be submitted with development proposals to ensure that impacts on the capacity of the transport network (including impacts on pedestrians and the cycle network), at the local, network-wide and strategic level, are fully assessed. Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, Parking Design and Management Plans, Construction

Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance."

Transport for London (TfL) – Healthy Streets Approach

2.3.4 The Healthy Streets Approach is the framework used to guide the Mayor's Transport Strategy and is a system of policies and strategies aimed at delivering a healthier, more inclusive city where people choose to walk, cycle and use public transport. It puts people and their health at the centre of decisions about how public spaces are designed, used and managed. The approach is based on ten indicators of a Healthy Street which focus on the experience of people using streets:

- Pedestrians from all walks of life
- Easy to cross
- Shade and shelter
- Places to stop and rest
- Not too noisy
- People choose to walk, cycle and use public transport
- People feel safe
- Things to see and do
- People feel relaxed
- Clean air

2.3.5 TfL states that *"working towards these will help to create a healthier city, in which all people are included and can live well, and where inequalities are reduced."* Within that framework, this Transport Statement report will demonstrate how the development will support key journeys to and from the site by sustainable modes of transport.

2.4 Local Policy

Hillingdon Local Plan (2012)

2.4.1 The Hillingdon Local Plan was adopted in 2012 and consists of two parts. Part 1 sets out the overall level and broad locations of growth up to 2026. It comprises a spatial vision and strategy, strategic objectives, core policies and a monitoring and implementation framework with clear objectives for achieving delivery. These policies are supported by more detailed policies and allocations set out in the Local Plan Part 2.

2.4.2 Policy T1 from Part 2 of the Local Plan: Accessible Local Destinations states that: *"the Council will steer development to the most appropriate locations in order to reduce the impact on the transport network. All development should encourage access by sustainable modes and include good cycling*

and walking provision". The development is located in an accessible location and therefore supports this policy.

2.4.3 The London Borough of Hillingdon's (LBH) parking standards are set out within Appendix C of the Local Plan Part 2 – Development Management Policies and the standards relevant for the proposed development are reproduced below:

Table 2-1: LBH Maximum Parking Standards

Unit	Maximum Car Parking	Maximum Bicycle Parking
Dwellings	2 spaces per dwelling	a. 1 space per 1 or 2 bed unit
		b. 2 spaces per 3 or more bed unit

2.4.4 A pre-application response from LBH, including comments from highways officers have confirmed that the above parking standards are applicable to the development proposals and the proposals will therefore accord with these standards. A copy of the pre-application response is provided within **Appendix A**.

3 Transport Planning for People

3.1 Overview

3.1.1 The core principle of the 'Healthy Streets' Approach is to put people first, prioritising walking, cycling and public transport over private vehicles. This approach takes account of different classifications of people, their travel characteristics and their propensity to change their mode of travel over time.

3.1.2 Within the context of the above, in this Section reliance is made on the Transport Classification of Londoners (TCoL) multi-modal customer segmentation tool developed by TfL. The TCoL has been designed to categorise Londoners based on the travel choices they make and the motivations for making those decisions.

3.1.3 In total there are nine customer segments described in the TCoL report. Based on the proposed residential units which will occupy the site, the customer's segments that are considered to be likely users of the development are those listed below:

- **Affordable Transitions** – new jobs and families, low car, high bus, walk, cycle, highest level of change,
- **Educational Advantage** – well educated, high income, high PT/active, low car, higher level of change,
- **Suburban Modernisation** – families with children, high car use, some bus use, average level of change.

3.1.4 The residential units that would occupy the site would cater to segments of the population that would typically tend to have lower levels of car ownership, higher levels of active travel and higher attitudes towards change on average.

3.1.5 The TfL classification tool suggests that the Borough has a mixed profile in terms of user types and transport usage. Car usage is generally high with an average/low propensity towards change (i.e. mode shift away from car use).

3.1.6 Notwithstanding the above, given the site's existing local public transport connections there is a potential for a change in attitude towards sustainable transport options. This is particularly relevant for new development schemes, where car parking provision will be low, and an emphasis will be placed on the ability for residents to live car free lifestyles.

3.2 Active Travel Zone

3.2.1 The purpose of the Active Travel Zone (ATZ) assessment is to establish what transport connections and local amenities would be accessible to future residents at the site and establish whether these facilities would be sufficient for site occupiers to live a 'car free' lifestyle.

3.2.2 The ATZ assessment for the site is presented as a series of illustrated maps, demonstrating how people of all abilities can make every day journeys from the site, using the active travel network.

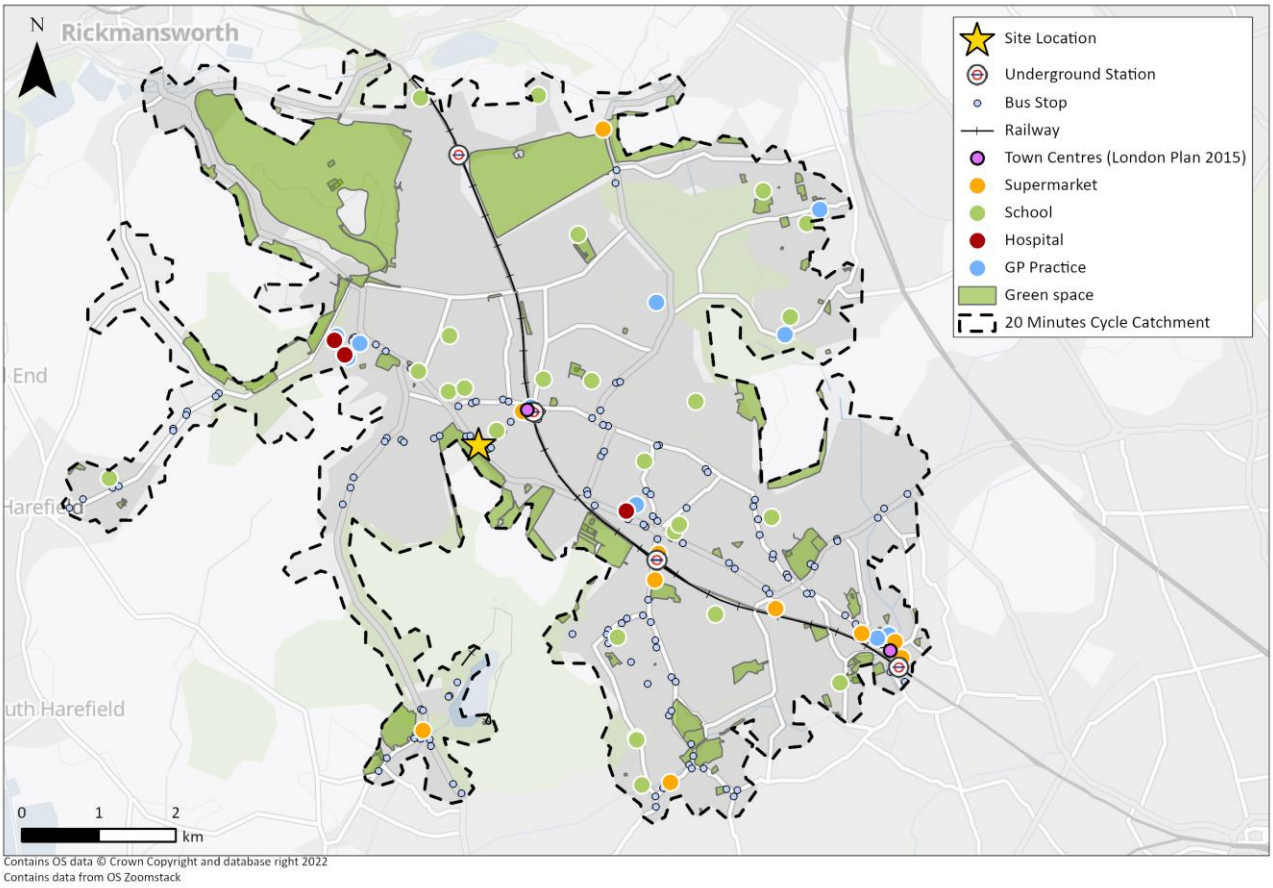
3.2.3 The ATZ assessment considers an area covered by a 20-minute cycle time from the site and considers access to local public transport connections, including bus stops and train stations.

3.2.4 ATZ Map 1 illustrates a 20-minute cycle isochrone from the site, with the following key points of interest identified:

- Public Transport stops and stations,
- Supermarkets,
- Places of Worship,
- GP Surgeries / Hospital,
- Schools/University,
- Greenspace,
- London 2015 town centres,
- Transport for London Road Network (TLRN)
- London's current and future London-wide strategic cycle network,

3.2.5 ATZ Map 1 identifies that a significant number of services, amenities and local transport links are available within 20-minute cycle catchment of the site, including schools, supermarkets, medical facilities, green spaces, public transport services and Northwood town centre. ATZ Map 1 is presented in Figure 3-1.

Figure 3-1: ATZ Map 1



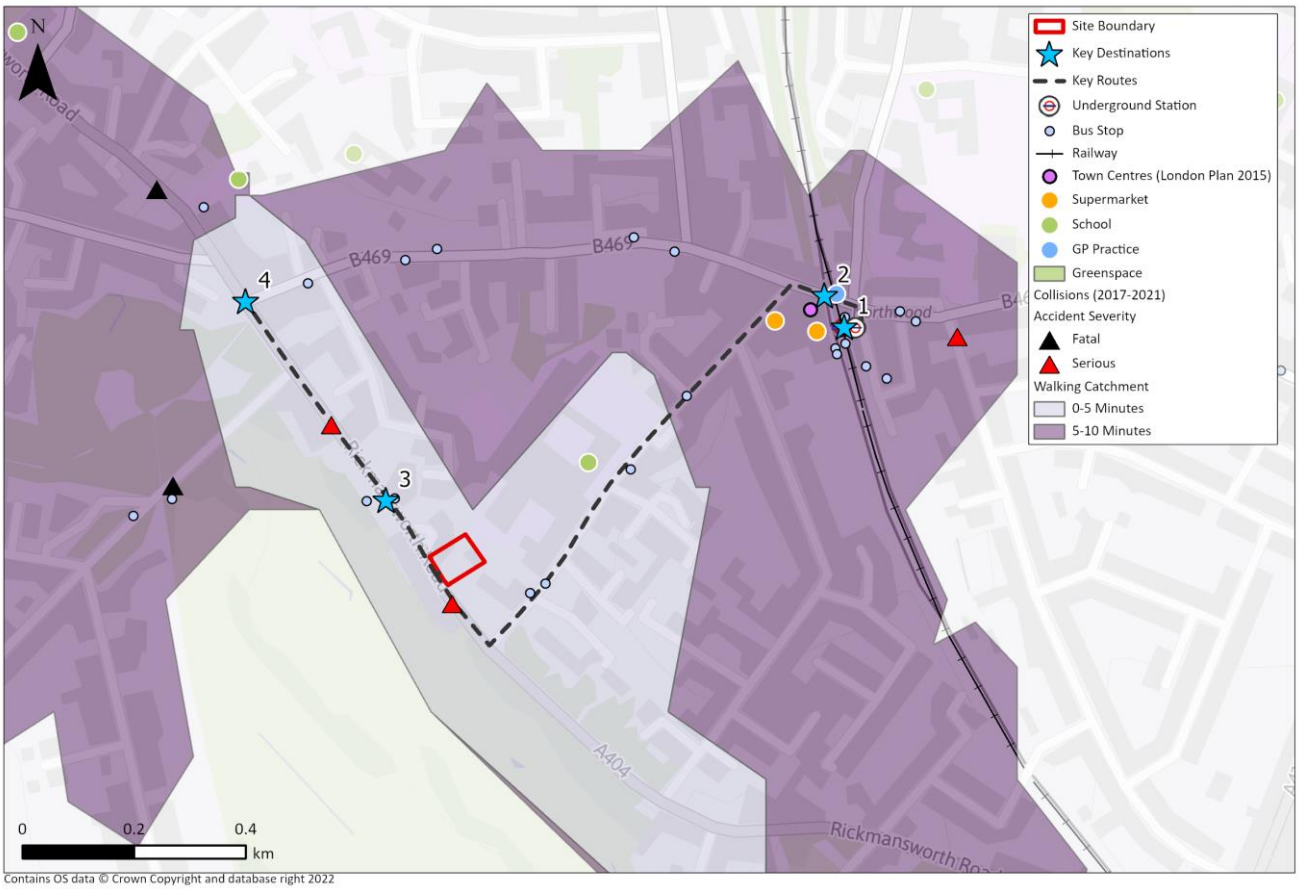
3.2.6 A total of four Key Destination Routes have been identified within the ATZ study area. The key destinations and routes considered in relation to the site are as follows:

- **Key Destination 1** – Northwood station
- **Key Destination 2** – Northwood Town Centre
- **Key Destination 3** – Bus stops V/W (Northwood Golf Course)
- **Key Destination 4** – Bus stop on Myrtleside Close / The Avenue

3.2.7 The extent of the Key Destination Routes is illustrated within ATZ Maps 2 and 3. A full review of the routes is provided in **Appendix B**.

3.2.8 ATZ Map 2 is a localised plan showing the Key Destination Routes; the closest and most convenient public transport stops and stations and key services and amenities, as well as Personal Injury Collision data, derived from the DfT. ATZ Map 2 is presented in Figure 3-2.

Figure 3-2: ATZ Map 2



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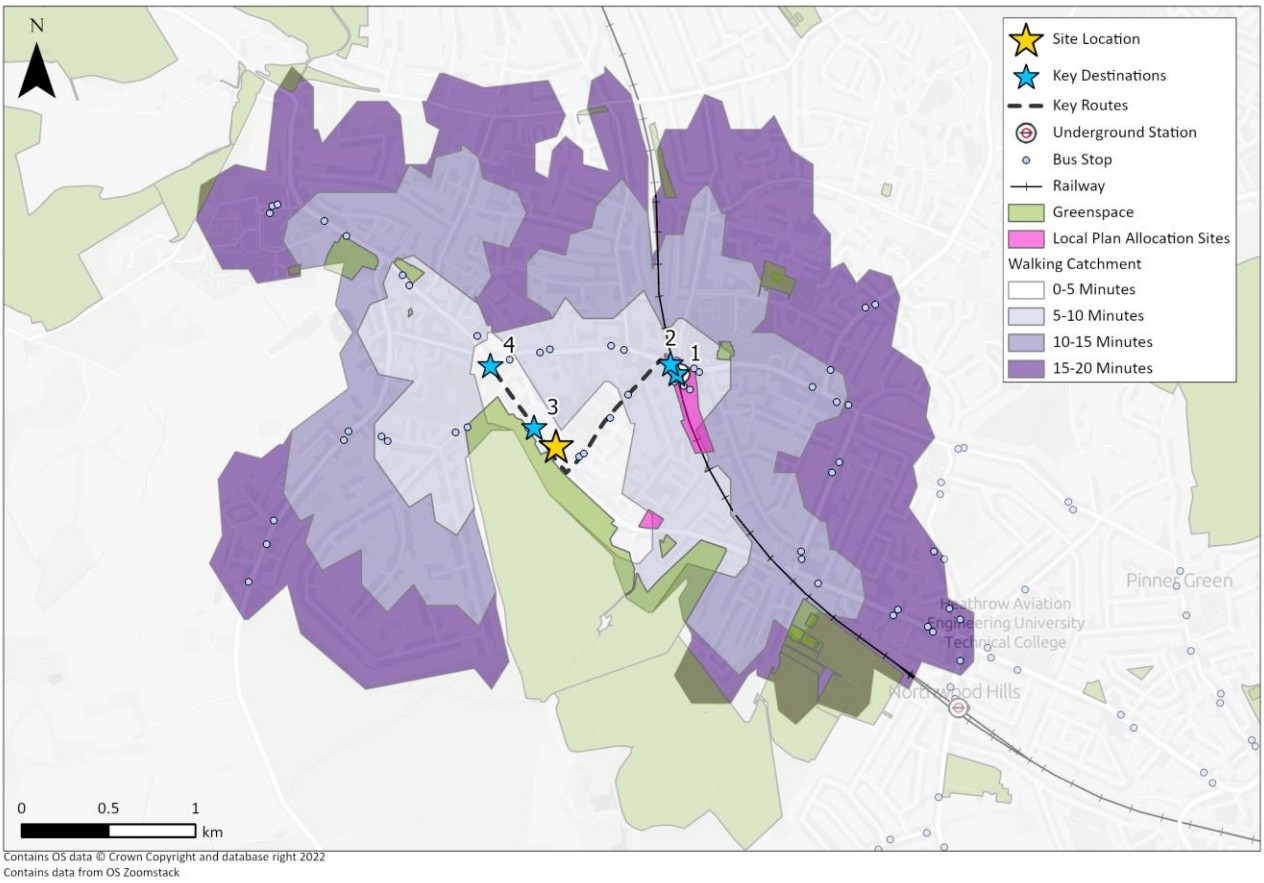
Contains data from OS Zoomstack
Collision Data obtained from Department for Transport

3.2.9 ATZ Map 3 depicts the area surrounding the site, Key Destination Routes, access to green space, public transport density and highlights key local plan allocation sites from Hillingdon's Local Plan. ATZ Map 3 is presented in Figure 3-3.

