

# **BE FIRST REGENERATION LTD INNOVATIVE SITES PROGRAMME**

## **GARAGE BLOCKS, HIGHLAND AVENUE, BARKING AND DAGENHAM, RM10 7AS**

### **Access and Highways Due Diligence Report**

MARCH 2021



## Garage Blocks, Highland Avenue, RM10 7AS

### Access and Highways Due Diligence Report

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Report No	10046791-AUK-XX-XX-RP-HE-0012-01-Highland Avenue Access and Highways Due Diligence Report
Date	MARCH 2021

## VERSION CONTROL

Version	Date	Author	Checker	Approver	Changes
01	March 2021	PJ	JC	IB	First Issue

This report dated 29 March 2021 has been prepared for Be First Regeneration Ltd (the "Client") in accordance with the terms and conditions of appointment dated 28 January 2021 (the "Appointment") between the Client and **Arcadis (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

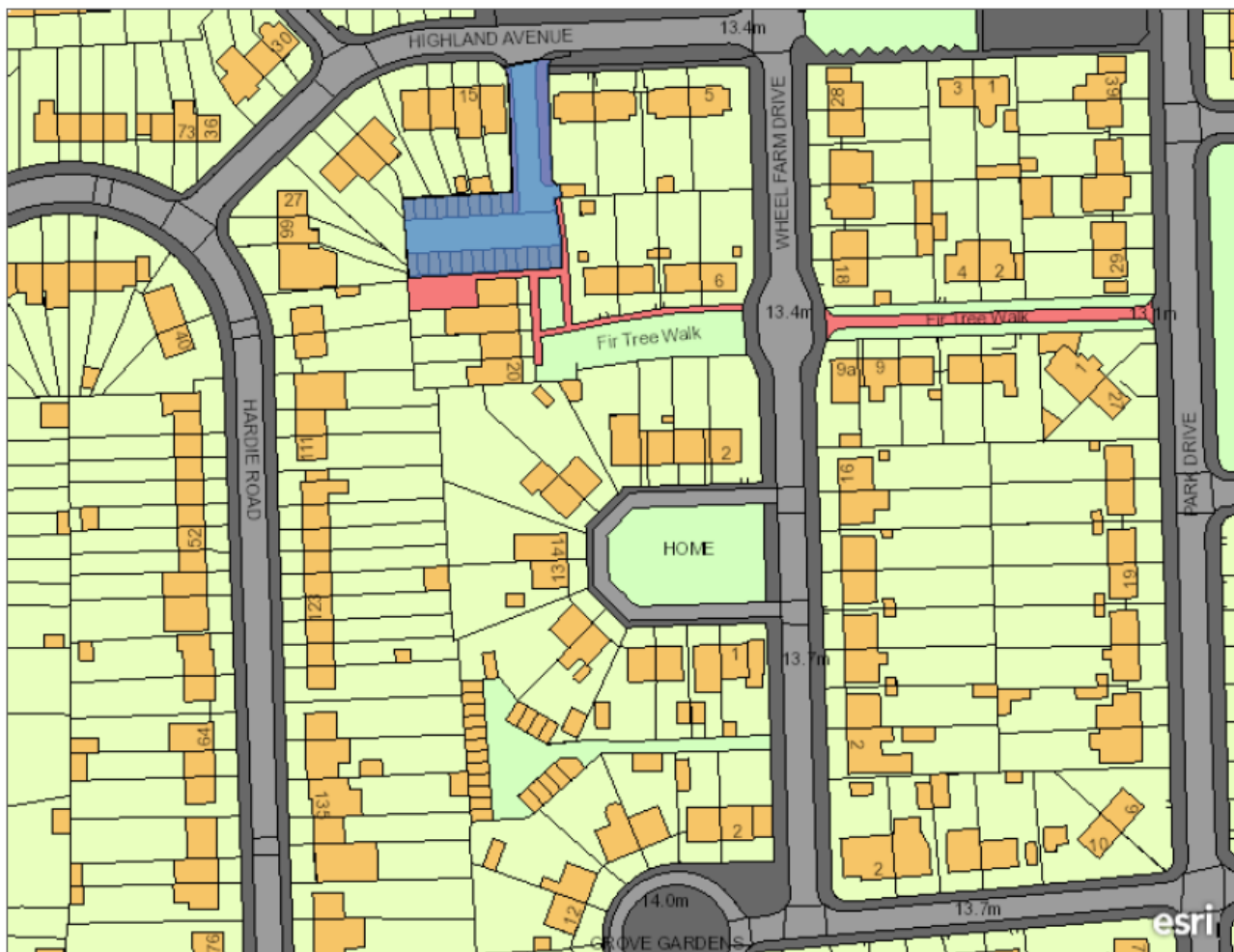
Arcadis (UK) Limited (Arcadis) has been commissioned by Be First Regeneration Limited on behalf of London Borough of Barking and Dagenham (LBBD) ('the Client') to undertake due diligence appraisals in connection with a number of small sites to enable regeneration, Highland Avenue, RM10 7AS, ('the Site') is one of these.

