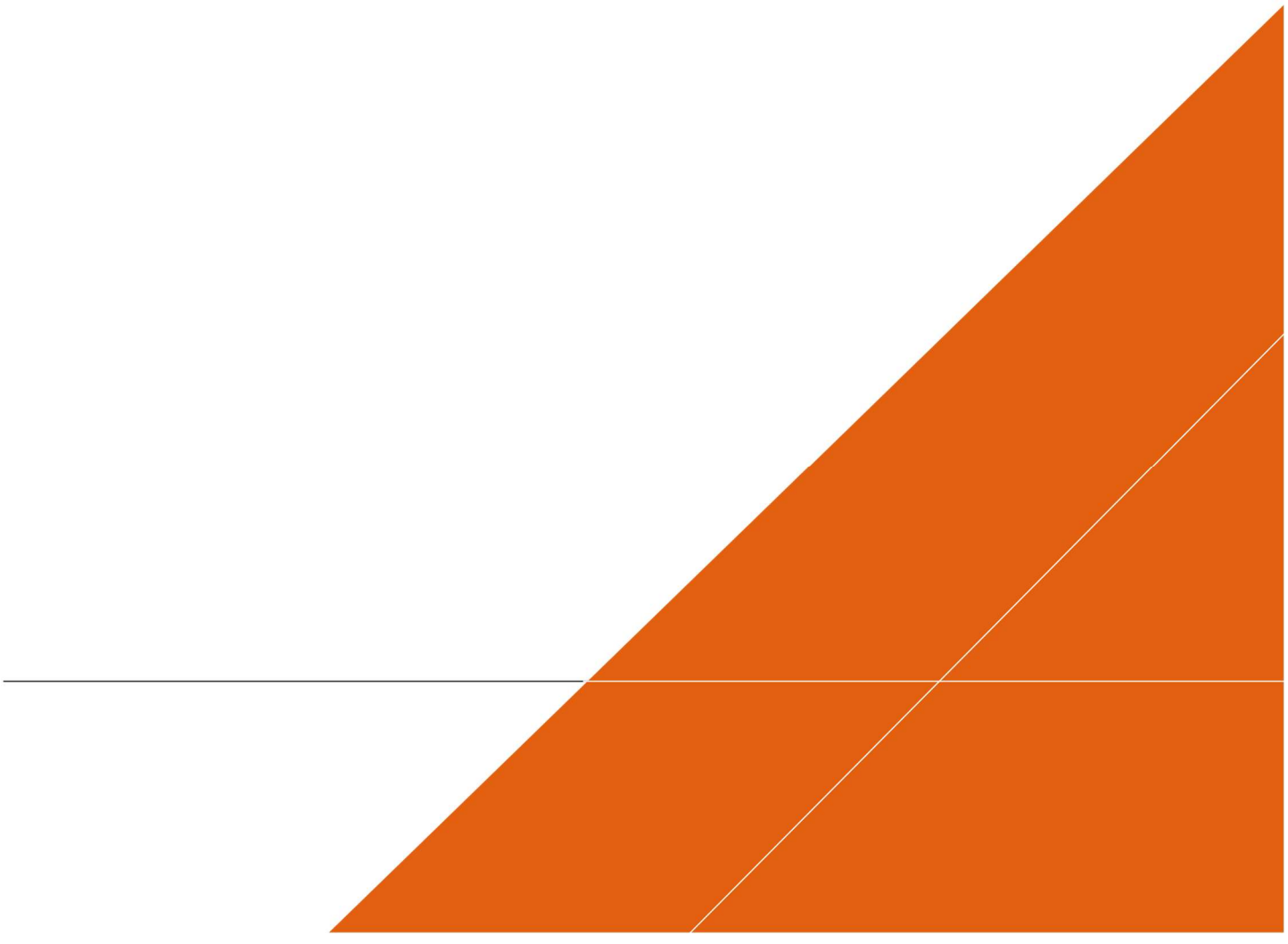
ARCADIS Design & Consultancy for natural and built assets

LEVITT BERNSTEIN

CHILTERN DENE, ENFIELD, EN2 7HH

Highways Due Diligence Report

JANNUARY 2022



CHILTERN DENE, ENFIELD, EN2 7HH
Highways Due Diligence Report

Author	Melissa Gordedo
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Approver	Ian Braddock
Report No	10053498-ARC-XX-XX-RP-HW-0016-01-Highways Due Diligence Report
Date	JANUARY 2022

VERSION CONTROL

Version	Date	Author	Checker	Approver	Changes
01	January 2022	MG	JC	IB	First Issue

This report dated 31 January 2022 has been prepared for Levitt Bernstein on behalf of Enfield Council (the "Client") in accordance with the terms and conditions of appointment dated 17 January 2022 (the "Appointment") between the Client and Arcadis Consulting (UK) Limited ("Arcadis") for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 Introduction

