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Report

Prepared by	**Laura Brooks** BA(Hons)
Reviewed by	Martin Battle
Civic Job No.	1253-01
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1. Introduction

1.1 Introduction

Civic Engineers have been appointed by London Borough of Harrow (LBH) to prepare a transport based due diligence report (DDR) of a site located at the garages at HA7 4SR ('the site').

The objective of this report is to identify and outline transport issues that may preclude the site for development highlighting any areas of risk that a potential developer should consider or mitigate.

This report has been prepared as part of a desk-based study in line with using publicly accessible information only. No searches were undertaken such and land ownership, individual titles, leaseholds, rights of access and parking rights that could affect the development of this site.

No parking beat surveys have been undertaken due to the impacts of the current social distancing measures implemented as a response to COVID-19. These measures are impacting the travel patterns and travel behaviours therefore any surveys undertaken at this current time would not be representative of a 'typical' week. It is therefore recommended that a parking street survey is undertaken as soon as normality returns given the availability of parking is the main concern with these types of infill developments.

This report has been written in line with the relevant national, regional (London) and local (LB Harrow) policy.

On transport grounds the feasibility of this site will depend on the density of development due to the waste and refuse requirements outlined in Section 4 and the recommendations outlined in Section 6 of this report.

1.2 The Site

The site location plan (shown in Figure 1) indicates the full extent of the site boundary. The site is located within the LB Harrow, with LB Harrow the local planning authority.

Figure 1 Site Location



The site is an approximately 272 sqm parcel of land accessed off Tintagel Drive. There are eight garages sited on an area of hard standing. The land is bound by residential properties to the north, south, east and west of the site.

Figure 2 Site Size



Source: Google MyMaps 2020

1.3 Report Structure

Following this introduction, the remainder of this DDR is structured as follows:

- **Section Two** identifies the relevant national, regional and local policies and guidance relevant to the site from a transport perspective
- **Section Three** outlines the site existing conditions including access, public transport accessibility level assessment and collision review.
- **Section Four** outlines the access arrangements for the site
- **Section Five** sets out the planning requirements for the site
- **Section Six** outlines the recommendations for the any future developer/site purchaser

2. Policy

A review of national, regional and local policy pertaining to transport matters, including parking standards is contained in Appendix A and the report refers to the relevant policy.

LBH's guidance on waste document (Code Of Practice for The Storage and Collection of Refuse and Materials For Recycling in Domestic Properties is referred to in the document and relevant sections are extracted and presented in Appendix B.

Reference is also made to London Fire Brigade's Guidance Note GN29 as this identifies access requirements for fire vehicles. Relevant extracts of are contained in Appendix B and are referred to in the document.