The objective of this desktop appraisal is to provide pragmatic advice to de-risk each of the sites to reduce 'abnormal' development costs, including:

- Review existing transport, highway, access and movement related 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
- Identify any potential 'abnormal' risks and future site access

The Site location is shown in Figure 1, with the site highlighted in blue.

Figure 1: Site Location Plan



## 1.2 Sources of Information

As part of this due diligence appraisal various sources of information have been used and are detailed below:

- Crash Map ([www.crashmap.co.uk](http://www.crashmap.co.uk))
- Transport for London WebCAT ([www.tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat](http://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 as a desktop exercise, which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others and has not undertaken site visits. 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

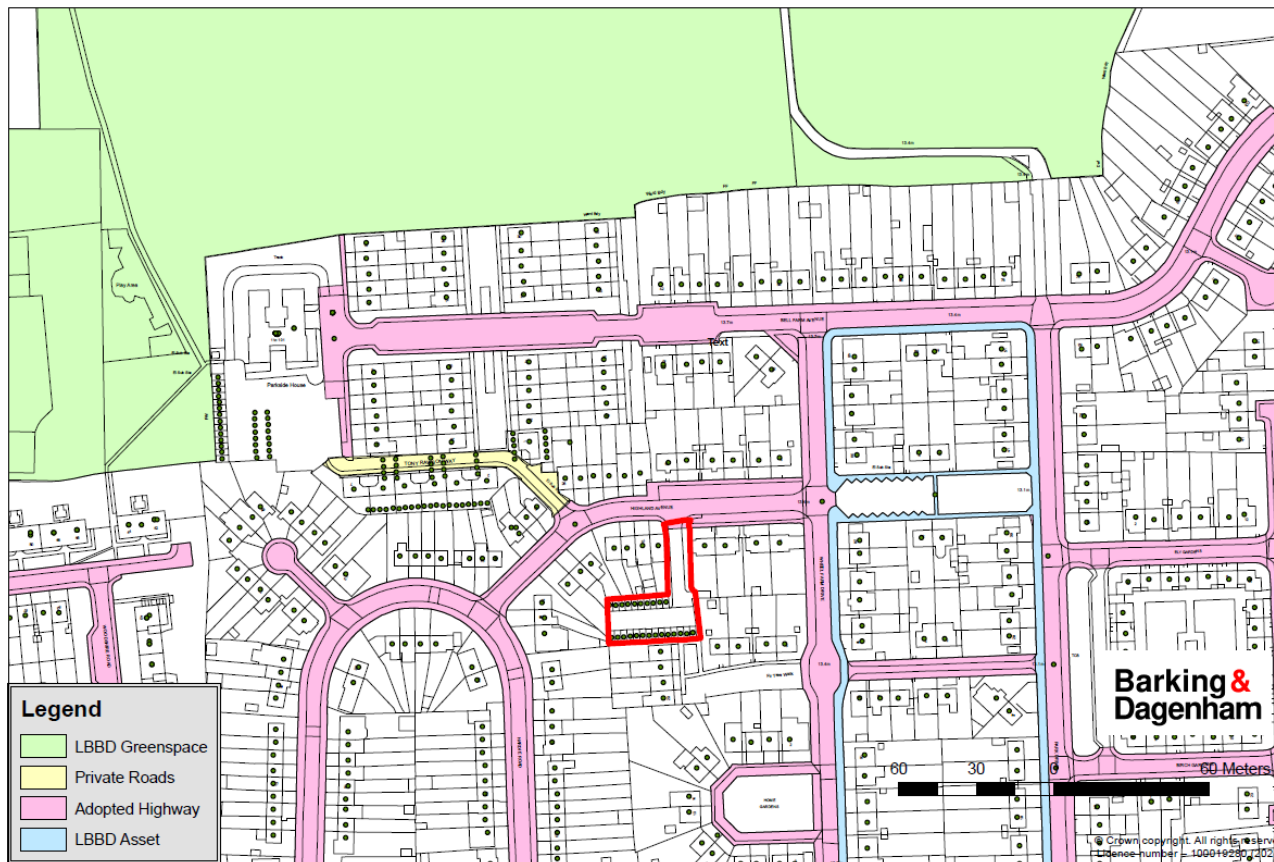
Table 1: Details relating to Site Location