Figure 3-3: ATZ Map 3



3.2.10 ATZ Maps 2 and 3 establish that local public transport connections are accessible on foot from the site. There are bus stops located approximately 75m to the north of the site, along Rickmansworth Road. Further stops are located approximately 150m to the east of the site, along Maxwell Road.

3.2.11 Northwood station is located approximately 750m to the northeast of the site and provides access to London Underground Metropolitan Line services.

3.2.12 Northwood town centre is located approximately 800m to the northeast of the site. Northwood town centre provides significant retail opportunities, including a Tesco Express store. Furthermore, the town centre also provides access to healthcare facilities and schools.

3.2.13 In summary, the ATZ maps demonstrate that the site is located within a walk distance of Northwood town centre, from which a number of services and amenities are accessible, as well as a number of public transport stops and the station. As a result, it is considered that local facilities are sufficient for prospective site occupiers to live a 'car free' lifestyle.

4 Site and Surroundings

4.1 Overview

4.1.1 The application site is currently occupied by Manor Lodge, an existing two-storey residential dwelling (Use Class C3).

4.1.2 The site is located to the southwest of central Northwood, within a predominantly residential area. The site is bound by Rickmansworth Road to the south, residential developments to the east and west, and Northwood College to the north.

4.1.3 Northwood town centre is located approximately 800m to the northeast of the site. Northwood station, which is served by London Underground Metropolitan Line services, is located approximately 750m to the northeast of the site.

4.1.4 Vehicular access to the Site is currently provided from Rickmansworth Road, approximately 100m northwest of the junction of Rickmansworth Road and Maxwell Road. Vehicular access is currently provided via a narrow crossover to the north-west corner of the site, which is presented in Figure 4-1.

Figure 4-1: Existing Site Access, from Rickmansworth Road

4.1.5 A separate pedestrian access is currently located approximately 30m to the south of the existing vehicular access, as presented in Figure 4-2.

Figure 4-2: Existing Pedestrian Access, From Rickmansworth Road

4.1.6 A site location and context plan is presented in Figure 1-1.

4.2 Existing Highway Network

A404 Rickmansworth Road

4.2.1 Rickmansworth Road is a single carriageway road with a northwest-southeast alignment, connecting with Pinner Road to the south and London Road / Batchworth Lane to the north. Rickmansworth Road is subject to a 30mph speed limit in the vicinity of the site.

4.2.2 Footways and streetlights are observed along both sides of Rickmansworth Road. A zebra crossing is present approximately 50m to the south of the site, along Rickmansworth Road.

4.2.3 In the vicinity of the site, double yellow line markings are present along the eastern side of Rickmansworth Road, which restrict waiting at any time. Waiting by goods vehicles and buses is also restricted between midnight-8am and 5:30pm-midnight along this section of Rickmansworth Road.

4.2.4 Along the western side of Rickmansworth Road, adjacent to Northwood Golf Club, a section of unrestricted on-street parking is present, as well as two blue badge holder spaces.

4.2.5 To the south of the site, Rickmansworth Road is provided with traffic calming features to reduce vehicular speeds. The carriageway width in each direction has been reduced through road markings

to encourage slower speeds. The route also features radar activated speed signs, such as at the junction with Hills Lane.

Maxwell Road

4.2.6 Maxwell Road is a single carriageway road with a northeast-southwest alignment, connecting with Rickmansworth Road to the south and Green Lane to the north. Maxwell Road is subject to a 30mph speed limit in the vicinity of the site.

4.2.7 Footways and streetlighting are present along both sides of Maxwell Road, in the vicinity of the site. An informal crossing is present at the junction of Maxwell Road / Rickmansworth Road, which is provided in the form of dropped kerbs and a pedestrian island.

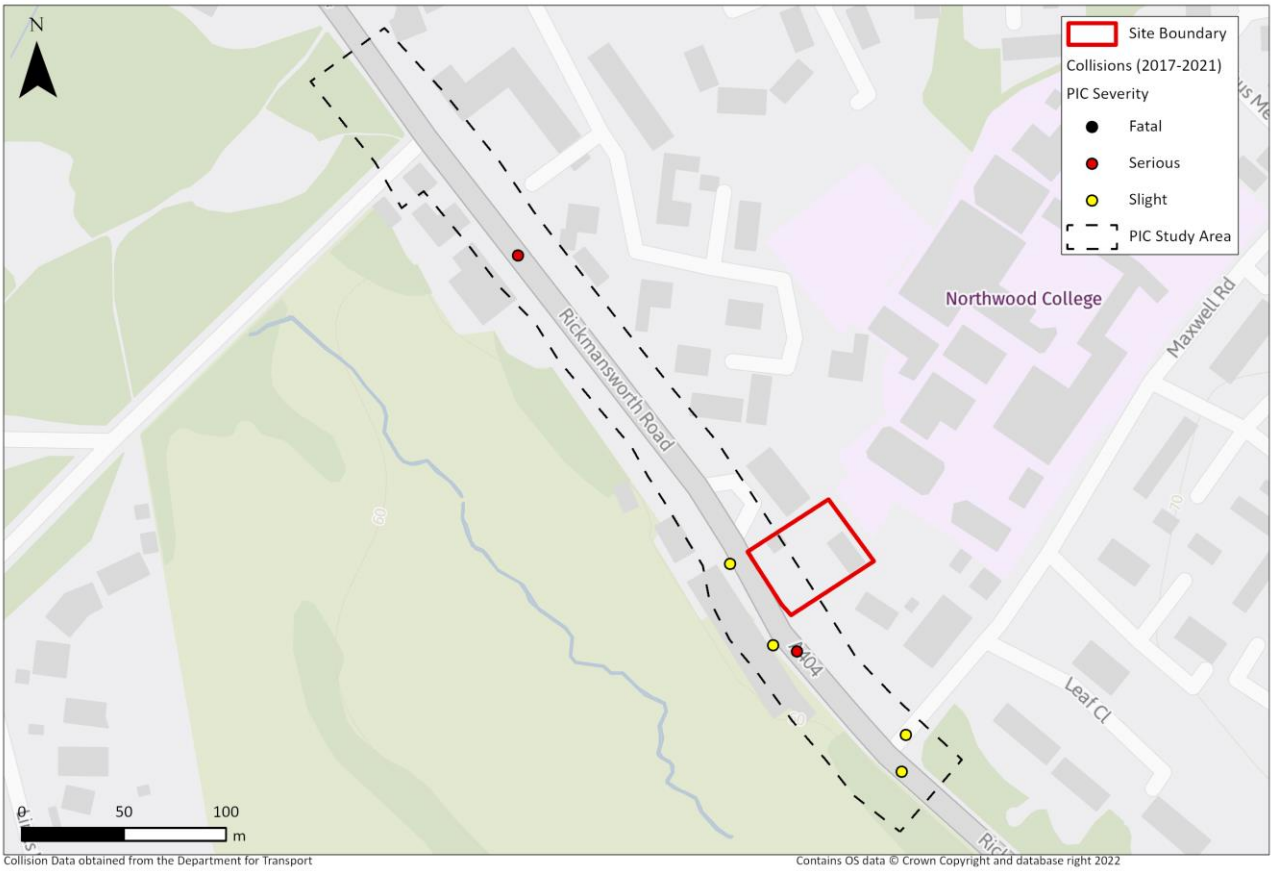
4.2.8 In the vicinity of the site, double yellow lines are present, indicating waiting is not permitted at any time. Maxwell Road is located within Controlled parking zone (CPZ) zone N, which allows permit holder parking only between Monday-Friday 1-2pm.

4.3 Collision Data Review

4.3.1 To establish whether there are any inherent safety issues on the local highway network, in the vicinity of the site, a review of collision data has been undertaken. Data was obtained from the DfT for the most recently available five-year period (2017-2021).

4.3.2 Personal Injury Collision (PIC) data has been obtained from the DfT for the study area defined within the plan presented within Figure 4-3.

Figure 4-3: Personal Injury Collision Locations



4.3.3 A total of six PICs were recorded within the study area, of which four collisions were recorded as resulting in 'slight' injuries and two 'serious' injuries. No fatal collisions were recorded within the study area during the period of assessment.

4.3.4 A summary of the recorded PICs is provided within Table 4-1.

Table 4-1: Summary of Recorded Personal Injury Collisions (PICs)

Location	Date	Time	Severity	Mode	Road Surface	Weather
Rickmansworth Rd J/W Maxwell Rd	11/03/2019	13:50	Slight	Pedal Cycle	Dry	Fine, no high winds
	18/05/2019	10.04	Slight	Car	Dry	Fine, no high winds
Rickmansworth Road, adj Northwood Golf Club	17/01/2017	17:54	Slight	Car	Wet / Damp	Raining, no high winds
	21/06/2019	13:45	Serious	Car	Dry	Fine, no high winds
	27/05/2021	15:10	Slight	Car	Dry	Fine, no high winds
Rickmansworth Rd J/W Copse Wood Way	17/10/2020	20:15	Serious	Motorcycle	Dry	Fine, no high winds

4.3.5 A description of the 'serious' PICs, involving vulnerable road users, recorded within the study area is presented below:

- A 'serious' PIC was recorded in 2020 at the junction of Rickmansworth Road and Copse Wood Way involving a motorcyclist. The incident occurred during hours of darkness, the road was dry and the weather fine. The incident was described as westbound motorcyclist moving straight ahead along the carriageway impacting car turning right at the junction.

4.3.6 The PIC data does not indicate any collision clusters within the study area associated with pedestrians or cyclists. Furthermore, there are no observable collision trends that indicate defects in the design of the highway that can be directly linked to negatively affecting highway safety.

4.3.7 Given the broad study area, it is not considered that an incident rate of six incidents over five years would be indicative of any inherent road safety deficiency in the assessed road network. In view of the scale and nature of the proposed development, it is considered that traffic associated with the development will not have a foreseeable impact on road safety conditions.

4.4 Summary

4.4.1 Northwood town centre is located approximately 800m to the northeast of the site. Northwood station, which is served by London Underground Metropolitan Line services, is located approximately 750m to the northeast of the site.

4.4.2 Vehicular access to the Site is currently provided from Rickmansworth Road, approximately 100m northwest of the junction of Rickmansworth Road and Maxwell Road.

4.4.3 A total of six PICs were recorded within the study area, of which four collisions were recorded as resulting in 'slight' injuries and two 'serious' injuries. No fatal collisions were recorded within the study area during the period of assessment.

4.4.4 A review of collision data for the local highway network demonstrates that there is no identifiable pattern of collisions associated with pedestrians and cyclists. It is considered that traffic associated with the development will not have a foreseeable adverse impact on local highway safety conditions.

5 Site Accessibility by Non-Car Modes of Travel

5.1 Preface

5.1.1 The planning process at the national and local levels aims to ensure that development sites are accessible by a range of sustainable transport modes.

5.1.2 This section of the TS considers the current opportunities to access the site by sustainable means of travel. Travel opportunities on foot, by cycle, bus and rail are considered in the context of the site.

5.2 Opportunities for Walking and Cycling

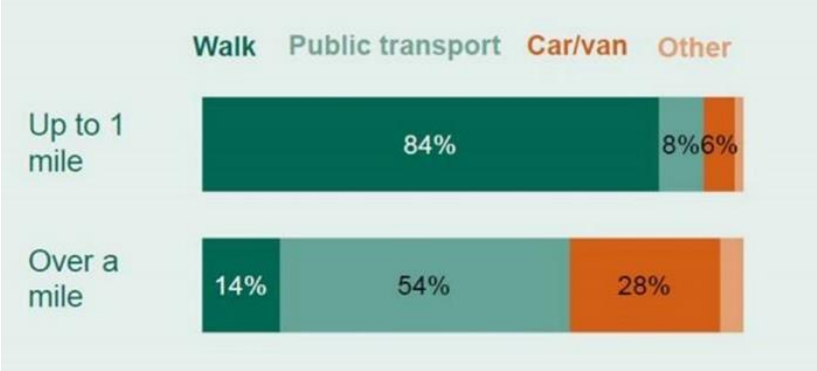
5.2.1 The Department for Transport 'Walking and Cycling Statistics, England 2019' publication indicates that the average walk distance within England for all journey purposes is 1.31 km. Given this is an average, for some, it will be acceptable to walk more than 1.31km.

5.2.2 Northwood station would be a key destination for pedestrians, located approximately 750m to the northeast of the site.

5.2.3 In terms of access on foot to local stations, it is relevant to consider data published in the National Travel Survey (NTS) relating to multi-stage trips.

5.2.4 A summary of that data is presented in Figure 5-1 below and this confirms that 84% of trips of up to one mile (1,609m) to stations are undertaken on foot, with 14% of trips of over one mile also being undertaken on foot.

Figure 5-1: NTS Data – Journey to Stations on Foot, as Part of a Multi-Stage Trip



5.2.5 Northwood town centre is located approximately 800m to the northeast of the site, and provides access to a number of services and amenities.

5.2.6 There are several green spaces accessible from the site on foot. The closest and most convenient green space in the vicinity of the site is Northwood Recreation Ground, located approximately 1.2km to the east of the site, along Chestnut Avenue.

5.2.7 A summary of some key local services and facilities is provided in Table 5-1.

Table 5-1: Summary of Local Facilities

Service	Name	Distance
Public Transport	Northwood Station	750m
Public Transport	Bus stops (Northwood Golf Course)	75m
Public Transport	Bus stops (Leaf Close)	150m
GP Surgery	Eastbury Surgery	750m
Pharmacy	Sharmans Pharmacy	600m
Supermarket	Tesco Express	600m
Supermarket	Waitrose	650m
Post Office	Northwood Post Office	750m
Education	Northwood College	300m
Place of Worship	Saint John's United Reformed Church	850m

5.2.8 The area local to the site is well served by pedestrian infrastructure, including sufficiently wide and lit footways and suitable crossing facilities of local roads. A zebra crossing is located approximately 50m to the southeast of the site, along Rickmansworth Road.

5.2.9 There is an existing network of public rights of way (PRoW) in the vicinity of the site. A map which presents all recorded PRoW in the borough is provided by LBH[1].A list of relevant PRoWs in the vicinity of the site is provided below:

- To the northwest of the site PRoW R14-R17 and R25-R27 are accessible in the vicinity of Copse Wood Way.
- To the southeast of the site, PRoW R28 and R29 are accessible from Hills Lane, which provide a route towards Ruislip to the south.
- To the northeast of the site PRoW R18/R19, accessible from Murray Road, provide a pedestrian route to/from Northwood station.