1.1 Terms of Reference

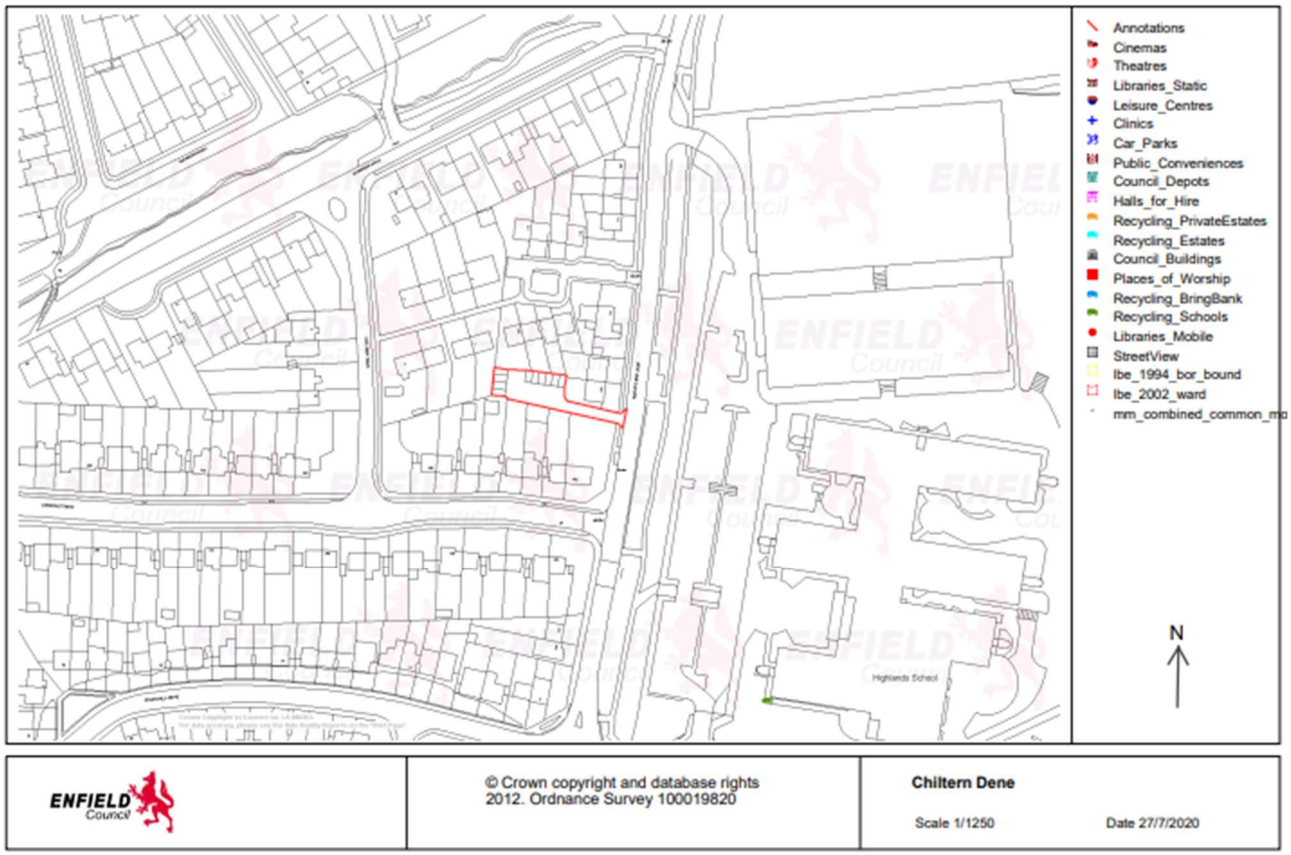
Arcadis Consulting (UK) Limited (Arcadis) has been commissioned by Levitt Bernstein on behalf of Enfield Council (the 'Client') to undertake due diligence appraisals in connection with Chiltern Dene, Enfield, EN2 7HH ('the Site').

The objective of this desktop appraisal is to provide pragmatic advise to de-risk each of the sites. The aim of this report is to:

- Review existing transport, highway, access and movement related to information regarding the Site and its surrounding area;
- Provide outline information on potential transport and highway constraints which may impact on the land value or redevelopment potential for the Site; and
- Identify potential development opportunities based upon local characteristics and risks.

The site location is shown in Figure 1.

Figure 1: Site Location Plan (as provided by the Client)



1.2 Sources of Information

As part of this desk study report various sources of information have been used and are detailed below:

- Crash Map (www.crashmap.co.uk)
- Transport for London WebCAT (www.tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat)

1.3 Limitations and Expectations

This report has been prepared for the Client in accordance with the terms and conditions of appointment. Arcadis cannot accept any responsibility for any use of or reliance on the contents of this report by any third party. The copyright of this document, including the electronic format shall remain the property of Arcadis.

This report has been compiled from a number of sources, which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others. The report is based on information available at the time. Consequently, there is a potential for further information to become available, which may change this report's conclusion and for which Arcadis cannot be responsible.