Site Location / Address	Garage Blocks, Highland Avenue, RM10 7AS
National Grid Reference	550243, 186269
Description of Site	<p>The Site comprises one plot of land off Highland Avenue which forms a backwards 'L' shape covering a total area of approximately 0.09 ha. The Site is currently occupied by 22 garages along northern and southern boundaries and an area of hardstanding in the middle, as shown in the Site Location Plan. The area hardstanding is currently used for vehicle turning.</p> <p>Vehicular access is provided in the form of a priority junction north of the Site with Highland Avenue, via a double lane access running for approximately 35m in length. The access way has segregated footways running along its length on both sides.</p>
Surrounding Area	<p>The Site is bounded by residential plots on all sides. The roads joining Highland Avenue are Tony Rawson Way and Hardie Road to the west and Wheel Farm Drive to the east.</p> <p>Central Park, Eastbrookend Country Park and Goresbrook Cricket Club are located north, east, and south of the Site respectively. The Chase Nature Reserve is located southeast of the Site. Eastbrook Comprehensive School is located south of the Site on Dagenham Road.</p>

### 2.2 Highways Register - Highway Boundary

LBBD has provided the highway boundary for the Site and its surrounding area, as shown in Figure 2. The site is accessed from the adopted highway of Highland Avenue.

Figure 2: Highway Status



## 2.3 Planning Policy

### 2.3.1 Draft Local Plan 2019 – 2034 – Sustainable Transport

#### Policy SP1 – Delivering Growth

This policy has been created to promote sustainable development throughout the borough to provide infrastructure which support's residents health and well being by meeting the 10 Healthy New Town Principles, set out below:

1. Actively promote and enable community leadership and participation in planning, design and management of buildings, facilities and the surrounding environment and infrastructure to improve health and reduce health inequalities.
2. Reduce health inequalities through addressing wider determinants of health such as the promotion of good quality local employment, affordable housing, environmental sustainability and education and skill development.
3. Provide convenient and equitable access to innovative models of local healthcare services and social infrastructure, with the promotion of self-care and prevention of ill health.
4. Provide convenient and equitable access to a range of interesting and stimulating open spaces and natural environments ('green' and 'blue' spaces) providing informal and formal recreation opportunities for all age groups.
5. Ensure the development embodies the principles of lifetime neighbourhoods and promotes independent living.
6. Provide access to fresh, healthy and locally sourced food (e.g. community gardens, local enterprise) and provide opportunities for food growing and managing the type and quantity of fast-food outlets.



7. Encourage active travel; ensuring cycling and walking is a safer and more convenient alternative to the car for journeys within and without the development and providing interesting and stimulating cycle paths and footpaths.
8. Create safe, convenient, accessible, well-designed built environments and interesting public spaces and social infrastructure that encourage community participation and social inclusion for all population groups including older people, vulnerable adults, low income groups and children.
9. Embrace the Smart Cities agenda by incorporating and future-proofing for new technology and innovation that improves health outcomes across a range of areas both at an individual level and also within the public realm.
10. Ensure workplaces, schools, indoor and outdoor sports and leisure facilities, public realm and open spaces are well-designed and managed in ways which promote an active and healthy lifestyle, including regular physical activity, healthy diet and positive mental health.

#### Policy SP2 – Delivering homes that meet people's needs

This Policy has been created to support the council's 10 year goal of providing housing within the areas identified within the London Plan. It states that housing should meet the needs for specific communities including disable and vulnerable people.

#### Policy SP7: Planning for Integrated Transport

This policy supports the delivery of the Mayor's strategic target of 80% of all trip throughout London to be made by foot, cycle or public transport. Additionally, the policy will *'support proposals that reduce reliance on the use of the private car through incorporation of design measures and facilities to promote walking and cycling and use of public transport.'*

#### Policy DM31: Making better connected neighbourhoods

As part of the planning application process development should be supported by a Transport Assessment/Statement to show the impact on capacity at a local or strategic level and so be fully assessed in accordance with the national or local guidelines.