5.2.10 The NTS (2019) identifies that the average length for cycle journeys in England is 3.375 miles (5.4km). It should be noted that 5.4km represents the average distance for cycle journeys and as such some people will be prepared to cycle further distances. All of the facilities identified in Table 5-1 are within an acceptable cycle distance of the site.

5.2.11 A number of cycle routes are accessible from the site. A network of London Cycle Network (LCN) routes is accessible to the east of the site. This includes LCN 89, which provides an orbital route connecting with Heathrow and Ruislip to the south and Edgware and New Southgate to the east.

[1] https://lbhillingdon.maps.arcgis.com/apps/View/index.html?appid=91b11349f29f40ec9770eba1108229ae

5.2.12 National Cycle Route (NCN) 6 and 61 are accessible from Riverside Drive, approximately 4.2km to the west of the site. NCN 6 provides a long-distance cycle route between Uxbridge and Keswick. NCN 61 provides a cycle route between Maidenhead and Hoddesdon, via St Albans.

5.3 Public Transport Accessibility

Public Transport Accessibility Level (PTAL)

5.3.1 The Public Transport Accessibility Level (PTAL) methodology has been adopted by the GLA and TfL as a means of quantifying and comparing accessibility by public transport for a given site. It takes into account the time taken to access the public transport network, including:

- The walk time to various public transport services;
- The average waiting time for each service; and,
- The reliability of each service

5.3.2 Based on the TfL PTAL calculator, the site has a PTAL AI of 8.32, which equates to a 'Poor' PTAL of 2. The full PTAL report is presented in **Appendix C**.

5.4 Accessibility by Bus

5.4.1 The nearest bus stops are located at Northwood Golf Course, approximately 75m to the north of the site. Further bus stops are located approximately 150m to the east of the site, along Maxwell Road, as well as approximately 400 / 450m to the northwest, at Myrtleside Close / The Avenue, respectively.

5.4.2 The bus stops located at Northwood Golf Course and Maxwell Road are both served by the 331 route. The bus stops located at Myrtleside Close and The Avenue are served by the 282, 331, 508 and H11 routes.

5.4.3 All bus stops are provided with bus stop flag and timetable information. The bus stop at The Avenue is also provided with a bus shelter and seating.

5.4.4 A summary of bus services accessible in the vicinity of the site is presented in Table 5-2 overleaf.

Table 5-2: Summary of Bus Service Information

No.	Route	Peak Hour Frequency	Hours of Operation	Days of Operation
331	Ruislip Station – Northwood Golf Course – Northwood Myrtleside Close – Harefield St Mary's Road – Denham adj Station Parade – Uxbridge Belmont Road	Every 20 minutes	06:13 – 23:43	Monday – Sunday
282	Hanwell Ealing Hospital – Greenford Depot – Northolt Station – Eastcote Station – Northwood Station – Northwood Myrtleside Close – Northwood Mount Vernon Hospital	Every 12 minutes	05:57 - 00:47	Monday – Sunday
508	Northwood Mount Vernon Hospital – Northwood The Avenue – Northwood – Eastbury Avenue – South Oxhey Hayling Road – Watford High Street – King Langley Rectory Farm – Hemel Hempstead Combe Street	Every 30 minutes	06:52 – 19:52	Monday – Sunday
H11	Harrow Bus Station – Pinner Love Lane – Northwood Station – Northwood Myrtleside Close – Northwood Mount Vernon Hospital	Every 15 minutes	06:20 - 00:48	Monday – Sunday

5.5 Accessibility by Rail

5.5.1 Northwood station is located approximately 750m to the northeast of the site and is served by London Underground Metropolitan Line services. Northwood station provides a direct service towards central London, with Baker Street and Aldgate stations accessible within an approximate 31-minute and 50-minute travel time respectively.

5.5.2 A summary of local rail services are summarised in Table 5-3.

Table 5-3: Summary of Rail Service Information

Service	Destination	Peak Hour Frequency (trains per hour)	Journey Time (Approx)
TfL London Underground Metropolitan Line	Baker Street	4ph	31 minutes
	Aldgate	5ph	49 minutes
	Chesham	2ph	26 minutes
	Amersham	3ph	21 minutes
	Watford	7ph	10 minutes

5.6 Summary

5.6.1 This site has a good level of access to local public transport networks and is accessible both on foot and by cycle.

5.6.2 The site is located approximately 800m to the southwest of Northwood town centre, which provides access to a number of key services and amenities.

5.6.3 Northwood station is located approximately 750m to the northeast of the site. Northwood station provides access to London Underground Metropolitan Line services.

5.6.4 The nearest bus stops are located along Rickmansworth Road, approximately 75m to the north of the site. Further bus stops are located at Maxwell Road, approximately 150m to the east of the site, as well as at Myrtleside Close / The Avenue, approximately 400m and 450m to the north of the site, respectively.

6 Development Proposals

6.1 Overview

6.1.1 The development proposals comprise the *'Demolition of the existing structures and creation of 6 family residential units together with means of access and associated parking and landscaping'*

6.1.2 The development proposals would be supported by a total of 12 car parking spaces.

6.1.3 A total of 14 cycle parking spaces (12 long-stay and 2 short-stay spaces) are proposed at the site, which accords with London Plan standards.

6.1.4 The architect's proposed site layout plans are provided in **Appendix D**.

6.2 Proposed Access Strategy

Vehicular Access

6.2.1 The proposed development would be served by a system of one-way entry and on-way exit from Rickmansworth Road:

- The existing vehicular access to the site, provided in the form of a vehicular crossover, would be retained as an exit only from the site.
- The development proposals would be supported by a new vehicular access, located approximately 25m to the south of the existing vehicular access to the site. This proposed access would serve as an entry only and would replace the existing pedestrian access at this location.

6.2.2 The access points are proposed to be gated. Sufficient room will be provided between the access gate and the back of footway to ensure a vehicle can stop at the gate without impeding the free flow of traffic along Rickmansworth Road.

6.2.3 The site access gates would be electronically controlled, with access provided to residents with a fob key / intercom system.

6.2.4 LBH pre-application response provided in **Appendix A** indicates that the proposed access arrangements would be considered acceptable, stating:

"There is no objection to the utilisation of the existing northern carriageway crossing (cc) for the purposes of vehicular access together with a new cc located at the southern extent of the envelope.

[…] A recessed gated provision would also accompany the new crossing and the proposed recession is considered acceptable as it allows for adequate stacking room for a vehicle discharging from the roadway."

6.2.5 The pre-application response also requests that satisfactory visibility splays be provided in line with design requirements set out within Manual for Streets. The drawing, attached within **Appendix E**, demonstrates that visibility splays of 2.4m x 43m can be achieved at the site access junction, in accordance with Manual for Streets (MfS) guidance for a 30mph speed limit.

6.2.6 The Vehicle swept path analysis of delivery and servicing vehicles likely to access the site, is attached within **Appendix F**. The drawings demonstrate that vehicles would be able to enter and exit the site in a forward gear.

Pedestrian and Cycle Access

6.2.7 A pedestrian and cycle access would be provided adjacent to the southern vehicular access gate, providing access directly from the footway on the A404 Rickmansworth Road.

6.3 Parking Provision

Car Parking

6.3.1 A total of 12 car parking spaces are proposed, at a ratio of 2 allocated spaces per unit. This is in accordance with the car parking standards set out within the London Borough of Hillingdon Local Plan Part 2 and pre-application advice has suggested that the proposed level of car parking is acceptable. All parking spaces will be positioned perpendicular to the internal drive and to the front of the allocated dwelling.

6.3.2 Vehicle swept path analysis presented within **Appendix F** demonstrates that all proposed car parking spaces on-site are accessible, and vehicles are able to enter/exit in a forward gear.

6.3.3 In excess of the requirements set out within Building Regulations Part S, each dwelling will be provided with a two active electric vehicle (EV) charging spaces. This exceeds the requirements set out within the London Plan (2021).

Cycle Parking

6.3.4 Cycle parking at the site will be provided in line with the requirements set out within Policy T5 and Table 10.2 of the London Plan (2021), which are presented in Table 6-1.

Table 6-1: London Plan (2021) Minimum Residential Cycle Parking Standards (Table 10.2)

Use Class	Long-stay (for residents)	Short-stay (for visitors)
C3-C4	1 space per studio or 1 person 1 bedroom dwelling 1.5 spaces per 2 person 1 bedroom dwelling 2 spaces per all other dwellings	5 to 40 dwellings: 2 spaces Thereafter: 1 space per 40 dwellings

6.3.5 In accordance with London Plan standards, it is proposed that a total 14 cycle parking spaces (12 long-stay and 2 short-stay spaces) will be provided at the site.

6.3.6 Long-stay cycle parking spaces will be located at the front of each unit and provide in the form of lockable cycle sheds. Each unit would be provided with two long-stay cycle parking spaces. The positioning of the cycle parking spaces ensures that cycle parking is as convenient as the car parking.

6.3.7 It is proposed that short-stay cycle parking would be provided in the form of a Sheffield stand, located adjacent to the vehicle exit point.

6.4 Delivery and Servicing

Delivery Vehicles

6.4.1 It is anticipated that most deliveries would be undertaken on-site, however on the rare occasion that a larger vehicle would service the site, this could be undertaken on-street from the existing double yellow lines adjacent to the sites frontage. Delivery vehicles accessing the site would do so via the proposed one-way loop arrangement to enter and exit the site.

6.4.2 The site access gate would be controlled by an intercom system, which would allow residents to remotely control access for authorised incoming delivery and servicing vehicles.

6.4.3 It is envisaged that the majority of deliveries would be undertaken by Light Goods Vehicles (LGVs). Vehicle swept path analysis, presented within **Appendix F**, demonstrate that delivery vehicles would be able to enter and exit the site in a forward gear.

6.4.4 In the rare event larger vehicles would be required to deliver to the site, it would be possible for vehicles to load/unload from the double yellow lines located along the site frontage.

Refuse Collection

6.4.5 Refuse collection is proposed to be undertaken from Rickmansworth Road, in accordance with the existing arrangements at the site and neighbouring properties.

6.4.6 A bin store is proposed to be located adjacent to the site access outside of the gated area. Residents will be required to place their waste within the store for collection. Waste operatives would be able to access the store without requiring access through the developments gates. The bin store is located adjacent to the sites pedestrian access to ensure easy access for residents.

6.4.7 LBH pre-application response, provided in **Appendix A**, indicates that the proposed refuse collection arrangements would be considered acceptable, stating:

'Refuse collection would be conducted via Rickmansworth Road. A bin storage location for each unit should be located in proximity of the public highway in order to conform to the council's

'waste collection' maximum distance parameter of 10m i.e. distance from a refuse vehicle to the point of collection. Irrespective of bin store positioning, adherence to this parameter is considered physically achievable by way of an informal on-plot regime ensuring that refuse is positioned within the above distance parameter on collection days.'

6.5 Fire Vehicle Access

6.5.1 All elements of the proposed development would be within the maximum permissible 45m distance from a fire tender stopping on Rickmansworth Road.

7 Trip Generation

7.1 Overview

7.1.1 This section of the report details the trip generation exercise undertaken to support the application. **Appendix G** provides the supporting calculations and TRICS output.

7.2 Trip Generation

7.2.1 The development proposals will result in a net increase of five residential dwellings at the site. The following assessment calculates the anticipated increase in trips associated with the increased number of dwellings at the site.

7.2.2 To establish trip rates for the existing development, the TRICS v7.8.4 database has been interrogated to establish sites with similar characteristics. The following selection criteria have been utilised:

- Residential land-use; Category A, privately-owned houses
- Sites located within Greater London only.
- Sites with a PTAL of 3 or less.
- Weekday surveys only.

7.2.3 Two suitable sites were available on the TRICS database. The resulting person trip rates and trips are presented in Table 7-1 and the full TRICS output report is provided in **Appendix G**.

Table 7-1: Anticipated Net Person Trip Generation (Net Increase of Five Dwellings)

Net Person Trip Attraction	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arr.	Dep.	2-Way	Arr.	Dep.	2-Way
Trip Rates	0.268	0.707	0.975	0.463	0.512	0.975
No. of Trips	1	4	5	2	3	5

7.2.4 In order to assess the site's multi-modal trip generation, the total person trips presented in Table 7-1 have been split by mode using 2011 Census data for the method of travel to work. The modal split identified from the 2011 Census data is presented in Table 7-2.

Table 7-2: 2011 Census Method of Travel to Work for the Local Workplace Zones

Method of Travel to Work	Hillingdon 002A	Mode Split
Underground, metro, light rail, tram	246	35%
Train	33	5%
Bus, minibus or coach	22	3%
Taxi	2	0%
Motorcycle, scooter or moped	5	1%
Driving a car or van	312	45%
Passenger in a car or van	17	2%
Bicycle	9	1%
On foot	49	7%
Other method of travel to work	3	0%

7.2.5 Applying the modal split presented in Table 7-2 to the total person trips identified in Table 7-1, results in the multi-modal net trip generation which is presented in Table 7-3.

Table 7-3: Multi-modal Net Trip Generation

Mode	AM Peak			PM Peak		
	Arr.	Dep.	2-Way	Arr.	Dep.	2-Way
Underground, metro, light rail, tram	0	2	2	1	1	2
Train	0	0	0	0	0	0
Bus, minibus or coach	0	0	0	0	0	0
Taxi	0	0	0	0	0	0
Motorcycle, scooter or moped	0	0	0	0	0	0
Driving a car or van	1	2	3	1	2	3
Passenger in a car or van	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0
On foot	0	0	0	0	0	0
Other method of travel to work	0	0	0	0	0	0
Total	1	4	5	2	3	5

7.2.6 The traffic generation assessment for the proposed residential units indicates a total of three additional two-way vehicle trips in the traditional AM peak period (08:00-09:00), and three additional two-way vehicle trips during the PM peak period (17:00-18:00). As such, it can be concluded that the development proposals would not result in any material impact on the operation of the local highway network.

8 Summary and Conclusion

8.1.1 This Transport Statement (TS) has been prepared by PJA on behalf of Merchant Land Investments Limited In association with the proposed redevelopment of a site at Manor Lodge, Rickmansworth Road, Northwood, north-west London within the London Borough of Hillingdon.

8.1.2 The development proposals comprise the demolition of the existing Manor Lodge building on the site and the construction of six semi-detached residential dwellings, with accompanying parking provision.

8.1.3 Northwood town centre is located approximately 800m to the northeast of the site. Northwood station, which is served by London Underground Metropolitan Line services, is located approximately 750m to the northeast of the site.

8.1.4 The ATZ assessment demonstrates that the site is located within a walk distance of Northwood town centre, as well as a number of public transport stops and station. The area local to the site is well served by pedestrian infrastructure, including sufficiently wide and lit footways and suitable crossing facilities of local roads. As a result, it is considered that local facilities are sufficient for prospective site occupiers to live a 'car free' lifestyle.

8.1.5 A review of collision data for the local highway network demonstrates that there is no identifiable pattern of collisions occurring associated with pedestrians and pedal cyclists. It is considered that traffic associated with the development will not have a foreseeable adverse impact on route safety conditions.

8.1.6 Northwood station is located approximately 750m to the northeast of the site. Northwood station provides access to London Underground Metropolitan Line services. The nearest bus stops are located along Rickmansworth Road, approximately 75m to the north of the site.

8.1.7 The proposed development would be served by a system of one-way entry and one-way exit from Rickmansworth Road:

- The existing vehicular access to the site, provided in the form of a vehicular crossover, would be retained as an exit only from the site.
- The development proposals would be supported by a new vehicular access, located approximately 25m to the south of the existing vehicular access to the site. This proposed access would serve as an entry only and would replace the existing pedestrian access at this location.