2 Site Setting and History

2.1 Site Location and Land Use

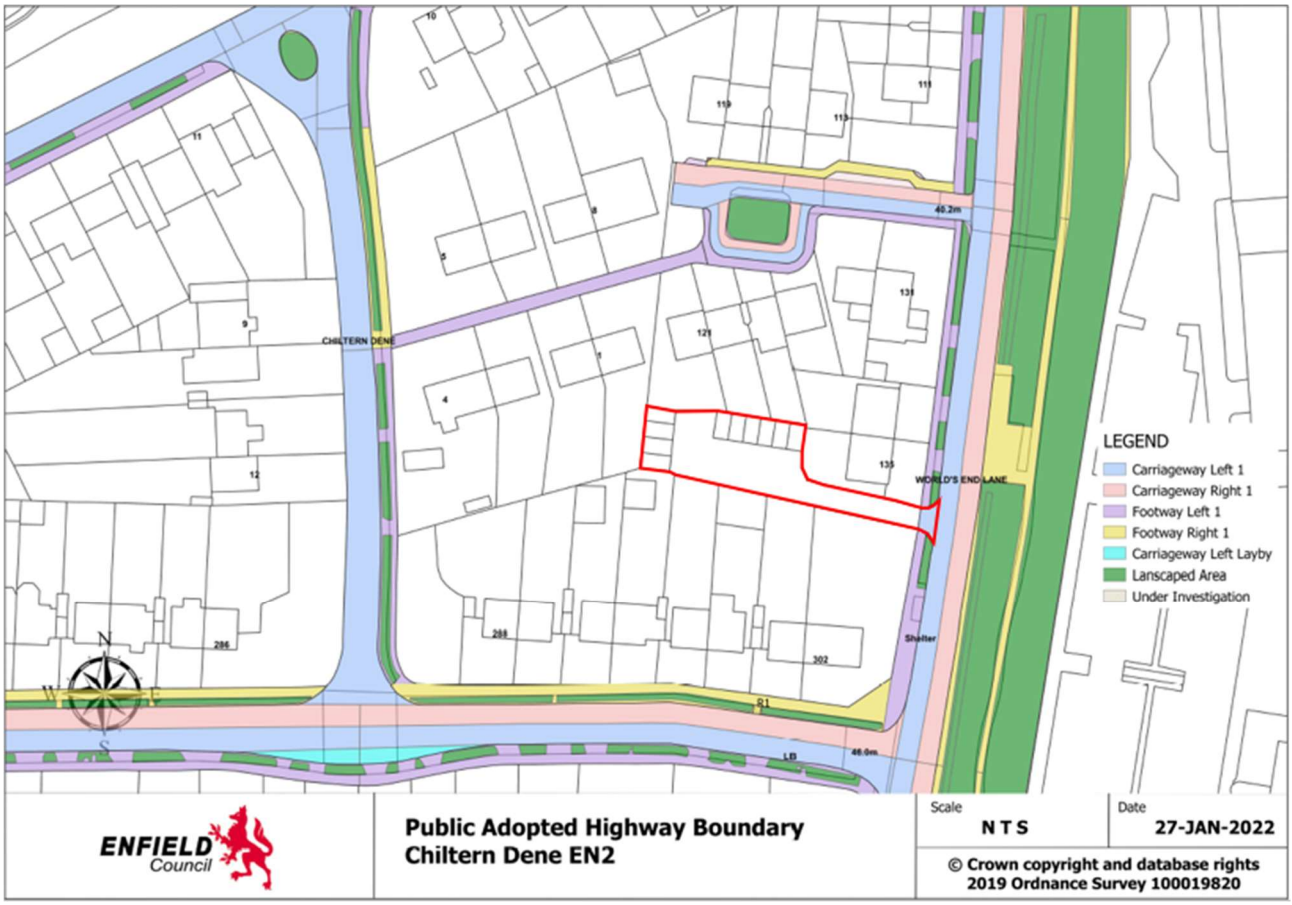
Table 1: Details relating to Site Location

Site Location / Address	Chiltern Dene, Enfield, EN2 7HH
National Grid Reference	530900, 196240
Approximate Site Area	The Site covers an area of approximately 0.05 ha (hectares).
Description of Site	The access to the site is via a single lane accessway, approximately 20m in length from Worlds End Lane between the southern side of house number 135 Worlds End Lane and the back garden fences of residential properties on the adjacent road of Lonsdale Drive The Site contains brick-built garages along the northern and western Site boundaries. The area of hardstanding is currently used for parking and for vehicle turning.
Topography	The topography of the Site is generally flat at around 42m Above Ordnance Datum (AOD) with a slight slope downwards from the entrance in the east towards the north-western corner of the Site. The regional topography is expected to decrease in elevation to the east towards Salmon's Brook.
Surrounding Area	The site is located within a predominantly residential area. To the immediate north, south and west of the site, the area is predominantly residential with gardens. To the east there is Highlands School.

2.2 Highways Register - Highway Boundary

The public adopted highway boundary of the site and surrounding area has been provided by Enfield Council, this is shown in Figure 2. According to Enfield Council's Highways Register, the site access onto World's End Lane is adopted carriageway. The adjacent footways to the left and right of the access are also adopted along with a small area of landscaped area.

Figure 2: Highway Status (as provided by the Client)



2.3 Planning Policy

2.3.1 Draft Enfield Local Plan (ELP) 2019 – 2039 – Sustainable Transport

The draft Enfield Local Plan (ELP) was approved for consultation on 9th June 2021. The ELP's overarching objective regarding transport is *"to deliver a transport network that improves the health and wellbeing of all Londoners and to achieve an 80% mode share for active and sustainable travel by 2014".* The ELP sets out several policies and outcomes, including two regarding sustainable transport.

T1 – Promoting Sustainable Transport

Travel choice and sustainable transport connectivity will be improved through the Borough and to other parts of London and beyond. Therefore, new development will be expected to:

a) Safeguard existing land and buildings where necessary to accommodate active travel, public transport or related support functions and future access to future infrastructure projects;

b) Deliver improvements to the transport network where they contribute towards sustainable regeneration and development within the Borough, promote sustainable modes of travel, reduce severance, improve safety and environmental quality and support businesses;

c) Be car-free (or offer a low level or parking provision) and support complementary measures, such as car clubs and contribute towards well-designed walking and cycling routes; and

d) Reduce traffic and promote safety of the transport network.