#### Policy DM33: Cycle and car parking

This policy sets out that all development should adhere to the parking standards as set out within the Draft New London Plan and should be designed with the associated specifications. Cycle parking is to be provided in smaller secure areas and car club spaces provided within a reasonable distance of development. If a road cannot accommodate the increase of cars incurred by development and it is not possible for mitigation, the developer would be expected to meet the cost of implementing a Controlled Parking Zone (CPZ). A car free development, including spaces for disabled persons, is strongly encouraged by this policy and developers should ensure that the provision of car parking spaces does not impact on cycleways and pedestrian desire lines.

### 2.3.2 Local Implementation Plan 3 2019/20 – 2021/22 (LIP) – Sustainable Transport:

The LIP's overarching objective regarding transport is to deliver a package of interventions and improvements that will *"help connect people and places; promote healthy, sustainable travel; improve safety and security; and create better streets and places"*.

The Local Implementation Plan document sets out Barking and Dagenham Borough's transport issues and objectives. Objectives under outcome 8 are detailed below:

- Enhancing public transport connectivity to enable growth
- Improving accessibility for all to key services and facilities
- Encouraging active travel to improve health and wellbeing
- Facilitating green travel to improve air quality and reduce the impact on the environment
- Reducing the number of casualties on our roads
- Improving safety and security across the transport network
- Managing our road space more efficiently to tackle congestion
- Transforming the public realm to create healthy, inclusive places

Residential development should therefore consider and support these objectives set out within the Local Implementation Plan 3.

### **2.3.3 Parking Strategy 2016-2021**

The Parking strategy for the London Borough of Barking and Dagenham has been put together in recognition that *'a road network that is free from congestion and safe for car users, pedestrians and cyclist alike is vitally important'*.

It is noted that it should be recognised that there are some residential groups for whom access to parking is essential to their daily lives. The plan states that the following hierarchy of user needs should apply when making decisions regarding parking:

1. Residents with a disability
2. Non- residents with a disability
3. Local residents
4. Priority care workers
5. Local business essential servicing
6. Short stay visitors and shoppers
7. Long stay visitors and shoppers
8. Long Stay Commuters

Proposed residential development should therefore best support the aims of the Parking Strategy and consider the hierarch of user importance.

### **2.3.4 London Plan 2021– Parking Standards**

Within the Local Plan, it is expected that development proposals will deliver patterns of land use that facilitate residents making shorter, regular trips by walking and cycling. Development proposals should demonstrate how they will deliver improvements that support the Healthy Street Indicators. In respect of car parking, the LBBD policies set out that they consist of an *"appropriate maximum number of car parking spaces consistent with the standards in the London Plan."*

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.

This document supports the implementation of the Mayors Transport Strategy and hence it is advisable to adhere to this strategy for upcoming developments. The proposed land use of the site will need be confirmed, but for the purposes of this report the London Plan 2021, sets out maximum car parking standards taking account of PTAL. The residential car parking standards are shown in Table 2.

## Garage Blocks, Highland Avenue, RM10 7AS

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 +
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 <sup>Δ</sup>
Outer London PTAL 0 - 1	3+	Up to 1.5 spaces per dwellings <sup>^</sup>

\* 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.

<sup>Δ</sup>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 1a, see Appendix A, and is located in outer London, therefore a maximum provision of 1.5 spaces per dwelling would be applicable, subject to the number of beds, should the proposal come forward as a residential led development on the Site.

### **3 Access and Movement Overview**

#### **3.1 Existing Access Arrangements**

The Site currently has its main access for vehicles from Highland Avenue, north of the Site. The Site is also accessible for pedestrians and cyclists from the same road. A pedestrian pathway, not a part of the Site, runs along the eastern edge of the Site connecting the Site with Wheel Farm Drive in the east.

#### **3.2 Adjacent Land Uses and Amenities**

The area surrounding the Site is predominantly residential land use with some shops and facilities providing goods and services. The residential dwellings generally consist of semi-detached houses, two storeys in height.