8.1.8 A pedestrian and cycle access would be provided adjacent to the southern vehicular access gate, providing access directly from the footway on the A404 Rickmansworth Road.

8.1.9 A total of 12 car parking spaces are proposed, at a ratio of 2 allocated spaces per unit. This is in accordance with the car parking standards set out within the London Borough of Hillingdon Local Plan Part 2.

8.1.10 In accordance with London Plan standards, it is proposed that a total 14 cycle parking spaces (12 long-stay and 2 short-stay spaces) will be provided at the site.

8.1.11 The development proposals will result in a net increase of five residential dwellings at the site. As a result, the trip generation assessment forecasts that the development proposals would result in an estimated additional three two-way vehicle movements in the AM peak hour and three two-way vehicle movements in the PM peak hour. As such, it can be concluded that the development proposals would not result in any material impact on the operation of the local highway network.

8.1.12 This document has identified that the development would not result in an adverse transport impact and the development is therefore supported by transport planning policies at a national, regional and local level.

8.1.13 In light of the above and the preceding assessment, it is reasonable to conclude that the development proposals are in accordance with the principles of sustainable development set out within the National Planning Policy Framework and are therefore fully acceptable in transport planning terms.

Appendix A LBH Pre-Application Response

HILLINGDON
LONDON

Richard Henley
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Tel: 01895 250230
Case Officer: Nesha Burnham
Email: nburnham@hillingdon.gov.uk
Date: 14th November 2022
Our Ref: 49436/PRC/2022/180

Dear Richard Henley

RE: Erection of 6 dwellings together with means of access and associated landscaping and parking, following demolition of existing building

SITE: Manor Lodge Rickmansworth Road Northwood

I refer to your request for pre-application planning advice and our subsequent meeting on 20th September 2022 relating to the above development. The advice provided is based on the following drawings and documents issued to the Local Planning Authority for consideration:

Plan Numbers:

LR1 (Site Plan) - received 09 Aug 2022

Pre-application Planning, Design & Access Statement - received 09 Aug 2022

5819-SK10 Rev. A - received 09 Aug 2022

5819-SK11 Rev. A - received 09 Aug 2022

5819-SK12 Rev. B - received 09 Aug 2022

5819-SK13 - received 09 Aug 2022

Outlined below is a preliminary assessment of the proposal, including an indication of the main issues that should be addressed should you choose to submit a formal planning application. Please note that the views expressed in this letter represent officer opinion only and cannot be taken to prejudice the formal decision of the Council in respect of any subsequent planning application, on which consultation would be carried out which may raise additional issues. In addition, the depth of analysis provided corresponds with the scope of information made available to Council officers.

The Site and Surrounds

The application site is located on the eastern side of Rickmansworth Road and is occupied by a two-storey, detached house. The property is externally finished in a mixture of render and brickwork and has a double hipped roof profile. It is set-back from the highway by approximately 36 metres, and is surrounded by a generously sized front and side garden. The site benefits from a single vehicle crossover along the northern section of the site frontage. Whilst there appears to have been a second vehicle crossover along the southern section of the site frontage, this has not been used for a substantial period of time as evident by the absence of a dropped kerb. There are mature trees and a high level brick wall along the site frontage, which screens views into the site.

To the north of the site is Moray House, a four-storey apartment block which is set-back from the highway by a private driveway. A detached two-storey property known as Kiln Farm is located to the east of the site. The rear site boundary adjoins the grounds of Northwood College School. On the opposite side of Rickmandsworth Road is Northwood Golf Club, which is a designated Nature Conservation Site.

The site is not the subject of heritage policies. However, it is located within a Potentially Contaminated Land Zone designation. The site falls in Flood Zone 1 and has a Public Transport Accessibility Level of 2 (Poor).

The Proposal

The application proposes the erection of 6 dwellings together with means of access, associated landscaping and parking, following the demolition of the existing building.

Planning Policy

Development Plan:

Planning law requires that applications for planning permission be determined in accordance with the development plan, unless material considerations indicate otherwise.

The Development Plan for the London Borough of Hillingdon currently consists of the following documents:
The Local Plan: Part 1 - Strategic Policies (2012)
The Local Plan: Part 2 - Development Management Policies (2020)
The Local Plan: Part 2 - Site Allocations and Designations (2020)
The West London Waste Plan (2015)
The London Plan (2021)

Material Considerations:

The National Planning Policy Framework (NPPF) (2021) is also a material consideration in planning decisions, as well as relevant supplementary planning documents and guidance.

Part 1 Policies:

PT1.BE1	(2012) Built Environment
PT1.EM7	(2012) Biodiversity and Geological Conservation
PT1.EM8	(2012) Land, Water, Air and Noise
PT1.H1	(2012) Housing Growth

Other Policies:

DMH 6	Garden and Backland Development
DMEI 7	Biodiversity Protection and Enhancement

DMEI 9	Management of Flood Risk
DMEI 10	Water Management, Efficiency and Quality
DMH 2	Housing Mix
DMHB 11	Design of New Development
DMHB 12	Streets and Public Realm
DMHB 14	Trees and Landscaping
DMHB 15	Planning for Safer Places
DMHB 16	Housing Standards
DMHB 17	Residential Density
DMHB 18	Private Outdoor Amenity Space
DMT 2	Highways Impacts
DMT 5	Pedestrians and Cyclists
DMT 6	Vehicle Parking
LPP D3	(2021) Optimising site capacity through the design-led approach
LPP D5	(2021) Inclusive design
LPP D6	(2021) Housing quality and standards
LPP D7	(2021) Accessible housing
LPP GG1	(2021) Building strong and inclusive communities
LPP GG2	(2021) Making the best use of land
LPP H2	(2021) Small sites
LPP SI12	(2021) Flood risk management
LPP SI2	(2021) Minimising greenhouse gas emissions
LPP T5	(2021) Cycling
LPP T6	(2021) Car parking
LPP T6.1	(2021) Residential parking
NPPF11	NPPF 2021 - Making effective use of land
NPPF12	NPPF 2021 - Achieving well-designed places
NPPF15	NPPF 2021 - Conserving and enhancing the natural environment
NPPF2	NPPF 2021 - Achieving sustainable development
NPPF5	NPPF 2021 - Delivering a sufficient supply of homes
NPPF9	NPPF 2021 - Promoting sustainable transport

Main Planning Issues

1. Principle of development

A) Need for Housing:

Policy DMH 6 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that there is a presumption against the loss of gardens due to the need to maintain local character, amenity space and biodiversity. In exceptional cases a limited scale of backland development may be acceptable, subject to the following criteria:
i) neighbouring residential amenity and privacy of existing homes and gardens must be maintained and unacceptable light spillage avoided;
ii) vehicular access or car parking should not have an adverse impact on neighbours in terms of noise

or light. Access roads between dwellings and unnecessarily long access roads will not normally be acceptable;
iii) development on backland sites must be more intimate in mass and scale and lower than frontage properties; and
iv) features such as trees, shrubs and wildlife habitat must be retained or re-provided.

Policy DMH 6 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) does not define what constitutes an 'exceptional case' where a limited scale of backland development may be acceptable, nor does the supporting text contain a definition of this term. However, the supporting text to Policy DMH 6 explains that the Council's restrictive approach has been informed by the 2016 London Plan and reflects the direct and indirect value of gardens which includes their contribution to local character. Based on the wording of Policy DMH 6, it is considered that the policy presumption against development on residential gardens, is in the interest of maintaining local character, amenity space and biodiversity.

The development proposal encompasses the residential garden of Manor Lodge. As such, Policy DMH 6 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) is applicable and should be given significant weight.

The proposal would conflict with the presumption against the loss of gardens under Policy DMH 6 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020). The Planning Statement submitted with any forthcoming planning application will need to present a case as to why the proposal should be acceptable to the Council. Planning Officers would expect the Planning Statement to justify why the proposal would not result in a harmful loss of visual openness, and to demonstrate compliance with criteria i) to iv) of Policy DMH 6.

The Council is currently able to demonstrate a five-year supply of deliverable housing sites. As such, the "tilted balance" as set out in paragraph 11(d) of the NPPF (2021) is not engaged.

B) Impact on Protected Species:

Policy DMEI 7 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that if development is proposed on or near to a site considered to have features of ecological or geological value, applicants must submit appropriate surveys and assessments to demonstrate that the proposed development will not have unacceptable effects. The development must provide a positive contribution to the protection and enhancement of the site or feature of ecological value.

Paragraph 99 of the Government Circular 06/2005 states that: "It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted."

The application site is sited directly opposite to a designated Nature Conservation Site (i.e. Haste Hill & Northwood Golf Courses & Cemetery). Also, the site itself includes mature trees, landscaping and vegetation. A Preliminary Ecology Report has not been included with the pre-application submission. In the absence of such report, there is insufficient information to demonstrate that the proposed development would not cause any harm to protected species (which includes bats).

A Preliminary Ecology Report should be submitted if the applicant decides to proceed with a formal planning application submission. If the report recommends that additional ecology surveys should be carried out, the reports for these additional surveys will also need to be submitted with any forthcoming

planning application.

C) Loss of trees:

The NPPF (2021) states that trees make an important contribution to the character and quality of urban environment and that existing trees should be retained wherever possible. This is reinforced by Policy G7 of the London Plan (2021) which states that development proposals should ensure that, wherever possible, existing trees of value are retained.

Policy DMHB 14 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states:
A) All developments will be expected to retain or enhance existing landscaping, trees, biodiversity or other natural features of merit.
B) Development proposals will be required to provide a landscape scheme that includes hard and soft landscaping appropriate to the character of the area, which supports and enhances biodiversity and amenity particularly in areas deficient in green infrastructure.
C) Where space for ground level planting is limited, such as high rise buildings, the inclusion of living walls and roofs will be expected where feasible.
D) Planning applications for proposals that would affect existing trees will be required to provide an accurate tree survey showing the location, height, spread and species of trees. Where the tree survey identifies trees of merit, tree root protection areas and an arboricultural method statement will be required to show how the trees will be protected. Where trees are to be removed, proposals for replanting of new trees on-site must be provided or include contributions to offsite provision.

It appears that some trees would need to be felled to facilitate the proposed development. An Arboricultural Impact Assessment, Method Statement and Tree Protection Plan has not been provided at this initial stage. In the absence of such information, the proposal's impact on the trees at the site cannot be fully assessed at this stage. It should be noted that it would be a validation requirement for an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan to be submitted as part of any formal planning application submission. Planning Officers are unlikely to support a scheme which would involve the loss of trees of merit (i.e. high visual amenity value).

The Arboricultural Report would need to provide details on whether any of the proposed dwellings would encroach the Root Protection Area of the retained trees, and if so, to what extent. It must be able to demonstrate that there would be no post development pressure to lop, top or remove the trees by future occupiers in the interests of residential safety, damage to property or residential amenity. In respect to the latter, the Arboricultural Report must include an shadowing diagram to demonstrate that the proposed dwellings and associated external amenity space would achieve appropriate levels of natural light. The spread of leaf litter is a further matter that needs to be considered as it could compromise the useability of the proposed external amenity space provision.

HOUSING MIX:

Policy H10 of the London Plan (2021) states that new development should consist of a range of unit sizes.

Policy DMH 2 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that the Council will require the provision of a mix of housing units of different sizes in schemes of residential development to reflect the Council's latest information on housing need. The Council's current information on housing need indicates a substantial borough-wide requirement for larger affordable and private market units, particularly 3 bedroom properties, as identified in the Strategic Housing Market Assessment 2016.

In accordance with Policy DMH 2 of the Hillingdon Local Plan: Part 2 - Development Management

Policies (2020), developments should demonstrate how the provision of family housing has been optimised to address local needs. The proposed housing mix comprises: 6 no. x four-bedroom (plus) houses. It is considered that the proposal would consist of an appropriate housing mix in accordance with Policy DMH 2 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) and Policy H10 of the London Plan (2021).

DENSITY LEVELS:

Policy D3 of the London Plan (2021) states that all development must make the best use of land by following a design-led approach that optimises the capacity of sites. Policy DMHB 17 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that all new residential development should take account of the Residential Density Matrix contained in Table 5.2.

Numerical density levels are considered to be more appropriate to larger sites and are not typically used in the assessment of schemes of less than 10 units. The key consideration is therefore whether the development would acceptably integrate with the character and appearance of the locality, and would respect residential amenity considerations. Please refer to the other sections of this report which assesses these planning considerations in further detail.

2. Design

CHARACTER AND APPEARANCE:

Paragraph 126 of the NPPF (2021) seeks the creation of high quality, beautiful and sustainable buildings. Parts b) and c) of paragraph 130 of the NPPF (2021) states that planning policies and decisions should ensure that developments are visually attractive as a result of good architecture and are sympathetic to local character and history, including the surrounding built environment.

Policies D3 and D6 of the London Plan (2021) require development proposals to be a high quality and to enhance the local context and be delivering buildings and spaces that positively respond to local distinctiveness.

Policy BE1 of the Hillingdon Local Plan: Part One - Strategic Policies (2012) states that all new developments should achieve a high quality of design in all new buildings and the public realm contributes to community cohesion and a sense of place.

Policy DMHB 11 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that all development will be required to be designed to the highest standards and incorporate principles of good design. Policy DMHB 12 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) advises that development should be well integrated with the surrounding area.

The proposal in its current form is unlikely to be supported by Planning Officers. The forward projection of the proposed dwellings beyond the established front building line of this section of Rickmansworth Road would disrupt the prevailing pattern of development. This, in turn, would cause unacceptable harm to the character and appearance of the area.

One possible option to explore is setting back the proposed dwellings closer in alignment with the front building lines of Moray House and Kiln Farm. This would require the depth of the 4.8 metre single storey rear elements to be reduced as the rear building lines should not protect any deeper into the plot than currently shown. For guidance purposes, it should be noted that Policy DMHD 1 of the Local Plan generally permits single storey rear extensions up to 3.6 metres deep on semi-detached properties.

The proposed dwellings must be set-in 1 metre from the side boundaries to ensure a comfortable separation distance and to permit views to the side of the buildings. As it currently stands, the

submitted drawings fails to meet this requirement. The proposed single storey rear elements should be reduced to 3.6 metres, in line with prescribed depth set by Policy DMHD 1 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020). This enable the proposed dwellings to be set-back as recommended in the preceding paragraph, whilst ensuring an adequate amount of external amenity space is retained (refer to Section 3 for further details).

There is a resistance to crown roof profiles as set out in Hillingdon Local Plan: Part 2 - Development Management Policies (2020). The Planning Statement should provide a case as to why the proposed crown roof profiles would be acceptable given the context of the site. Alternatively, the proposed crown roof profiles could be replaced with a hipped roof. However, the applicant would need to ensure any new hipped roof profile does not result in an substantial increase to the ridge height of the proposed dwellings as this could result in a visually dominant, bulky and top heavy design.

A street scene elevation drawing and topographical survey showing the changes in ground levels should be submitted with any forthcoming planning application.

Notwithstanding the above concerns, it is considered that the Arts and Craft design of the proposed dwellings would respect the suburban character of the area and is a welcomed design approach. The proposed choice of brickwork at ground floor level and cladding at first floor would help to break up the massing of the buildings, whilst providing a degree of visual interest. Furthermore, the proposed two-storey front gables and side chimney stacks replicates the characteristic features found on neighbouring properties.

3. Amenity

NEIGHBOURING RESIDENTIAL AMENITY:

Policy DMHB 11 of the Hillingdon Local Plan: Part Two - Development Management Policies (2020) states that all development will be required to be designed to the highest standards and incorporate principles of good design. It should also not adversely impact on the amenity, daylight and sunlight of adjacent properties and open space. The Council will aim to ensure that there is sufficient privacy for residents and it will resist proposals where there is an unreasonable level of overlooking between habitable rooms of adjacent residential properties or onto private opens spaces.