New and planned transport investment will be required to support the levels of planned growth within the Borough over the plan period, as well as increasing the proportion of journeys via walking, cycling and public transport. These include:

a) Ensuring that major development contributes to the delivery of the West Anglia mainline to improve frequency of train services to eight trains per hour; upgrades to the Piccadilly Line; more frequent rail services to at least four trains an hour peak and three trains an hour off-peak on the Enfield Town/Cheshunt services to and from Liverpool Street; more frequent rail services to at least four trains an hour at Meridian Water – including capacity improvements, accessibility, public realm or step-free access to mitigate impact of development or to unlock potential for growth;

b) Where appropriate contribute to the delivery of new public transport infrastructure and services where it is in areas of low public transport accessibility; and

c) Safeguarding space to deliver future improvements to Underground, Overground and National Rail including the future inter-urban rail route through Enfield to serve London and wider southeast.

T2 – Making Active Travel the Natural Choice

New development will be expected to support the healthy streets approach. Priority will be given to measures that encourage a shift to active transport modes and an increase in cycling and walking particularly journeys under 2 kilometres, along with public transport and high-quality public realm. Proposals will be expected to:

a) Improve walking access and routes to local services, including schools and retail locations, with new routes, networks and streets designed to meet regional and local guidance and standards, including the healthy streets indicators set out in Transport for London guidance;

b) Improve access to and where appropriate, contribute to the delivery of the cycling and walking route network, including green chains and links as set out on the Policies Map;

c) Provide and ideally exceed minimum standards in respect of high quality short and long stay cycle parking provision on site or contribute to offsite provision where this is not feasible;

d) Promote road safety and safer cycling and pedestrian movement around town centres and transport nodes and traffic-calming measures within residential areas and the wider pedestrian environment; and

e) Create or contribute to the creation of quieter neighbourhoods throughout the borough, through the removal of road traffic and prioritising active travel measures over car journeys. Streets should also include new pedestrian crossings and 20 mph speed limits, where appropriate; and where appropriate require contributions towards creating well-connected, high quality, convenient and safe network of cycling and walking routes to local destinations.

2.3.2 The London Borough of Enfield Transport Plan 2019-2041

The Transport Plan aims to transform transport and mobility in Enfield to allow people to travel and goods to be transported in a healthy and sustainable way. The priorities of the Transport Plan are to:

- Make active travel the natural choice, particularly for those trips less than 2km (1.2 miles);
- Make more school trips safe, sustainable and healthy;
- Reduce the impact of private vehicles on our streets;
- Make the public transport network more accessible and the natural choice for longer trips; and
- Maintain our assets for the benefit of the public.

The objectives of the Transport Plan are to:

- Deliver Cycle Enfield and supporting measures which encourage more cycling and walking in the borough;

- Promote safe, active and sustainable transport to and from schools;
- Monitor air quality and develop and deliver interventions which address local issues;
- Manage growing demand for on-street parking;
- Focus on and improve priority locations, making them safer for vulnerable road users;
- Improve local reliability of and accessibility to the public transport network; and
- Maintain and improve the transport network in Enfield, including developing potential interventions.

2.3.3 Development Management Document – Parking Standards

Within the Development Management Document (Adopted November 2014), it is expected that car parking proposals "will be considered against the standards set out in the London Plan".

New developments will also be considered against the following conditions:

a) The scale and nature of the development.

b) The public transport accessibility (PTAL) of the site.

c) Existing parking pressures in the locality.

d) Accessibility to local amenities, and the needs of the future occupants of the developments.

For developments where no standards exist, parking should be provided to ensure that:

e) Operational needs are adequately met, having regard to the need to maximise use of sustainable modes of transport.

2.3.4 The New London Plan – Parking Standards

The New London Plan, published in January 2021, outlines the mayor's environmental, economic, social and transport strategic policy framework which is aimed to improve London as a region over the next 20-25 years. Chapter 10 of this document sets out the Transport policy including the Healthy Streets Indicators and the maximum car parking standards.

The London Plan 2021 maximum car parking standards taking account of PTAL (Public Transport Access Levels) for residential car parking are shown in Table 2.

Table 2: Maximum residential parking standards in accordance with Table 10.3 of the London Plan 2021

Location	Number of Beds	Maximum parking provision*
Central Activities Zone Inner London Opportunity Areas Metropolitan and Major Town Centres All areas of PTAL 5 – 6 Inner London PTAL 4	All	Car free
Inner London PTAL 3	All	Up to 0.25 spaces per dwelling
Inner London PTAL 2 Outer London Opportunity Areas	All	Up to 0.5 spaces per dwelling
Inner London PTAL 0 – 1	All	Up to 0.75 spaces per dwelling
Outer London PTAL 4	1 - 2	Up to 0.5 – 0.75 spaces per dwelling +

Location	Number of Beds	Maximum parking provision*
Outer London PTAL 4	3+	Up to 0.5 – 0.75 spaces per dwelling+
Outer London PTAL 2 - 3	1 - 2	Up to 0.75 spaces per dwelling
Outer London PTAL 2 – 3	3+	Up to 1 space per dwelling
Outer London PTAL 0 - 1	1 - 2	Up to 1.5 spaces per dwelling ^
Outer London PTAL 0 - 1	3+	Up to 1.5 spaces per dwellings ^

* Where Development Plans specify lower local maximum standards for general or operational parking, these should be followed.

~ With the exception of disabled persons parking, see Policy T6.1 Residential parking.

+ When considering development proposals that are higher density or in more accessible locations, the lower standard shown here should be applied as a maximum.