There is a varied range of amenities in the vicinity of the Site. The site has several options for recreation and outdoor space such as Eastbrook Country Park which is located east of the Site and can be accessed from Central Park in the north. Central Park is accessible from Bell Farm Avenue and consists of facilities such as children's playground, outdoor gym, football and rugby pitches, tennis and basketball courts, golf course, car parks and more. Dagenham Farm is also located 600m to the west of the Site and can be accessed via pedestrian pathways within Central Park. Becontree Heath Leisure Centre is located 1.6km northwest of the Site on Wood Lane. Goresbrook Cricket Club is located south of the Site on Dagenham Road.

Eastbrook Comprehensive School is located at a walking distance of 500m, south of the Site on Dagenham Road. The nearest primary school is William Bellamy Primary School, located at a walking distance of 1.1 km northwest of the Site. 1<sup>st</sup> Steps Day Nursery and Wantz Community Centre are situated 650m southwest of the Site on Rainham Road North. In terms of higher education, Barking and Dagenham College and Coventry University are located 1.6km northeast and 1.2km northwest of the Site respectively. Coventry University can be accessed from the pedestrian pathways present within Central Park.

Various commercial establishments including grocery stores, dining and drinking establishments, hardware establishments are located south of the Site on Dagenham Road, Oxlow Lane and Rainham Road South. The nearest Tesco Express is located at a distance of some 1.3km on Oxlow Lane and can be reached via Dagenham Road.

Dagenham Business Centre and Frizlands Lane Reuse and Recycling Centre are situated west of the Site at approximately 800m and 1km of walking distance respectively, on Rainham Road North. Dagenham Fire station is also located on the same road, at about 900m northwest of the Site.

For health services, Laburnum Health Centre and Britannia Pharmacy are located approximately 1.5km northwest of the Site. Oxlow Pharmacy is located at a walking distance of 1.2km southwest of the Site on Oxlow Lane.

In terms of places of worship, a Buddhist Temple is located 750m west of the Site on Rainham Road North. Oxlow Lane Baptist Church and Grace to Grace International Church are located at 800m and 1.1km respectively on Oxlow Lane.

#### **3.3 Pedestrian Accessibility**

Highland Avenue which provides access to the Site, is a two-way single carriageway. There are footways present on both sides of the carriageway. The road continues east to connect with Wheel Farm Drive. To the west, Highland Avenue meets Tony Rawson Way at a Y-junction and runs further east towards Hardie Road which connects it to Rainham Road North either via Central Park Avenue, Macdonald Avenue or Greenwood Avenue. Wheel Farm Drive meets Fels Farm Avenue, connecting the Site with Dagenham Road via Park Drive. The surroundings of the Site are residential and all the above-mentioned roads providing access to them have footways present on both sides of the road. A pedestrian pathway runs along the eastern edge of the Site, connecting the access of the Site with Wheel Farm Drive which further connects with Park Drive via a pedestrian pathway east of Wheel Farm Drive.

Garage Blocks, Highland Avenue, RM10 7AS

Dagenham Road that runs south of the Site also has footpaths on either side of the carriageway and can be accessed via foot from Hooks Hall Drive. There are controlled pedestrian crossings present at its junction with Rainham Road North/Rainham Road South/ Oxlow Lane four arm signalised junction.

There are dedicated pedestrian pathways running within Central Park and Eastbrookend Country Park, which connects the site with the A1112 Rainham Road North in west and Dagenham Road in east.

Most of the locations on the local highway network have dropped kerbs and tactile paving where there are footways on the adjacent side.

### **3.4 Cycle Infrastructure**

There are no National Cycle Routes (NCR) in the vicinity of the Site. The closest NCR is NCR 13, located approximately 4km south of the Site. It is a 220 km long route, connecting London in the west to Dereham in the north. NCR 136, also known as The Ingreborne Valley Way, which connects Rainham with the village of Noak Hill to the north via Upminster, is located approximately 4.6km from the Site. It can be reached either via NCR 13 to the south or via Local Cycle Route 15 to the north via Rush Green Road.

A LCR runs along the Dagenham Road connecting A1112 Rainham Road North in the west with LCR 15 at Rush Green Road in north. LCR along the A1112 Rainham Road North, connects with LCR 15 at the A124 Wood Lane/A1112 Rainham Road North three-arm roundabout and Rainham Road South to the south. There are marked cycle lanes along all the aforementioned LCRs in both directions. These marked cycle routes connect the Site with Dagenham East Rail Station, approximately 1.7km south of the Site, via Rainham Road South.

Dedicated cycle paths are also present within the Central Park, Dagenham and Eastbrookend Country Park which connects Rainham Road North with Legon Avenue to the north-east and Dagenham Road to the southeast.