There are significant concerns about the breach of the 45-degree line of sight taken from the nearest front elevation windows at Moray House. In its current form, it is considered that the proposed development would cause an unacceptable loss of outlook, sense of enclosure and overbearing impact for the occupiers at Moray House. It is strongly recommended that this relationship is re-considered prior to the submission of any forthcoming planning application.

As mentioned during the meeting, the applicant might wish to consider exploring the option of setting the proposed dwellings back to broadly align with the front building line of Moray House. This would help to mitigate the impact on the residential amenities of the occupiers at Moray House. This would necessitate a reduction to the depth of the proposed single storey rear elements.

Due to the separation distances involve, it is not considered that the proposal would cause harm to the living conditions of the occupiers at Kiln Farm.

Any formal planning application submission would involve a consultation period and an Officer site visit which might further change the views of the Council.

INTERNAL AMENITY SPACE:

Policy D6 of the London Plan (2021) sets out the requirements for the gross internal floor area of new dwellings at a defined level of occupancy.

Policy DMHB 15 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that the Council will require all new development to ensure safe and attractive public and private spaces by referring to the Council's latest guidance on Secured by Design principles.

Policy DMHB 16 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that all housing development should have an adequate provision of internal space in order to provide an appropriate living environment. The space standards set out in Table 5.1 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) are the same as those found in Table 3.1 of the London Plan (2021).

Paragraph 5.60 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states, "When assessing the size of households the Council will assume that any bedroom over 11.5 sqm is capable of being occupied by two persons. Similarly any "study", "bonus room" or third living/reception room that is not annotated as a bedroom will be assumed to be capable of serving as a bedroom.

Parts 3) and 4) of Policy D6 of the London Plan (2021) requires double bedrooms to have a floor area of at least 11.5 square metres, and for single bedrooms to have a floor area of at least 7.5 square metres.

The proposed 'play room' within the loft space of the proposed dwellings could be used flexibly as an additional bedroom. It is therefore considered prudent to assess their implications as bedrooms on the quality of living accommodation. The proposed dwellings would include habitable accommodation within their loft space, and would therefore constitute as three-storey dwellings for the purposes of assessing internal space standards.

Table 3.1 of the London Plan (2021) states 5 bedroom 7- person three-storey dwelling must have a GIA of at least 125 square metres. The proposed drawings submitted with any forthcoming planning application should : i) State the gross internal area of the proposed dwellings; ii) Include the floor area of each of the bedrooms including the attic rooms; iii) include section drawings to demonstrate that the minimum floor to ceiling height would be 2.5 metres for at least 75% of the GIA of each dwelling (as required by Policy D6 of the London Plan); and iv) indicate the headroom height above 1.5 metres on the proposed loft plans.

The requested tree report would need to include a shadow assessment to demonstrate that there would not be post-development pressure from future occupants to fell the trees along the site frontage on the grounds of loss of light.

EXTERNAL AMENITY SPACE:

Policy DMHB 18 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that all new residential development and conversions will be required to provide good quality and usable private outdoor amenity space. Amenity space should be provided in accordance with the standards set out in Table 5.3, which requires houses with four bedrooms or more should provide a minimum of 100 square metres of private usable amenity space.

The proposed dwellings must be provided with at least 100 square metres of private amenity space. This would need to be taken into account when updating the drawings to show the proposed dwellings set-back in alignment with the established front building line on Rickmansworth Road.

The proposed site plan submitted with any forthcoming planning application should include measurements of the rear garden spaces for each of the proposed dwellings. It should be noted that the side passageways leading to the rear garden space should be discounted from the measurement as these areas do not constitute as useable private amenity space.

4. Highways

The Council's Highways Officer has provided the following comments:

"Site Characteristics & Background:

The site is located on Rickmansworth Road which is a main thoroughfare in Northwood and is thereby designated as 'classified' in the borough's hierarchy of roads. The site consists of an existing substantive piece of land accommodating a detached and vacant 'lodge' which is to be demolished with the unaltered retention of the existing carriageway crossing (cc) located to north of the envelope. A second new cc is also proposed to the south facilitating a recessed gate into the site and vehicular 'flow-thru' the site.

In lieu of the existing build, 3 pairs of 3 or 4 bedroom semi-detached units are proposed with two on-plot parking spaces per dwelling. The location is partially covered with double yellow line on-street parking controls and exhibits a 'poor' PTAL level of 2 which inherently encourages a higher dependency of the use of private motor transport.

Parking Provision:

Hillingdon Local Plan: Part 2 Policy - DMT 6 requires that new development will only be permitted where it accords with the council's adopted parking standards unless it can be demonstrated that a deviation from the standard would not result in a deleterious impact on the surrounding road network. London Plan (2021): Policy T6.1 (Residential Parking) requires that new residential development should not exceed the maximum parking standards as set out in table 10.3.

The proposal would require an on-plot provision of up to 2 spaces for each of the dwellings to fully comply with Hillingdon's adopted parking standard. This would equate to 12 spaces in total and 2 spaces per unit are proposed which indicates conformity. The London Plan (2021) requires a lesser maximum quantum of 1 space per unit.

Although the level of proposed provision exceeds the regional parking standard, it is considered acceptable in this case as it reduces the potential for untoward on-street parking displacement resulting from the higher dependency on the private motor car due to the 'poor' PTAL rating.

Electric Vehicle Charging Points (EVCP's):

In line with the London Plan (2021), within the final parking quantum there is a requirement for a minimum 20% 'active' EVCP provision with all remaining spaces being designated as 'passive' provisions. In this case, it is recommended that 1 'active' and 1 'passive' space is provided for each of the new units to future proof for anticipated demand.

Cycle Parking:

In terms of cycle parking, there would be a requirement to provide 2 secure and accessible space per unit which should be detailed at the time of formal application submission.

Vehicular Trip Generation:

Local Plan: Part 2 Policies - DMT 1 and DMT 2 require the council to consider whether the traffic generated by proposed developments is acceptable in terms of the local highway and junction capacity, traffic flows and conditions of general highway or pedestrian safety.

It is crucial that evidence of anticipated residential activity predicted for the proposal is presented to determine the likely net highway capacity/traffic assignment and safety impacts on the local network.

Trip analysis based on the 'industry recognised' assessment tool (TRICS - Land Use Database) should be applied. This will allow for an informed decision to be made on the acceptability (or otherwise) of this aspect of the scheme.

Vehicular Access and Internal Arrangements:

There is no objection in principle to the utilisation of the existing northern carriageway crossing (cc) for the purposes of vehicular access together with a new cc located at the southern extent of the envelope. The latter should conform to the council's 'Domestic Vehicle Footway Crossover' (DVFC) 2022 Policy i.e. with a maximum width of 5m at the back of footway and 6.2m at the edge of kerb.

The internal parking layout should conform to best practice design standards (DfT's Manual for Streets - circa 2007 for new development road and parking layouts) so there is adequate turning space to allow for passenger vehicles using the site to enter and leave the plot in a forward gear which is recommended practice on safety grounds. As presented, this requirement is achieved by the provision of a second cc. A recessed gated provision would also accompany the new crossing and the proposed recession is considered acceptable as it allows for adequate stacking room for a vehicle discharging from the roadway. An effective electronic gated control is recommended as it helps to ensure a more rapid discharge of a vehicle entering the site from the public highway which promotes traffic fluidity and mutual safety for all road users.

Satisfactory highway visibility splays at both access points are also considered crucial given the status/heavily trafficked nature of Rickmansworth Road and should therefore be applied on safety grounds as per the above design standard.

Operational Refuse Requirements:

Refuse collection would be conducted via Rickmansworth Road. A bin storage location for each unit should be located in proximity of the public highway in order to conform to the council's 'waste collection' maximum distance parameter of 10m i.e. distance from a refuse vehicle to the point of collection. Irrespective of bin store positioning, adherence to this parameter is considered physically achievable by way of an informal on-plot regime ensuring that refuse is positioned within the above distance parameter on collection days. There are no further observations.

Synopsis:

In terms of transport/highways impacts, the acceptability (or otherwise) of a future planning application will be dependent on the evidence and detail provided within the submitted documentation together with an appropriate response to the comments and recommendations made within this appraisal."

The applicant might wish to consider submitting a Construction Management Plan with any future planning application. This would avoid having to discharge a pre-commencement condition, if planning permission were to be granted. The typical wording of the Construction Management Plan condition is as follows:

Prior to development commencing, a demolition and construction management plan shall be submitted to and approved in writing by the Local Planning Authority. The plan shall detail:
(i) The phasing of development works
(ii) The hours during which development works will occur
(iii)Measures to prevent mud and dirt tracking onto footways and adjoining roads (including wheel washing facilities).
(iv) Traffic management and access arrangements (vehicular and pedestrian) and parking provisions for contractors during the development process (including measures to reduce the numbers of construction vehicles accessing the site during peak hours).

(vi Measures to reduce the impact of the development on local air quality and dust through minimising emissions throughout the demolition and construction process.
(vi) The storage of demolition/construction materials on site.

The approved details shall be implemented and maintained throughout the duration of the demolition and construction process.

Reason: To safeguard the amenity of surrounding areas in accordance with Policy DMHB 11 of the Hillingdon Local Plan Part 2 (2020).

5. Other

FLOODING AND DRAINAGE:

Policy SI 12 of the London Plan (2021) states that development proposals should ensure that flood risk is minimised and mitigated, and that residual risk is addressed. Policy SI 13 of the London Plan (2021) states that development proposals should aim to achieve greenfield runoff rates and ensure that surface water run-off is managed as close to its source as possible.

Policy DMEI 9 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that proposals that fail to make appropriate provision for flood risk mitigation, or which would increase the risk or consequences of flooding, will be refused. Policy DMEI 10 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that development within areas identified at risk from surface water flooding which fail to make adequate provision for the control and reduction of surface water runoff rates will be refused.

The site lies within Flood Zone 1 of the Environment Agency's Flood Risk Map. This means the site is classified as being at low risk and defined as having a less than 1 in 1,000 probability of fluvial and tidal flooding. As such, there are no restrictions on development, including more vulnerable uses such as Use Class C3 (dwellinghouses), in this location, in terms of fluvial and tidal flood risk.

It is recommended that a sustainable water management and water efficiency scheme is submitted with any forthcoming planning application to avoid having to discharge pre-commencement conditions, in the event that planning permission were to be granted. The scheme should:

i. Provide information about the design storm period and intensity, the method employed to delay and control the surface water discharged from the site and the measures taken to prevent pollution of the receiving groundwater and/or surface waters;
ii. Include a timetable for its implementation; and
iii. Provide a management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime.

The scheme should also demonstrate the use of methods to minimise the use of potable water through water collection, reuse and recycling and will:

iv. Provide details of water collection facilities to capture excess rainwater;
v. Provide details of how rain and grey water will be recycled and reused in the development;
vi. Provide details of how the dwelling will achieve a water efficiency standard of no more than 110 litres per person per day maximum water consumption (to include a fixed factor of water for outdoor use of 5 litres per person per day in accordance with the optional requirement defined within Approved Document G of the Building Regulations).

ENERGY EFFICIENCY

Policy SI 2 of the London Plan (2021) states that residential development should achieve 10% beyond

Building Regulation 2013.

Policy DMEI 2 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) requires all developments to make the fullest contribution to minimising carbon dioxide emissions in accordance with London Plan targets.

It is recommended that a sustainability statement is submitted with any forthcoming planning application to avoid having to discharge pre-commencement conditions. The sustainability statement must demonstrate that the proposed dwellings would achieve an energy efficiency standard of 10% CO2 improvement over Building Regulations requirements Part L 2013 (TER Baseline).

LAND CONTAMINATION:

The Council's Land Contamination Officer has provided the following comments:

"Based on Ordnance Survey mapping and other data available in the Councils GIS records, this particular property is shown to be situated on the site of a former orchard there is also evidence that other structures were also present prior to the construction of the current building. Therefore, there is a possibility some contaminating substances including asbestos materials may be present at the site.

We have no detailed information on the precise ground conditions at the site, and would therefore advise persons working on site to take basic precautions in relation to any contamination they may discover.

Precautions should also be taken to minimise the mixing of any excavated contaminated made ground material with clean shallow soils that are to remain on site.

If asbestos is discovered this must be addressed in strict accordance with authoritative guidance and approved code of practice from the Health and Safety Executive.

I therefore recommend the following conditions should be imposed if planning permission is awarded:

Condition for land that may be affected by contamination

Before any part of this development is commenced a suitably structured site survey, to investigate and assess levels of any unacceptable land contamination that may be present, shall be conducted and reported to the satisfaction of the Local Planning Authority (LPA). If applicable a remediation scheme for removing or rendering unacceptable contaminants identified at the site shall be submitted to and approved by the LPA. The remediation scheme shall include an assessment of the extent of site contamination and provide details of remedial measures to be taken to avoid future risk to the occupiers and the buildings when the site is developed. All works which form part of the survey and remediation scheme shall be completed before any part of the development is occupied (unless otherwise agreed in writing by the Local Planning Authority). This condition will not be discharged until verification information has been submitted following completion of the required site survey and remedial works as applicable.

Reason To ensure occupants and users of the proposed development are not subject to any risks from contamination, all in accordance with Hillingdon Local Plan: Part 2 (January 2020) Policies - DMEI 11: Protection of Ground Water Resources and DMEI 12: Development of Land Affected by Contamination.

Imported Materials Condition

No contaminated soils or other materials shall be imported to the site. All imported soils for

landscaping and/or soil engineering purposes shall be clean and free of contamination. All imported soils shall be tested for chemical contamination, and the results of this testing shall be submitted, as a factual and interpretive report, to the Local Planning Authority for approval.

Reason To ensure that the occupants of the development are not subject to any risks from soil contamination in accordance with Hillingdon Local Plan: Part 2 (January 2020) Policies - DMEI 11: Protection of Ground Water Resources and DMEI 12: Development of Land Affected by Contamination"

The applicant might wish to consider submitting the Contamination Report with any future planning application. This would avoid having to discharge a pre-commencement condition, if planning permission were to be granted.

6. Planning Obligation and CIL (Mayor and LBH)

S106 PLANNING OBLIGATIONS

Policy DMCI 7 of the Hillingdon Local Plan: Part 2 - Development Management Policies (2020) states that to ensure development is sustainable, planning permission will only be granted for development that clearly demonstrates there will be sufficient infrastructure of all types to support it. Infrastructure requirements will be predominantly addressed through the Council's Community Infrastructure Levy (CIL).

The proposed development is unlikely to generate requirements for planning obligations.

COMMUNITY INFRASTRUCTURE LEVY (CIL)

The Council adopted its own Community Infrastructure Levy (CIL) on 1st August 2014. The Hillingdon CIL charge for residential developments is £95 per square metre of additional floor space. This is in addition to the Mayoral CIL charge of £60 per square metre. CIL rates are index linked. The proposal involves the erection of new dwellings and is therefore CIL liable if planning permission were to be granted.

Should you require further information please refer to the Council's Website https://www.hillingdon.gov.uk/community-infrastructure-levy

7. Application Submission

If an application were to be formally submitted, it would need to be supported by the following documentation:

- Application Form and associated fee
- CIL Form
- Location Plan (1:1250)
- Block Plan (1:500) and Proposed Site Plan (1:200), including private outdoor amenity space areas
- Proposed floor plans (including a roof plan), elevations and sections (including GIA of the houses and floor areas of the bedrooms)
- Proposed Street Scene Elevation
- Tree Survey, Arboricultural Impact Assessment, Method Statement and Tree Protection Plan
- Preliminary Ecology Assessment
- Construction Management Plan
- Landscaping Scheme
- Sustainability Statement
- Topographical Survey
- Contamination Report
- Planning Statement/ Design and Access Statement

8. Conclusion

It is unlikely that the proposal, in its current form, could be supported by the Council. There is an in principle objection to the loss of gardens. As such, further information would be required to justify why the proposal would meet the requirements of Policy DMH 6 of the Hillingdon Local Plan Part 2 (2020).