^Boroughs should consider standards that allow for higher levels of provision where there is clear evidence that this would support additional family housing.

The Site has a PTAL rating of 1b (see Appendix A) and is located in outer London, therefore the maximum provision is up to 1.5 spaces per dwelling would be applicable.

3 Access and Movement Overview

3.1 Existing Access Arrangements

The Site currently has its main access for vehicles directly via Worlds End Lane. The Site is also accessible for pedestrians and cyclists from the same road although there is no dedicated path within the Site.

3.2 Adjacent Land Uses and Amenities

The area in the immediate vicinity of the Site is residential, with close proximity to education facilities to the north and east. The residential dwellings in the area generally consists of two-storey terraced/semi-detached housing, some of which have loft conversions, with gardens at the rear of the property and green areas fronting the properties.

There are several schools in close proximity to the Site. To the north of the site, within 230m walking distance is Merryhills Primary School. Highlands School is located directly to the east of the Site, within a walking distance of 350m and Grange Park Primary School is located to the southeast within a 300m walking distance. Additionally, Busy Bees nursery is located to the south at Florey Square in Highlands Village which is within an 850m walking distance.

For health services, the nearest GP is Bincote Road Surgery, which is located to the north of the site, and within 750m walking distance. Another Health Practice, Highland Practice, is located to the south of the Site on Florey Square in Highlands Village which is within 800m walking distance. The nearest Pharmacy is Capricorn Pharmacy, is within 700m walking distance, located to the northeast of the site on Enfield Road. Additionally, Lloyds Pharmacy to the south of the site, which like the nearest Health Practice, is located on Florey Square in Highlands Village. For dental services, the closest facility is Angle House Orthodontics located to the northeast of the site on The Ridgeway, which is within a walking distance of 1.6km.

There is a varied range of amenities in the vicinity of the Site. To the west of the Site, within a walking distance of 350m, there is Boxers Lake Open Space Play Area and Boxers Lake. Additionally, Enfield Golf Club is located directly to the east of Highlands School, which is a walking distance of 1.5km. There are a few dining and drinking establishments near the Site, however, they are sparse, with the nearest being Délicemobil.Com, located on Laidlaw Drive at a walking distance of 700m to the southwest of the Site.

In addition to the amenities outlined above on Florey Square in Highlands Village, which is to the south of the Site, the nearest supermarket, Sainsburys, is located here and is a walking distance of 850m.

With regards to places of worship, Grace Church Highlands is the closest to the Site, located to the southeast, within a walking distance of 210m.

3.3 Pedestrian Accessibility

Worlds End Lane, which provides direct access to the Site is a two-way single carriageway road with footways on both sides of the road. The footways are in relatively good condition, with dropped kerbs and tactile paving present at crossing points. Along a vast majority of the footway, grass verges are also present. Along the footway, there are dropped kerbs to the frontage of houses for vehicular access.

Worlds End Lane footway connects to Lonsdale Drive, located to the south of the Site, and Glenbrook Street located to the north of the Site. Lonsdale Drive footways are generally cracked with no dropped kerbs or tactile paving provided at crossing points. The footway is present along the south of the carriageway throughout, however, there is no footway present along Boxers Lake, which is located to the west of the Boxers Lake Open Space Play area. Along the vast majority of the footways, grass verges are also present. At some points along the footways, the surface has been impacted by the provision of dropped kerbs to the frontage of houses for vehicular access. Glenbrook Street is in relatively good condition, with smooth surfaced footways. However, there are no dropped kerbs or tactile paving provided at crossing points. The footway is only present on the southern side of the carriageway.

To the west of the Site is Chiltern Dene, with footways connecting to Glenbrook Street and Lonsdale Drive. This is a two-way single carriageway road with footways on the western side of the carriageway. The

footways along this road are generally cracked, although trip hazards are not evident. Along the footway, grass verges are also present.

3.4 Cycle Infrastructure

There are no National Cycle Routes (NCR) in the vicinity of the Site. The closest NCR is Route 12 which is located to the north of the Site and runs in sections from Enfield Lock in north London to Spalding via Stevenage, St Neots and Peterborough. This route is a walking distance of 2.5km. There are also no London Cycle Network routes nearby, with the nearest being C20 which is located approximately 2.6km walking distance on the A103 Green Lanes to the east of the Site. However, there are shared cycling and walking paths approximately 550m walking distance north of the Site along Enfield Road.

3.5 Parking

The Site is located within Controlled Parking Zones. Along Worlds End Lane, there is no parking allowed Monday to Friday between 8:30am and 6:30pm on both sides of the carriageway. Additionally, approximately 230m to the north of the site there are No Stopping markings on the northbound side of the carriageway by the (Merryhills Primary) School entrance on Monday to Friday between 8:15am-9:15am, 11:30am-1:30pm, and 2:45-4:00pm.

However, there are no parking restrictions present on the roads surrounding the Site. Along Chiltern Dene, which is to the west of the Site, there are no parking restrictions present, and on-street parking is common on the eastern side of the carriageway. There are no parking restrictions along Glenbrook South located to the north of the Site. On-street parking is common throughout on both sides of the carriageway. Additionally, along Lonsdale Drive, which is situated to the south, there is a dedicated space for disabled parking only, however, the remaining sections of the road has no other parking restrictions.