Four Sheffield Cycle stands are provided outside the Dagenham Fire Station and three at Rainham Road South near the Rainham Road North/Dagenham Road/Rainham Road South/Oxlow Lane four arm signalised junction. Another six stands are provided on Dagenham Road where the commercial establishments are located.

### **3.5 Parking**

There are no parking restrictions on the roads in the vicinity of the Site and vehicles are noted to be parking on the kerb in the surrounding streets. On Highland Avenue, the vehicles can be seen parked on the northern side of the carriageway. Rainham Road North has a continuous marked parking bays on both sides of the carriageway. There are restrictions for vehicles weighing 5 Tonnes and above to park Monday to Friday between midnight and 07:00 and between 20:00 and midnight and any time on Saturdays and Sundays.

There are no parking restrictions on Dagenham Road, and the vehicles can be noted to be parked on the footways, off the highway.

### **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](https://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.

Within the immediate vicinity of the Site, there has been one collision on Fels Farm Avenue, two on Hardie Road and one on Central Park Avenue, all of slight severity.

There have been seven incidents on Rainham Road North, three of which were near Macdonald Avenue and Ashbrook Road with A1112 Rainham Road North, two near Woodshire Road Bus Stop and two further north, all of which were slight in severity.

Eight incidents were recorded on Dagenham Road along the stretch of the road south of the Site, six of which were of slight severity, one serious and one being fatal.

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The fatal severity collision took place near the access to the off-street parking located between Eastbrook Comprehensive school and Eastbrook Avenue.

Another nine incidents occurred on Rainham Road North/Dagenham Road/Rainham Road South/Oxlow Lane four arm signalised junction, all of which were slight in severity. Two incidents at this junction involved cyclists and five involved pedestrians.

The collisions recorded can be attributed to driver error and are not connected to the layout of the highway network and no further measures should be taken.



## 4 Future Site Access and Considered Risks

For the purpose of the analysis of this report, it has been assumed that the Site would primarily be considered for a future residential led development. In the context of the surrounding area, this would be deemed appropriate due to the predominantly residential setting.

This could take the form of a single block or individual units in a similar scale to the neighbouring buildings. The single vehicle access would have the capacity to support a small scale residential led development.

The Site currently has a vehicle access which offers two way movement with a carriageway of approximately 5m in width and also a footway along the eastern side of the carriageway via Highland Avenue. The location is considered suitable, as access is already established, meaning that future use as a private car access and pedestrian access is unlikely to raise any concerns from a highway perspective. Service and emergency access will need to be considered in any future design, as on-site turning facilities may be required to comply with planning guidance. A secondary access for pedestrians could be considered in the future from the south eastern part of the Site, with its boundary with the pedestrian pathway that runs along the eastern edge of the Site. The ownership status of this footpath will need to be confirmed when considering a secondary pedestrian access.

The viability of the vehicular access from Highland would unlikely be disputed and the land surrounding the area, both the carriageway and the footway south of the carriageway have been identified as adopted, therefore there are no land ownership issues with regards to the access of the Site. Visibility from the Site is currently considered to have no issues as the existing Site and the access road is on a flat terrain and allows sufficient visibility for drivers and existing users of the Site. The 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: Access Option (Background Source – Google)



## 5 Conclusions and Recommendations

### 5.1 Conclusions

The Site is considered to be suitable to support a residential led development 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 future detailed design consideration.

Table 3: Summary

Current Access	Vehicular access currently achieved directly via Highland Avenue. Pedestrian and cyclist access are also provided via Highland Avenue.
Surrounding Area	The Site is located within a residential area, surrounding the site. Commercial developments including restaurants, supermarkets and other minor commercial purpose land uses are located to the south and southwest Site. The site has several options for recreation and outdoor space locations like Central Park, Eastbrookend Country Park, and Chase Nature Reserve located in the vicinity of the Site to the north, east and south.
Current Visibility	Visibility from the existing site access does not create any issues, as the existing access and the Site is on a flat terrain, 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.  The width of Highland Avenue is constrained by on-street parking such that it operates as a single carriageway road for most of its length.
Access Solutions	Access could be maintained at the established points of access, as it is established and currently considered viable for its purpose. This is in the form of a 5m wide carriageway (approximately) and a footway alongside this.  A secondary access for pedestrians could be considered from the southern or eastern boundary of the Site via the pedestrian pathway that presently runs along the eastern edge of the Site.
Risks	Footways and carriageways of Highland Avenue have been identified as adopted, therefore there would be no risk associated with land ownership and access to the Site from this road. The status of the footpath on the eastern boundary will need to be confirmed if a secondary pedestrian access is considered at the south eastern edge of the Site.  The visibility of the access will be no worse than the existing situation, and further assessment will need to be undertaken during the design process in the future stages of the Site development.  Future design will need to consider servicing and emergency vehicle access and the possible requirements to turn within the site.  Analysis of any future residential development on the Highland Avenue Site may result in a reduction in vehicle movements using the access compared to its extant use as a garage block.