There are significant concerns that the proposed development would have a harmful impact to the character and appearance of the area, and upon the residential amenities of the neighbouring occupiers at Moray House. It has not been demonstrated that no harm would be caused to protected species, and that trees of merit and high visual amenity value would be retained.

The proposed development would therefore conflict with national, regional and local planning policies and guidance and could not be supported by the Council without amendments being made to the scheme as set out in the above report.

Please be advised that the Council require confirmation that you wish to enter into a PPA as soon as possible, in order to ensure the necessary resource are in place to meet the terms of the PPA.

Thank you for entering into the Councils pre-application advice service and I trust you have found this service of assistance.

Nesha Burnham
Principal Planning Officer
Major Applications Team
London Borough of Hillingdon

Planning Guarantee
For complex applications which are likely to exceed the statutory timeframes, the applicant is encouraged to enter into a Planning Performance Agreement (PPA) to allow for the negotiation of complex cases. Central Government encourages the use of PPAs for larger and more complex planning proposals to bring together the developer, the Local Planning Authority and key stakeholders to work in partnership throughout the planning process.

Providing a PPA helps ensure that major proposals progress through the application process in a timely fashion and result in high quality development but the service is both time consuming and costly. The charge for all Planning Performance Agreements will ensure that adequate resources and expertise can be provided to advise on major development proposals, the charges are determined in a site by site basis.

Hillingdon are committed to ensure the best possible service provision to all of our applicants. In order to ensure this, we will not be able to facilitate negotiation which would result in an application being determined outside of statutory timeframes, unless the applicant has entered into a Planning Performance Agreement.

Appendix B ATZ Key Destination Route Assessment

Merchant Land Investments Limited

Manor Lodge, Northwood

Active Travel Zone Assessment

March 2023

Project Code: 06181

PJA
The Aquarium
King Street
Reading
RG1 2AN
UK
pja.co.uk

Version Control and Approval

Version	Date	Main Contributor	Issued by	Approved by
A	04 January 2023	TH	JW	JW
B	08 March 2023	TH	JW	JW

Prepared for

Irfaan Merali
Merchant Land Investments Limited
66 Leman Street
London
E1 8EU

Contents

List of Figures

1 Introduction

1.1 Overview

1.1.1 This Active Travel Zone (ATZ) Assessment has been prepared by PJA on behalf of Merchant Land Investments Limited in association with the proposed redevelopment of a site at Manor Lodge, Rickmansworth Road, Northwood, Hillingdon.

1.1.2 This report summarises the findings of the ATZ Assessment site visit with point of view (POV) photography undertaken along the key routes identified within the assessment. The report has been produced to accompany the planning application for the proposed scheme and should be read in conjunction with the associated Transport Statement (TS).

1.1.3 The purpose of the ATZ assessment is to establish the current condition of pedestrian and cycle routes to key destinations associated with the proposed development and to establish whether these are sufficient for encouraging a car-free lifestyle.

1.1.4 A total of four Key Destination Routes have been identified within the ATZ study area. The key destinations and routes considered in context to the site are as follows:

- **Key Destination 1** – Northwood station
- **Key Destination 2** – Northwood Town Centre
- **Key Destination 3** – Bus stops V/W (Northwood Golf Course)
- **Key Destination 4** – Bus stop on Myrtleside Close / The Avenue

1.1.5 The Healthy Streets Approach is the framework used to guide the Mayor's Transport Strategy and is a system of policies and strategies aimed at delivering a healthier, more inclusive city where people choose to walk, cycle and use public transport. It puts people and their health at the centre of decisions about how public spaces are designed, used and managed. The approach is based on ten indicators of a Healthy Street which focus on the experience of people using streets:

- Pedestrians from all walks of life
- Easy to cross
- Shade and shelter
- Places to stop and rest
- Not too noisy
- People choose to walk, cycle and use public transport
- People feel safe
- Things to see and do

- People feel relaxed
- Clean air

1.1.6 The Key Destination Routes have been assessed and photographed, with the worst location along each route reviewed against Transport for London's (TfL) Healthy Streets criteria. Accompanying suggestions of potential improvements have been made for the consideration of London Borough of Hillingdon (LBH) and TfL.

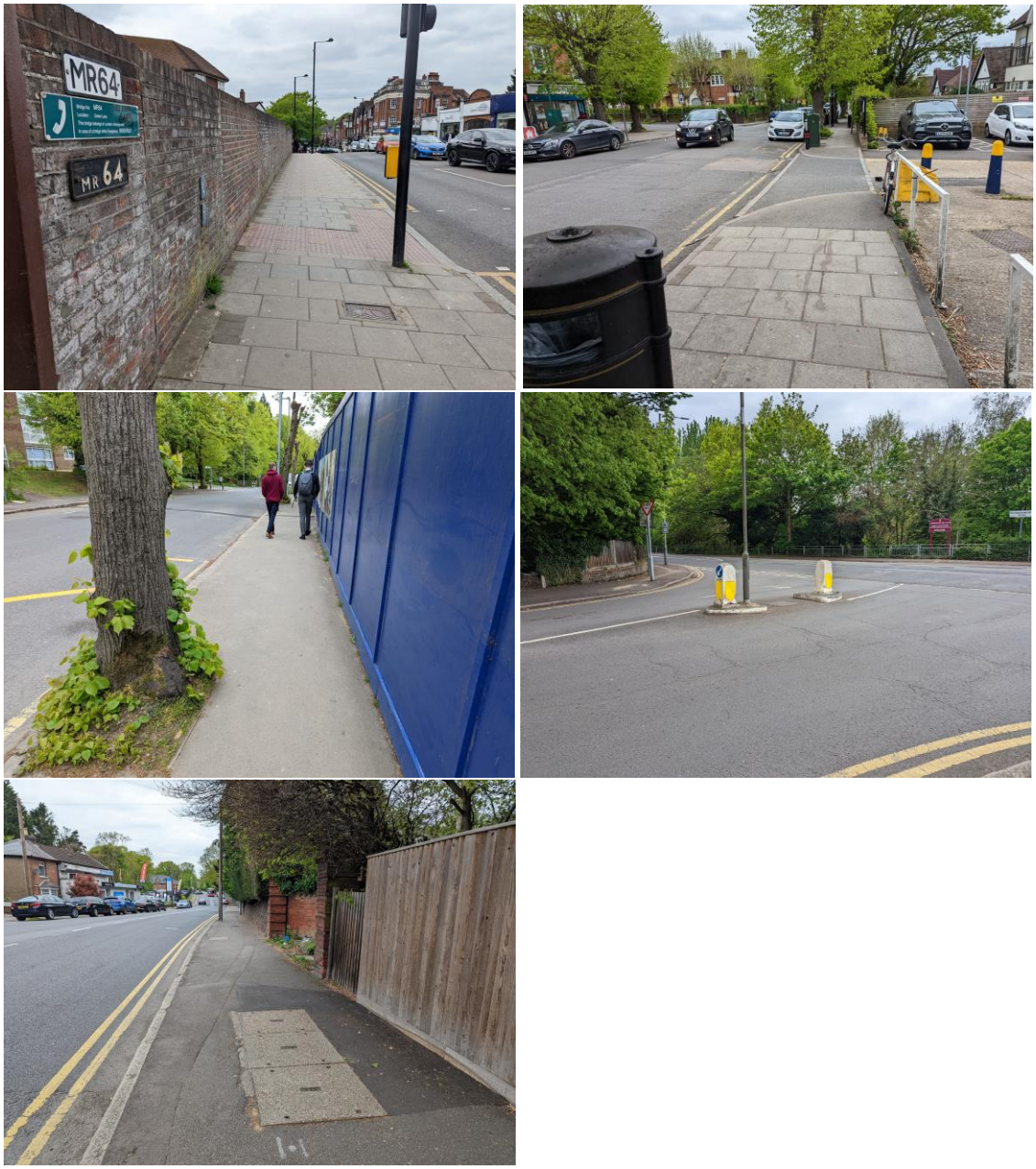
2 Key Destination Route 1 – Northwood Station

2.1 Description

2.1.1 Northwood station is located approximately 750m to the northeast of the site. The route from the site follows Rickmansworth Road southeast, Maxwell Road north, and Green Lane east towards the station. Northwood station provides access to London Underground Metropolitan Line services.

2.1.2 POV photography of Key Destination Route 1 is presented in Figure 2-1.

Figure 2-1: Key Destination Route 1 POV Photography



2.2 Worst Location and Recommendations

2.2.1 The worst location along this route was located at the informal crossing at Rickmansworth Road / Maxwell Road. This area was identified as an area where improvements to the pedestrian environment could be made. It was observed that no tactile paving was present at this crossing. The addition of tactile paving at this location would aid safe crossing for those with visual impairment.

3 Key Destination Route 2 – Northwood Town Centre

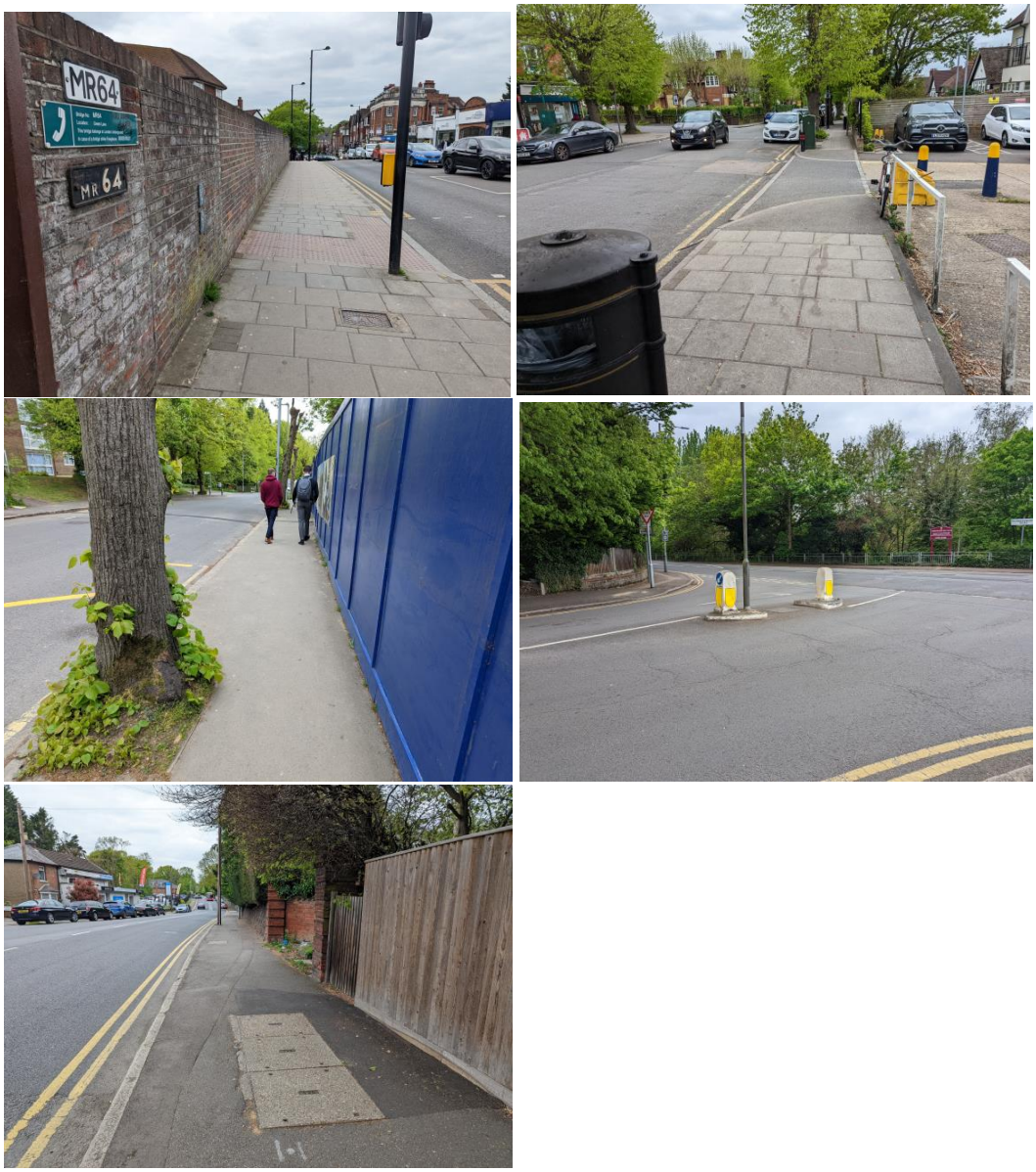
3.1 Description

3.1.1 Northwood town centre is located approximately 800m to the northeast of the site. The route from the site follows Rickmansworth Road southeast, Maxwell Road north, and Green Lane east towards Northwood.

3.1.2 Northwood town centre provides access to several retail opportunities, healthcare facilities, schools and several multi-faith places of worship.

3.1.3 POV photography of Key Destination Route 2 is presented in Figure 3-1.

Figure 3-1: Key Destination 2 POV Photography



3.2 Worst Location and Recommendations

3.2.1 Key Destination Route 1 and 2 follow identical routes towards Northwood town centre. Instead of highlighting the same location as in Section 2, a second worst location along this route has been considered.

3.2.2 Northwood town centre is located approximately 800m to the northeast of the site on foot, and as a result additional places to stop and rest have been suggested. The footway is sufficiently wide to support additional places to stop and rest between Green Lane and Anthus Mews. Benches could be implemented to improve the pedestrian environment along this section of the route.

4 Key Destination Route 3 – Bus Stops V/W (Northwood Golf Course)

4.1 Description

4.1.1 Key Destination Route 3 follows Rickmansworth Road northbound from the site. The bus stops are located approximately 75m to the northwest of the site and provide access to the 331 bus service.

4.1.2 POV photography of Key Destination Route 3 is presented in Figure 4-1.

Figure 4-1: Key Destination Route 3 POV Photography

4.2 Worst Location and Recommendations

4.2.1 The nearest crossings are currently located approximately 200m to the north and south of the bus stops V/W. As a result, pedestrians are likely to cross Rickmansworth Road away from the crossing facilities provided, as observed in the POV photography.

4.2.2 An informal crossing provided in the vicinity of the bus stops V/W (Northwood Golf Course), would allow pedestrians to cross Rickmansworth Road more easily and safely.

5 Key Destination Route 4 – Bus Stops on Myrtleside Close / The Avenue

5.1 Description

5.1.1 Key Destination Route 4 follows Rickmansworth Road northwest, towards the junction with Green Lane. The bus stops at Myrtleside Close and The Avenue are located approximately 400m and 450m to the northwest of the site respectively. These bus stops provide access to the 282, 331, 508 and H11 services.