3.6 Analysis of Collision Data

An indicative analysis of the most up to date five-year period of collision data has been undertaken using the DfT registration of collisions, accessible via Crashmap.co.uk. Please note, no details of collisions have been requested, only statistics. An extract from Crashmap showing the exact locations of the incidents can be viewed within Appendix B.

No collisions have been identified within the immediate vicinity of the Site. However, there was a collision of ‘slight’ severity at a walking distance of approximately 150m to the north of site on Worlds End Lane. Additionally, there was a collision of ‘slight’ severity at a walking distance of approximately 180m to the south of the site at the Worlds End Lane/Roundhill Drive junction. Both of these collisions involved pedestrians.

Approximately 500m north of the Site on Enfield Road/Bincote Road junction, one collision of ‘slight’ severity, involving a pedal cyclist casualty, was recorded. There was a collision of ‘serious’ severity involving a pedal cyclist 1km north of the Site on Enfield Road. The nearest collision recorded involving a pedal cyclist occurred on Linden Way approximately 210m northwest of the site. This collision was of ‘slight’ severity.

4 Future Site Access and Considered Risks

For the purpose of the analysis for this report, it is assumed that the Site would be considered for future residential development. In the context of the surrounding area, this would be deemed appropriate due to the surrounding residential land use.

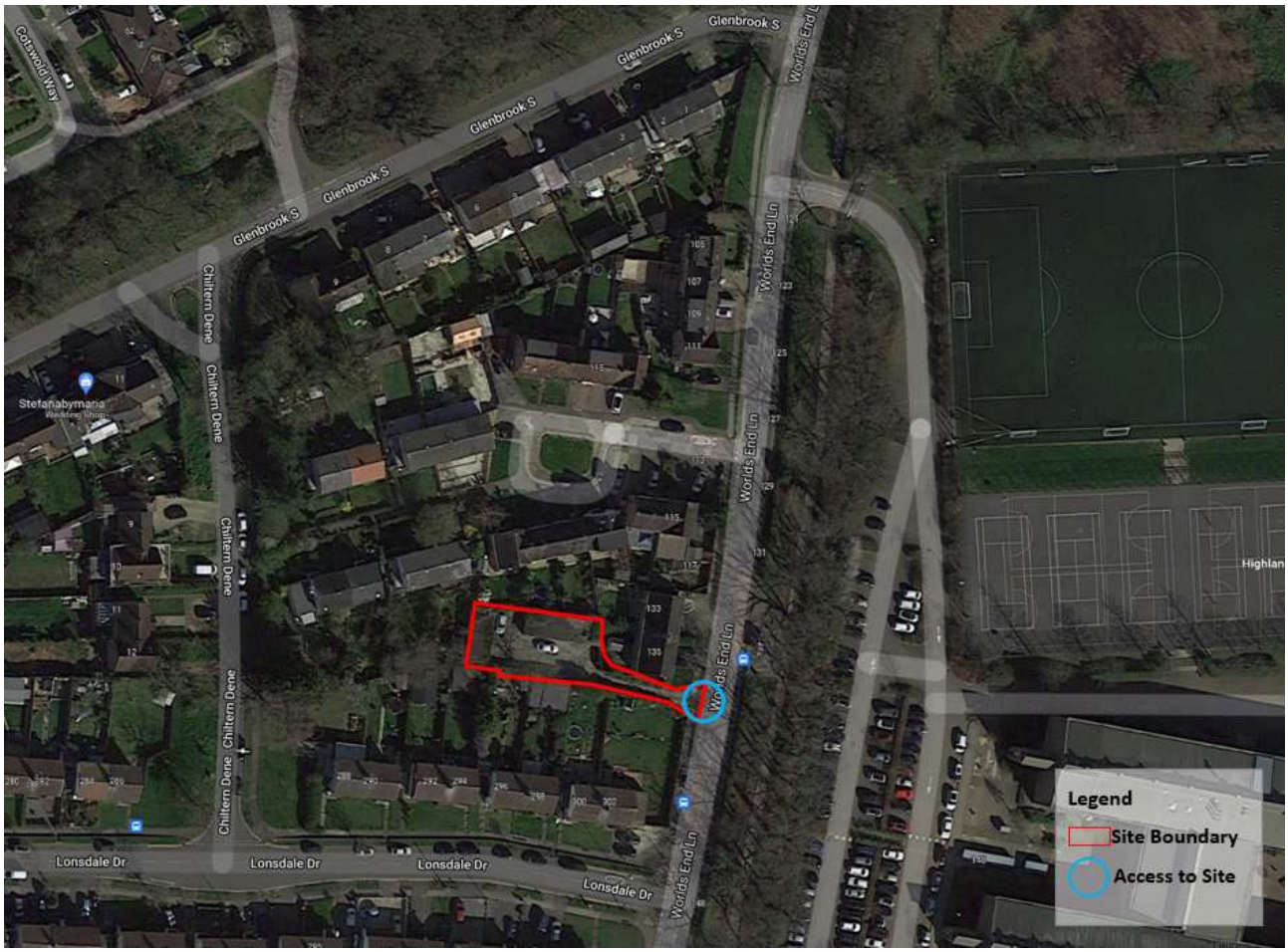
Considering the existing neighbouring sites in surrounding areas, the Site would be suitable for residential development. This could take the form of flats of a similar height to the neighbouring buildings. A single vehicle access would have the capacity to support this scale of development.