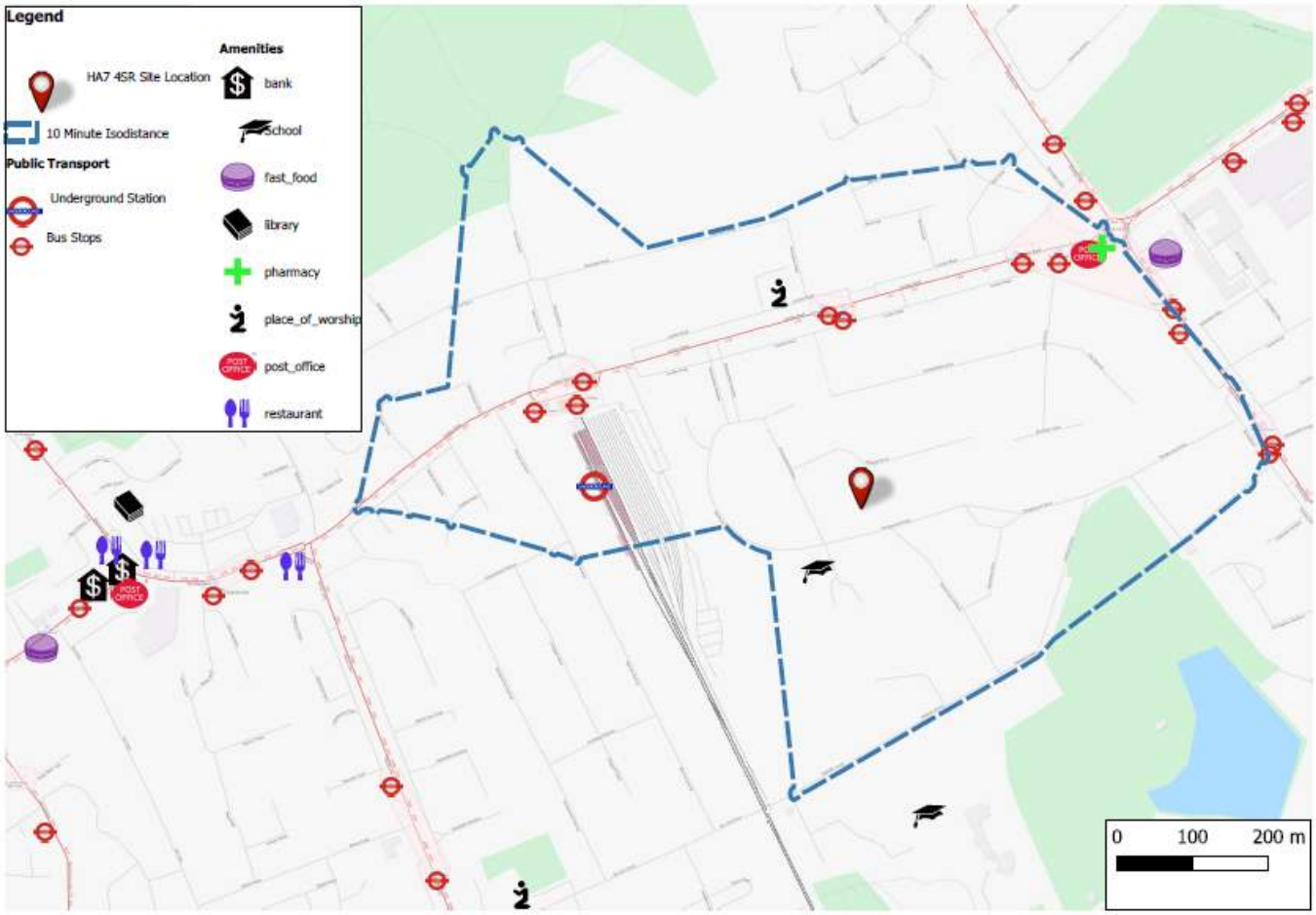
3. Site

3.1 Site Location

The site is located off Tintagel Drive in Stanmore which is in the London Borough of Harrow in North West London. Tintagel Drive is a residential area formed of primarily low-density semi-detached housing set in a cul-de-sac located off London Road (A410).

Figure 3 shows a plan of the local area including the site location and the location of key amenities.