5.1.2 POV photography of Key Destination Route 4 is presented in Figure 5-1.

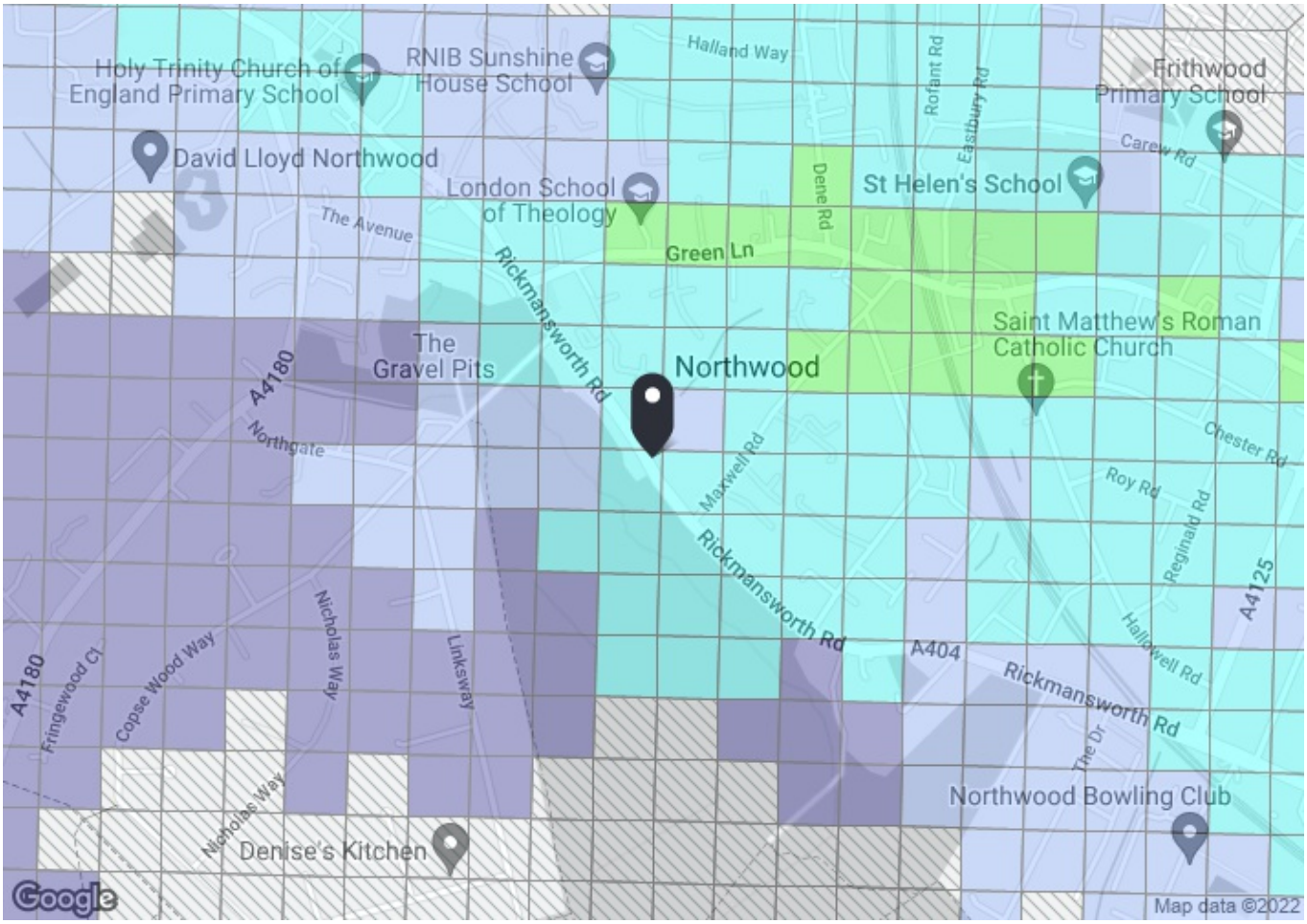
Figure 5-1: Key Destination Route 4 POV Photography

5.2 Worst Location and Recommendations

5.2.1 During the time of the site visit it was observed that greenery encroached the northern side of the footway, along Rickmansworth Road, in the vicinity of Copse Wood Way. Pedestrians would feel more relaxed along this route if greenery is maintained at this location.

Appendix C PTAL Report

TRANSPORT FOR LONDON



PTAL output for Base Year
2

98 Rickmansworth Rd
98 Rickmansworth Rd, Northwood HA6 2QT, UK
Easting: 508782, Northing: 191175

Grid Cell: 137365

Report generated: 19/12/2022

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

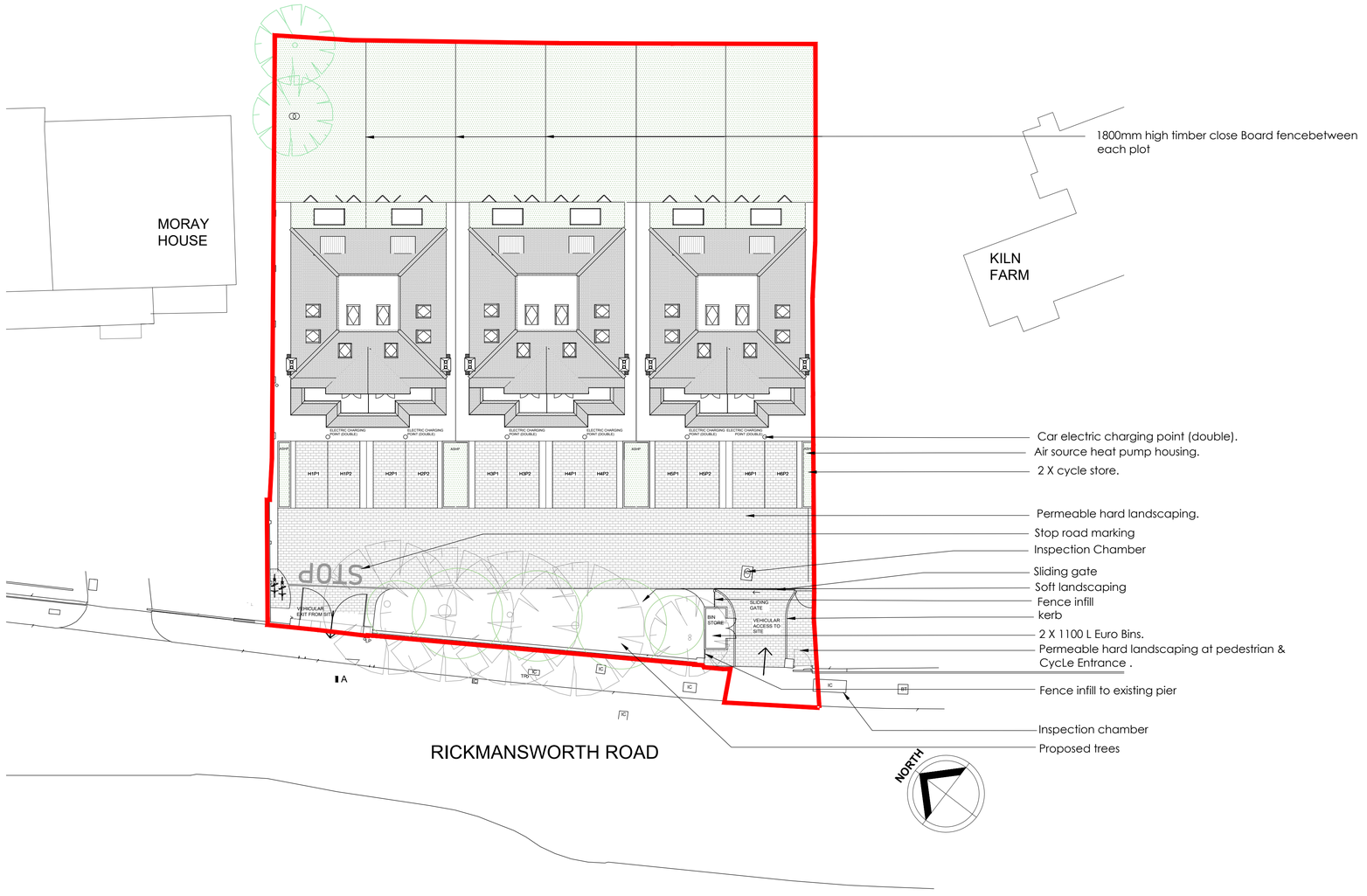
Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	RICKMANSWORTH R GREEN LN	282	404.73	5	5.06	8	13.06	2.3	0.5	1.15
Bus	RICKMANSWORTH R GREEN LN	H11	404.73	4	5.06	9.5	14.56	2.06	0.5	1.03
Bus	NORTHWOOD GOLF CLUB	331	76.06	3	0.95	12	12.95	2.32	1	2.32
LUL	Northwood	'Watford-BStreetSF '	795.27	2.33	9.94	13.63	23.57	1.27	0.5	0.64
LUL	Northwood	'Watford-AldSfast '	795.27	3.67	9.94	8.92	18.87	1.59	1	1.59
LUL	Northwood	'Aldg-WatfordSlow'	795.27	3.67	9.94	8.92	18.87	1.59	0.5	0.8
LUL	Northwood	'BakStr-WatfordSlow'	795.27	1.67	9.94	18.71	28.65	1.05	0.5	0.52
LUL	Northwood	'Wembley-WatfordSL '	795.27	0.67	9.94	45.53	55.47	0.54	0.5	0.27
									Total Grid Cell AI:	**8.32**

Appendix D Architect's Layout Plan



1 PROPOSED SITE PLAN
1 : 200

1:200 @ A1
0 Scale 1:200 10m 20m

Amendments/Notes

Rev.	Detail	By	Date

Project

MANOR LODGE
RICKMANSWORTH ROAD
NORTHWOOD
HA6 2QT

Drawing

PROPOSED SITE PLANS

SEABROOK ARCHITECTS
CHARTERED ARCHITECTS
Unit17, Chiltern Court, Asheridge Road,
Chesham, Bucks HP5 2PX
Tel: 01494 778918
e-mail: info@seabrookarchitects.co.uk

Drawn By	Date 01/03/2023
Checked By JS	Date 01/03/2023
Approved By JS	Scale 1:200 @ A1
Drawing No. 5819 PL06	Rev.

MORAY
HOUSE

KILN FARM

A

B

C

KITCHEN/ DINING/
LIVING

WC

UP

UTILITY

LIVING ROOM

HALL

ASHP

Max slope
1:12

D

E

F

TOP

* refer to Landscape scheme.

VEHICULAR
EXIT FROM SITE

LP

TP

IC

BIN
STORE

VEHICULAR
ACCESS TO
SITE

BT

NORTH

0 Scale 1:100 5m 10m

1:200 @ A3
1:100 @ A1

Amendments/Notes

Rev.	Detail	By	Date

GROSS INTERNAL AREAS

Floor	GIA per unit
Ground Floor	77 m2
First Floor	56 m2
Loft Floor	32 m2
Total	165 m2

Project

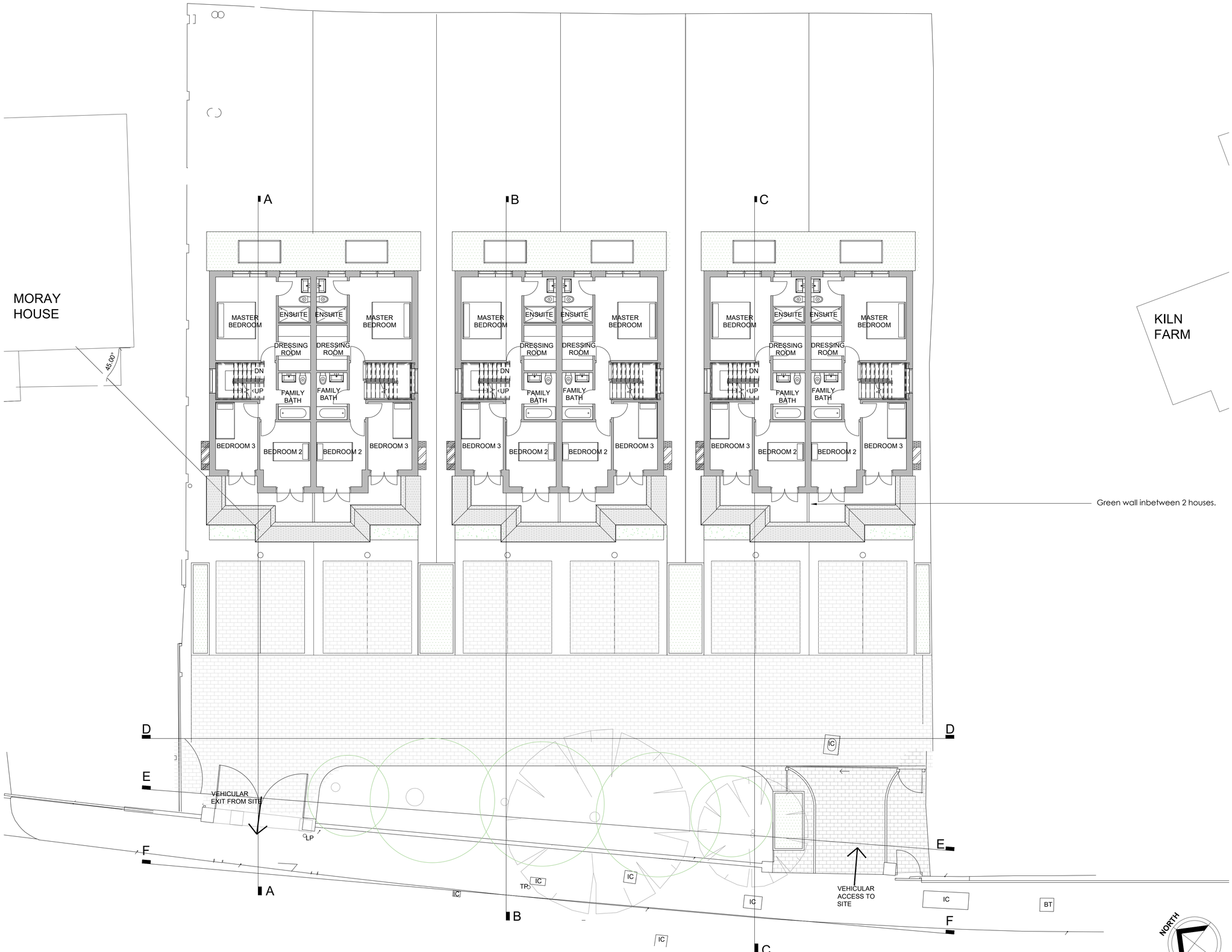
MANOR LODGE
RICKMANSWORTH ROAD
NORTHWOOD
HA6 2QT

Drawing

PROPOSED
GROUND FLOOR PLAN

SEABROOK
ARCHITECTS
CHARTERED ARCHITECTS
Unit17, Chiltern Court, Asheridge Road,
Chesham, Bucks HP5 2PX
Tel: 01494 778918
e-mail: info@seabrookarchitects.co.uk

Drawn By	Date 01/03/2023
Checked By JS	Date 01/03/2023
Approved By JS	Scale 1:100 @ A1
Drawing No. 5819 PL010	Rev.