The Site currently has a direct access for all modes via World's End Lane. Although the location is already established, it is only a single lane access. The future use as an all-modes access for private car, pedestrian and cyclists are likely to raise safety and operational concerns from a highway perspective. The Site will also need to consider servicing and emergency access in any future design, including the access into and out of the Site as well as any on-site turning facilities which are likely to be required. These requirements are likely to be problematic with the constraints of the access. These considerations will need to be reviewed in detail to understating whether these could comply with current planning and design guidance.

The viability of intensifying the existing vehicular access, connected to the rear plot, is therefore unlikely to be considered feasible. However, the land surrounding the area, both the carriageway and the footways have been identified as adopted, therefore there are no land ownership issues with regards to the access of the Site. The potential access option is illustrated in Figure 3.

Connections from the Site provide the opportunity for any future development to promote trips by sustainable travel modes, which will have inclusion and environmental benefits.

Figure 3: Potential Access Option (Background Source – Google)



5 Conclusions and Recommendations

5.1 Conclusions

The Site is considered to be suitable for residential use, with a comparison of a similar sized plots nearby being utilised for residential purposes. Existing access arrangements for the Site have the potential to be maintained. However, the feasibility of this would need to be assessed as part of any design.

Table 3: Summary

Current Access	Vehicular access is currently achieved directly via World's End Lane. Pedestrian and cyclist access are provided via the same path.
Surrounding Area	The Site is located within a residential area with properties with gardens to the north, south and west. The residential dwellings are generally two storey in height. There are several schools close to the Site, with Highlands School directly to the east, Merryhills Primary School to the north and Grange Park Primary School to the southeast. There are a range of amenities in the vicinity of the Site, namely Florey Square/Highlands Village located approximately 800m walking distance to the south, where a supermarket, health practice, pharmacy and nursery are located. There is an Open Space Play Area located 350m walking distance to the west of the Site on Lonsdale Drive. There is also a place of worship located 210m southeast of the Site.
Current Visibility	Visibility from the existing site access does not create any issues, as the existing access is generally flat, it allows sufficient visibility for drivers and existing users of the Site.
Current Restrictions	The visibility of any future access will have to meet the visibility splay standards such that it would not prejudice highway safety for all highway users.
Access Solutions	Access could be maintained at the established point of access, if safety concerns around intensifying its use can be addressed for a residential purpose.
Risks	Footways and carriageways surrounding the Site have been identified as adopted, therefore there would be no risk associated with land ownership and access. The narrow width and length of the existing single lane access, providing the connection to the larger plot, would likely cause safety concerns and may not be considered viable for a future residential use. The visibility of the access will be no worse than the existing situation, but analysis should be undertaken during the design process in the future stages of the Site development. Access width is only considered as a single lane, enabling one vehicle at a time, confirmation will be required to identify if this complies with any Access Design Guidance adopted by Enfield Council.

5.2 Recommended Works to De-Risk Site

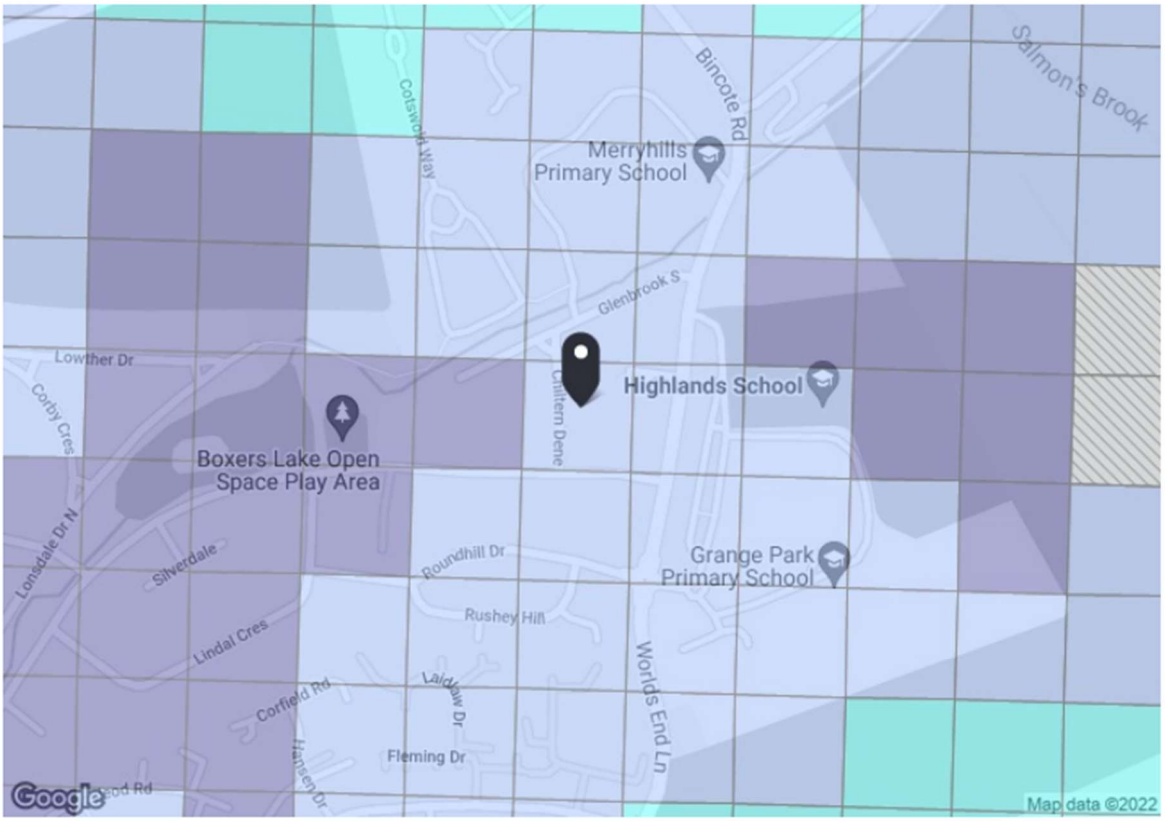
Visibility from the existing access will need to be considered in development designs to mitigate highway safety concerns such that they are not compromised. Future detailed design will need to ensure servicing and emergency vehicle access is made available and swept path analysis will need to be considered to inform vehicle turning requirements.