## 5.2 Recommended Works to De-Risk Site

Further investigation into access options for all modes is required and an access strategy for all modes should be established prior to commencement of any detailed work.

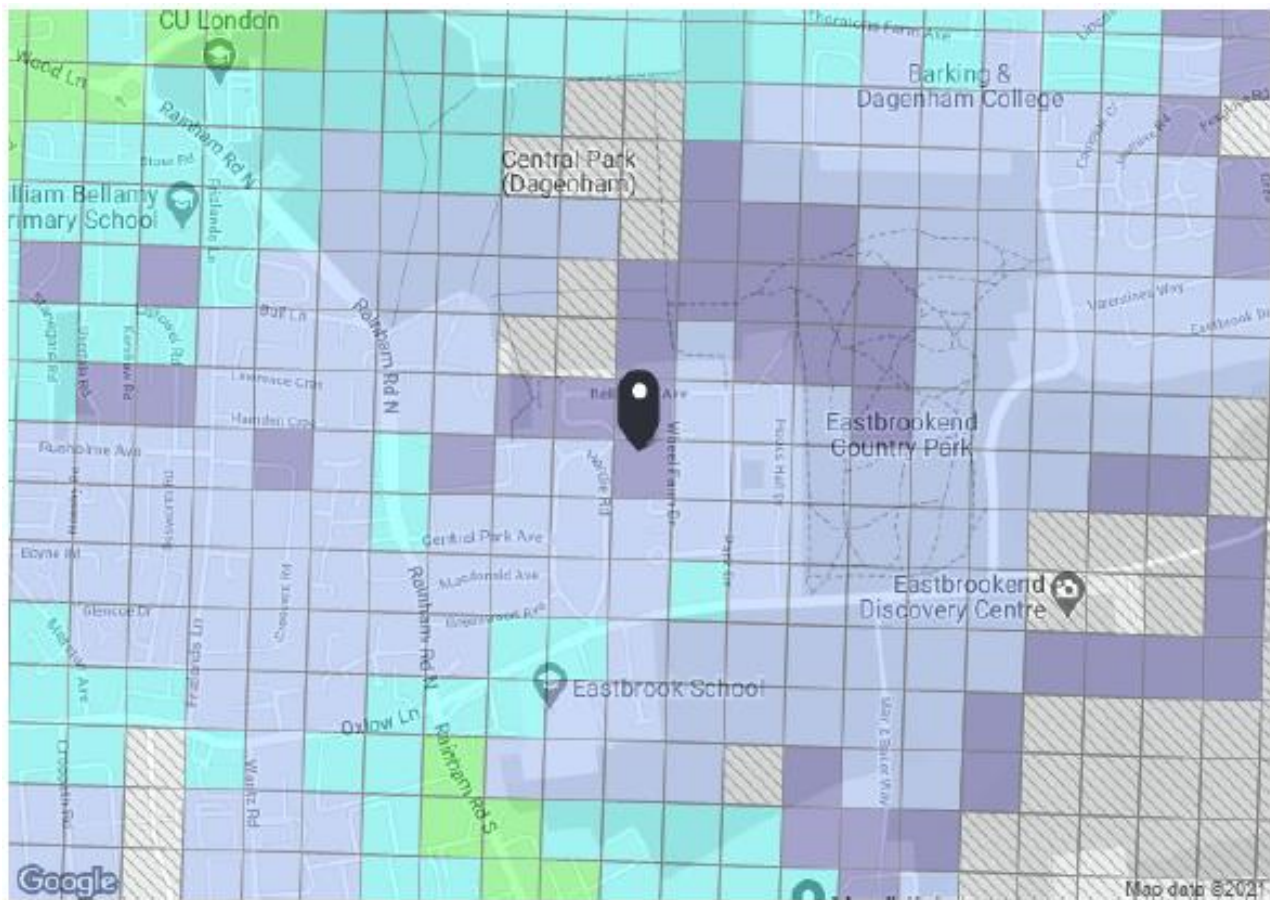
Visibility from the existing access will need to be considered in development designs to mitigate highway safety concerns such that they are not compromised. Future detailed design will need to consider servicing and emergency vehicle access arrangement, and swept path analysis will need to be considered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