Amendments/Notes

Rev.	Detail	By	Date

GROSS INTERNAL AREAS

Floor	GIA per unit
Ground Floor	77 m2
First Floor	56 m2
Loft Floor	32 m2
Total	165 m2

Project

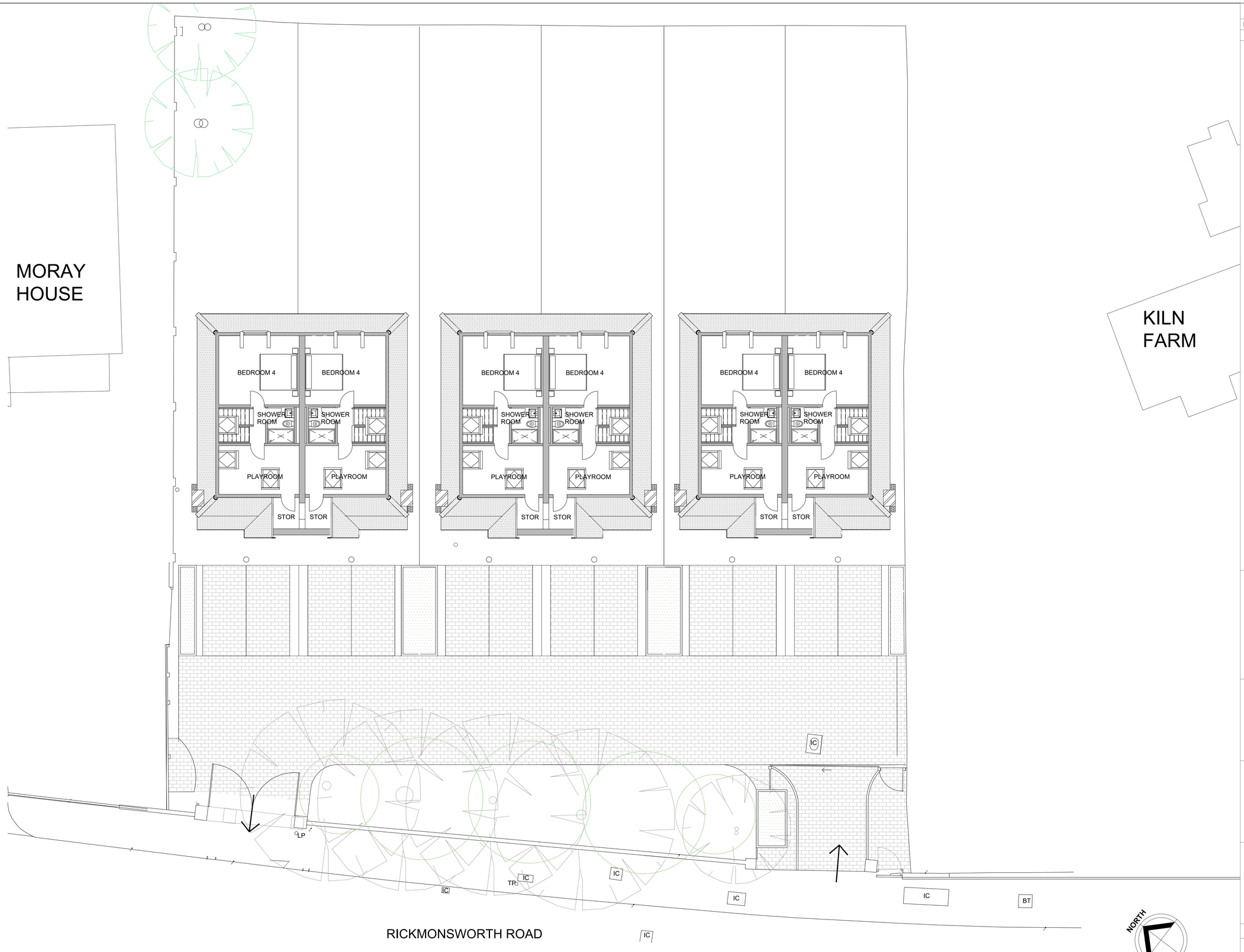
MANOR LODGE
RICKMANSWORTH ROAD
NORTHWOOD
HA6 2QT

Drawing

PROPOSED
FIRST FLOOR PLANS

SEABROOK ARCHITECTS
CHARTERED ARCHITECTS
Unit17, Chiltern Court, Asheridge Road,
Chesham, Bucks HP5 2PX
Tel: 01494 778918
e-mail: info@seabrookarchitects.co.uk

Drawn By	Date 01/03/2023
Checked By JS	Date 01/03/2023
Approved By JS	Scale 1:100 @ A1
Drawing No. 5819 PL011	Rev.



Amendments/Notes

Rev.	Detail	By	Date

GROSS INTERNAL AREAS

Floor	GIA per unit
Ground Floor	77 m2
First Floor	56 m2
Loft Floor	32 m2
Total	165 m2

Project

MANOR LODGE
RICKMANSWORTH ROAD
NORTHWOOD
HA6 2QT

Drawing

PROPOSED
LOFT/SECOND FLOOR PLANS

SEABROOK ARCHITECTS
CHARTERED ARCHITECTS
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e-mail: info@seabrookarchitects.co.uk

Drawn By	Date 01/03/2023
Checked By JS	Date 01/03/2023
Approved By JS	Scale 1:100 @ A1
Drawing No. 5819 PL012	Rev.

Appendix E Visibility Splay

A3 1:500 10 20 30

ROAD

A404 Rickmansworth Road

61.0m

Moray House

MORAY HOUSE

Existing vehicular access retained and used for vehicular exit only.

Proposed gated entrance.

Sufficient space between gate and footway for vehicle to wait.

Existing pedestrian access widened to creat new vehicular access with new crossover onto the A404 Rickmansworth Road. Access to be used for entry only.

Belair

Fern Cottage

LB

Kiln Farm

KILN FARM

Soval Court

MORAY HOUSE

NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

1. Do not scale from this drawing.
2. All dimensions in metres unless otherwise stated.
3. This drawing is based on OS_MasterMap_Topography_Layer_779449_1002140 _OS_Mastermap supplied by Emapsite (C) Crown Copyright and database rights [2022] Ordance Survey 0100031673 and drawing 5819-SK10-A supplied by Seabrook Architects and PJA cannot guarantee the accuracy of the drawing.
4. The purpose of the drawing is to demonstate visibility splays at the proposed site access.
5. Visibility splays have been shown in accordance with the requirements for a 30mph design speed as set out within Manual for Streets, in the absence of 85th percentile speed surveys.
6. Levels, earthworks and/or the need for retaining structures has been considered at this stage.
7. The impact of statutory undertakers equipment has not been considered at this stage.
8. All design elements are subject to further design development and relevant technical approvals.

Highway Boundary

2.4m x 43m (30mph) Visibility Splay

REV	DATE	REVISION NOTE	BY
P04	11.04.23	Updated Layout	JW
P03	30.03.23	Updated Layout	JW
P02	07.06.22	Minor Amendments	JW
P01	10.05.22	First Issue	JW

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CLIENT
Merchant Land Ltd

PROJECT
Manor Lodge,
Northwood

DRAWING TITLE
Site Access
Visibility Splays

DRAWING ISSUE STATUS
INFORMATION

PJA JOB No. SUB-CODE
06181 - TR - 0001 - P04

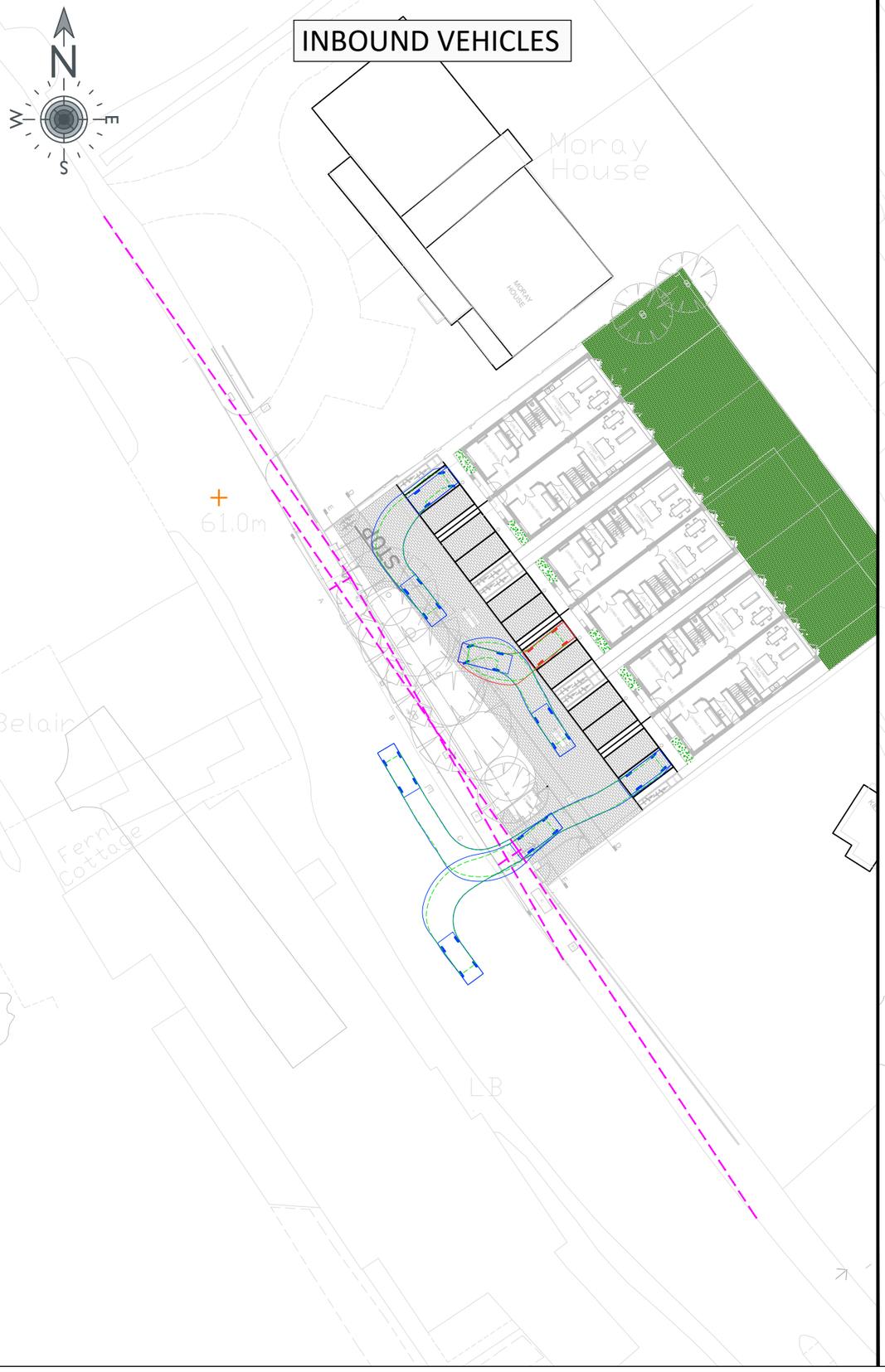
Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:500	JW	MF	11/04/2023

Appendix F Vehicle Swept Path Analysis

A3 1:500 10 20 30



NOTES

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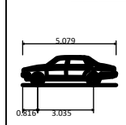
1. Do not scale from this drawing.
2. All dimensions are in meters unless otherwise stated.
3. The purpose of this drawing is to provide a review of the proposed site layout.
4. This drawing is based on drawing '5819 - PLANING 06.04.23'
5. Levels and earthworks have not been considered at this stage.
6. The impact to statutory undertakers equipment has not been considered at this stage
7. All design elements are subject to further design development and relevant technical approvals

2.4m x 43m (30mph) Visibility Splay

VEHICLE PROFILE



FORWARD GEAR
REVERSE GEAR
WHEEL TRACK

Large Car (2006)	
Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m

REV	DATE	REVISION NOTE	BY
P4	11.04.2023	Drawing Update	JW
P3	17.03.2023	Drawing Update	JW
P2	06.03.2023	Drawing Update	TH
P1	03.02.2023	Drawing Update	TH
P0	15.12.2022	First Issue	TH

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CLIENT
Merchant Land Ltd

PROJECT
Manor Lodge,
Northwood

DRAWING TITLE
Vehicle Swept Path Analysis - Large Car

DRAWING ISSUE STATUS
INFORMATION

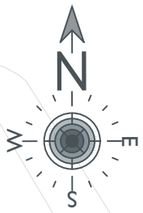
PJA JOB No. SUB-CODE
06181 - TR - 0002 - P4

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:500	JW	MF	11/04/2023

A3 1:250 4 6 8 10 12 14 16 18



61.0m

GOLF

KILN FARM

NOTES

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1. Do not scale from this drawing.
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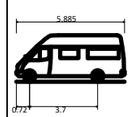
3. The purpose of this drawing is to provide a review of the proposed site layout.
4. This drawing is based on drawing '5819 - PLANING 06.04.23'
5. Levels and earthworks have not been considered at this stage.
6. The impact to statutory undertakers equipment has not been considered at this stage
7. All design elements are subject to further design development and relevant technical approvals

2.4m x 43m (30mph) Visibility Splay

VEHICLE PROFILE



FORWARD GEAR
REVERSE GEAR
WHEEL TRACK

4.6t Light Van	
Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.000m

REV	DATE	REVISION NOTE	BY
P0	11.04.2023	First Issue	JW

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CLIENT
Merchant Land Ltd

PROJECT
Manor Lodge,
Northwood

DRAWING TITLE
Vehicle Swept Path Analysis - 4.6T Light Van

DRAWING ISSUE STATUS
INFORMATION

PJA JOB No. SUB-CODE
06181 - TR - 0003 - P0
Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A3 @ 1:250	JW	MF	11/04/2023

Appendix G TRICS Outputs

Calculation Reference: AUDIT-231601-220505-0547

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

01	**GREATER LONDON**		
	BN	BARNET	1 days
	KI	KINGSTON	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 20 to 21 (units:)
Range Selected by User: 9 to 25 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 05/11/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Thursday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	2 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included
Population within 1 mile:

25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

500,001 or More	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

2 Poor	1 days
3 Moderate	1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 **BN-03-A-02** **MIXED HOUSES** **BARNET**
SWEETS WAY
WHETSTONE

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 21
Survey date: TUESDAY *03/07/18* *Survey Type: MANUAL*

2 **KI-03-A-02** **DETACHED** **KINGSTON**
WOLSEY CLOSE
KINGSTON UPON THAMES

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 20
Survey date: THURSDAY *24/06/10* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.93

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	21	0.073	**2**	**21**	**0.341**	2	21	0.414
08:00 - 09:00	2	21	0.146	2	21	0.341	2	21	0.487
09:00 - 10:00	2	21	0.146	2	21	0.244	2	21	0.390
10:00 - 11:00	2	21	0.146	2	21	0.098	2	21	0.244
11:00 - 12:00	2	21	0.220	2	21	0.171	2	21	0.391
12:00 - 13:00	2	21	0.146	2	21	0.220	2	21	0.366
13:00 - 14:00	2	21	0.195	2	21	0.049	2	21	0.244
14:00 - 15:00	2	21	0.171	2	21	0.220	2	21	0.391
15:00 - 16:00	2	21	0.244	2	21	0.146	2	21	0.390
16:00 - 17:00	2	21	0.146	2	21	0.293	2	21	0.439
17:00 - 18:00	2	21	0.268	2	21	0.171	2	21	0.439
18:00 - 19:00	**2**	**21**	**0.390**	2	21	0.293	**2**	**21**	**0.683**
19:00 - 20:00	1	21	0.286	1	21	0.048	1	21	0.334
20:00 - 21:00	1	21	0.238	1	21	0.286	1	21	0.524
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.815			2.921			5.736

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	20 - 21 (units:)
Survey date date range:	01/01/10 - 05/11/19
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 1.93

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	21	0.195	**2**	**21**	**0.951**	2	21	1.146
08:00 - 09:00	2	21	0.268	2	21	0.707	2	21	0.975
09:00 - 10:00	2	21	0.244	2	21	0.439	2	21	0.683
10:00 - 11:00	2	21	0.317	2	21	0.220	2	21	0.537
11:00 - 12:00	2	21	0.317	2	21	0.390	2	21	0.707
12:00 - 13:00	2	21	0.293	2	21	0.390	2	21	0.683
13:00 - 14:00	2	21	0.317	2	21	0.073	2	21	0.390
14:00 - 15:00	2	21	0.341	2	21	0.268	2	21	0.609
15:00 - 16:00	2	21	0.537	2	21	0.220	2	21	0.757
16:00 - 17:00	2	21	0.341	2	21	0.390	2	21	0.731
17:00 - 18:00	2	21	0.463	2	21	0.512	2	21	0.975
18:00 - 19:00	**2**	**21**	**0.780**	2	21	0.439	**2**	**21**	**1.219**
19:00 - 20:00	1	21	0.429	1	21	0.190	1	21	0.619
20:00 - 21:00	1	21	0.571	1	21	0.476	1	21	1.047
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.413			5.665			11.078

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*