Depending on the scale of proposed development, it would be useful to undertake a high-level trip generation as a comparison to the existing use of the Site to provide an indication of the impact on the surrounding highways due to the change of use of this site.

To establish the full requirements for planning application submission, discussions with colleagues at Enfield Council will need to be undertaken.

APPENDIX A

PTAL Report



PTAL output for Base Year
1b

EN2 7HH
Chiltern Dene, Enfield EN2 7HH, UK
Easting: 530850, Northing: 196251

Grid Cell: 154226

Report generated: 28/01/2022

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

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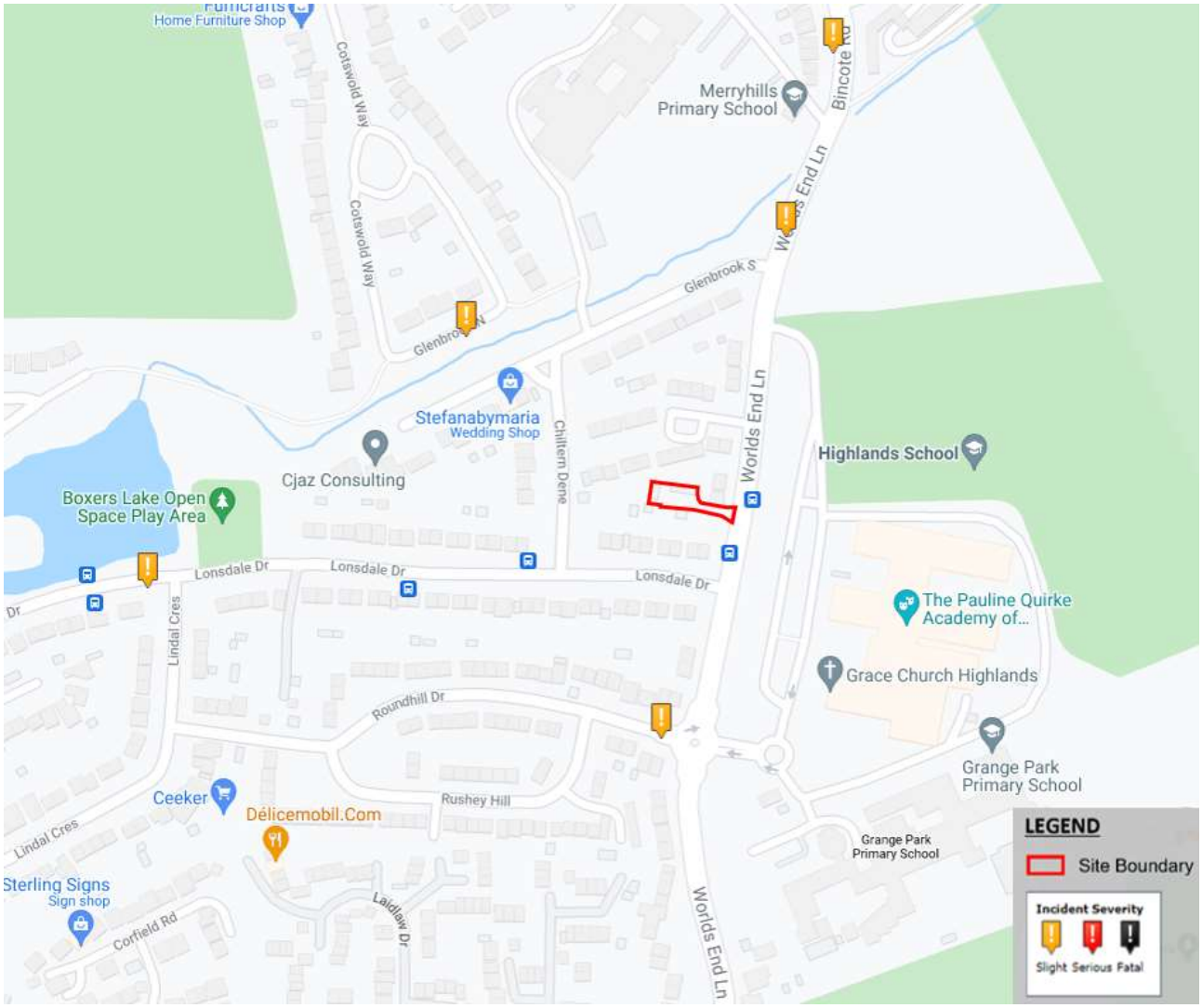
Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	WORLDS END LANE HIGHLANDS AVENUE	W9	502.1	4	6.28	9.5	15.78	1.9	1	1.9
Bus	LONSDALE DRIVE, CHILTERN DENE	377	74.93	2	0.94	17	17.94	1.67	0.5	0.84
									Total Grid Cell AI:	2.74

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APPENDIX B

Crashmap Figure



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