Figure 3 Site Location and Key Amenities Plan



3.2 Public Transport Accessibility Level (PTAL)

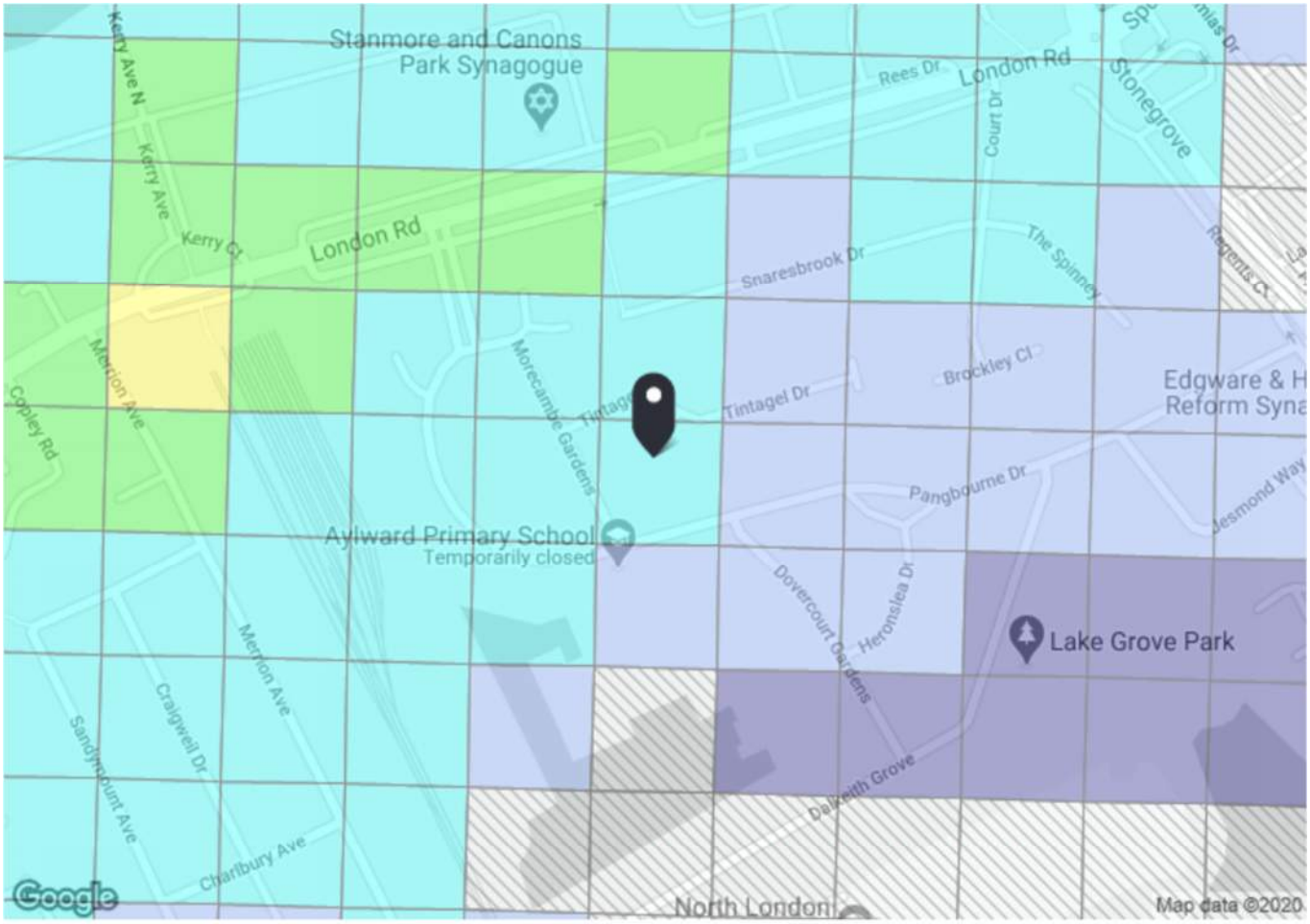
The PTAL for the site has been derived using TfL's Web-based Connectivity Assessment Toolkit (WebCAT). PTAL is a measure of connectivity to public transport. For any given location, a PTAL can be generated which rates a location based on how close the site is to public transport nodes and how frequent the services are in the area. PTAL scores range from 0-6a, with the highest value representing the best connectivity.

The PTAL is used as a development planning tool in London, to determine both permitted parking standards and development densities. Access to public transport dictates the density of development and car parking levels.

Tables from the draft London Plan are presented in Appendix A along with details of the quantum of development and the maximum parking standards levels based on PTAL score.

The PTAL for the site is shown in Figure 4.

Figure 4 HA7 4SR PTAL



PTAL output for Base Year
2
Easting: **517941**, Northing: **192463**

Map key - PTAL

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

Map layers

PTAL (cell size: 100m)