Depending on the scale of proposed future development, it would be useful to undertake a high-level trip generation analysis, site visit and Active Travel Zone assessment, as a comparison to the existing use of the Site to provide an indication of the impact on the surrounding highway network and how the Site would encourage walking and cycling and public transport access.

To establish the full requirements for planning application submission, discussions with colleagues at the London Borough of Barking and Dagenham will need to be undertaken.

# APPENDIX A

## PTAL Report



### PTAL output for Base Year 1a

11 Highland Ave, Dagenham RM10 7AS, UK  
Easting: 580243, Northing: 186208

Grid Cell: 111152

Report generated: 22/03/2021

### Map key- PTAL



### Map layers

PTAL (cell size: 100m)

### Calculation Parameters

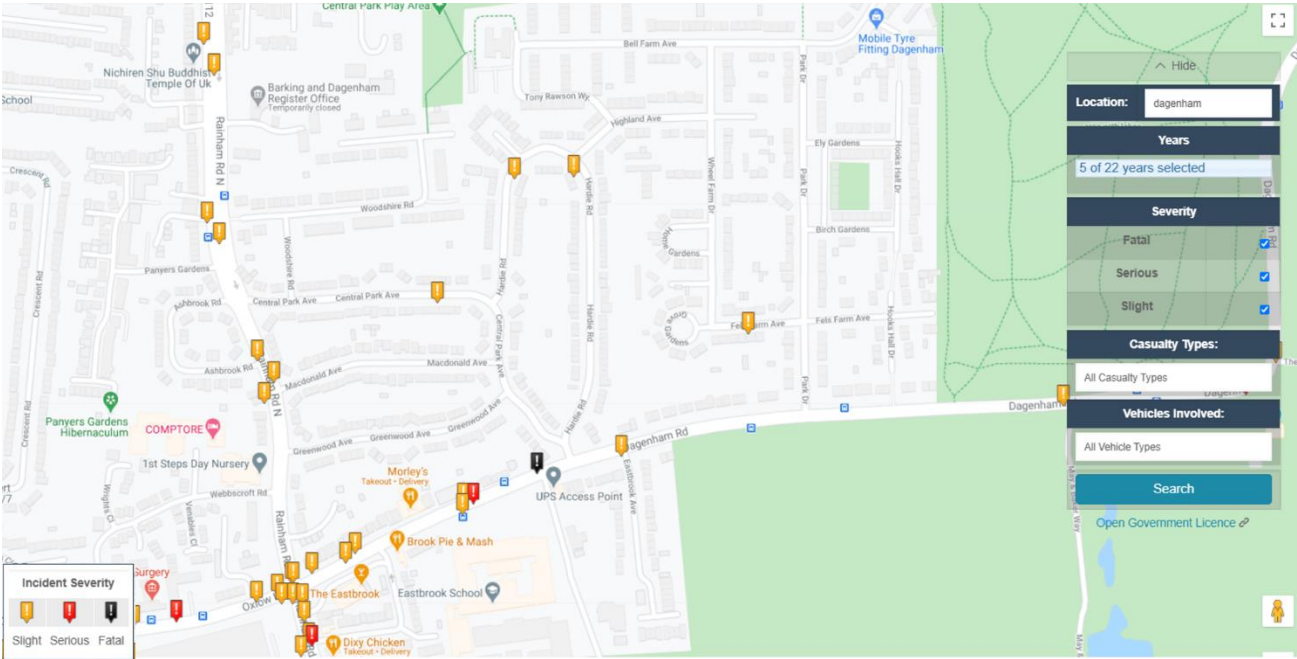
Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	DAGENHAM RD PK DRIVE	174	501.35	7.5	6.27	6	12.27	2.45	1	2.45
									Total Grid Cell AI:	2.45

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	DAGENHAM RD PK DRIVE	174	501.35	7.5	6.27	6	12.27	2.45	1	2.45
									Total Grid Cell AI:	2.45

# APPENDIX B

## Crashmap Figure



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