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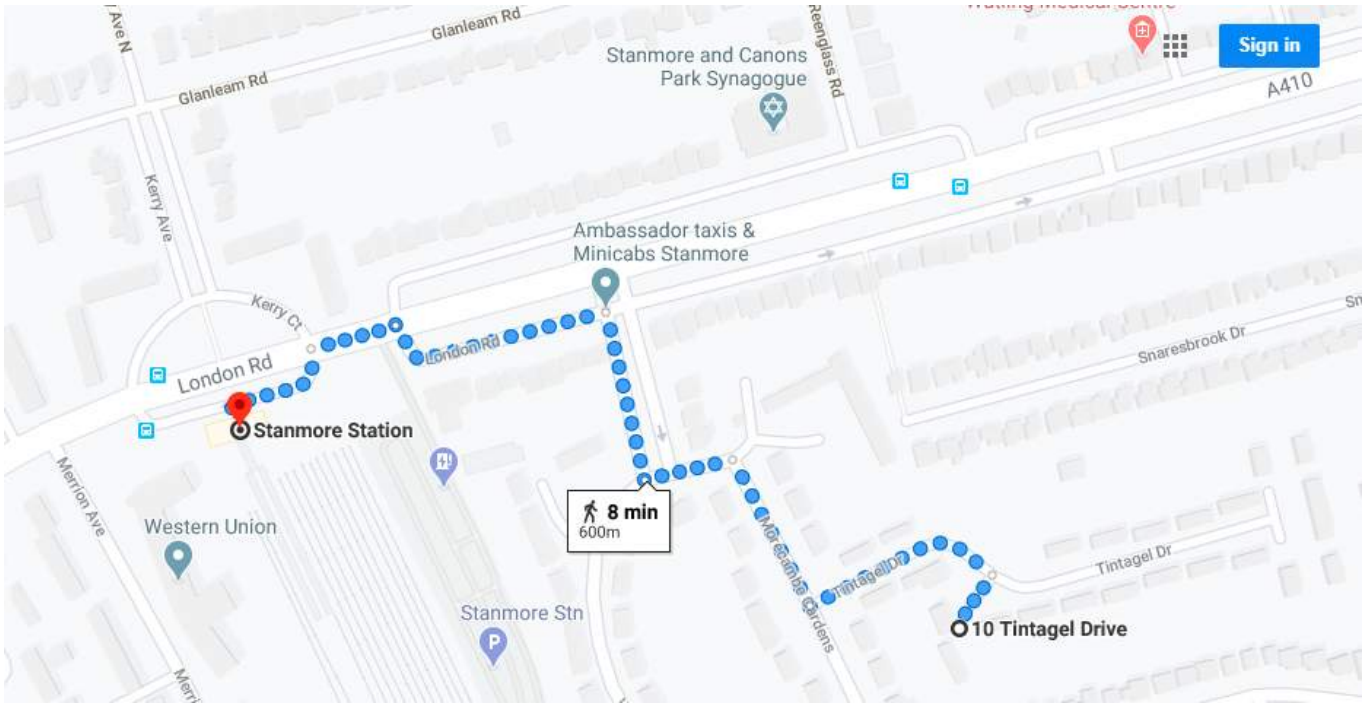
TRANSPORT FOR LONDON

As shown in Figure 4, the PTAL for the site is 2. This reflects that the site has a low level of access to public transport. The low PTAL score is a reflection of the low frequency and limited routes served by the local bus stops.

However, Stanmore Underground Station is a 600m walk from the site and is served by Jubilee Line services. The station is the northern termination point of the line and served by trains to Stratford. The nearest bus stops to the site are London Road Synagogue Stops J and H, located 400m from the site by foot. These stops are served by the 142 service (Watford – Brent Cross) only.

Although the PTAL for the site is low, Stanmore Underground Station is within the 960m maximum walking distance to access rail-based travel and the bus stops are located within acceptable walking distances as defined by both TfL and CIHT. Further details on CIHT and TfL's acceptable walking distances to public transport is presented in Appendix C.

Figure 5 Walking Route from Site to Stanmore Underground station



Source: Google Maps 2020

3.3 The Site

The site, as shown in Figure 6, comprises of 8 garages and an area of hard standing. There are no evident parking restrictions on the site but vehicular access to the site is restricted by the presence of collapsible bollards.

Sensitivity receptors within the vicinity of the site that should be considered include:

- Aylward Primary School

It is recommended that a consideration of the impact any development could have on changes to travel patterns must not make travel to Aylward Primary School less safe, especially for children accessing the site via foot or bicycle.

Figure 6 Google Streetview of the Site



Source: Google Maps 2020

Figure 7 Google Satellite View of The Site



Source: Google Maps 2020

3.4 Site Access

3.4.1 Vehicles

At present vehicles can access the site via an access road off Tintagel Drive. The site access road is narrow (<2.8m) and approximately 30m in length. The access road is does not have the same surface treatment as Tintagel Drive and the single yellow lines do not cover the access road. This could suggest that this section of the highway is not adopted.

It is recommended that the Highway adoption status of the access road should be acquired from the LB Harrow.

This section of Tintagel Drive and to the west of the site is covered by controlled parking zone (CPZ) H. The CPZ is in operation Monday-Sunday between the hours of 10-11am and 3-4pm. There are also single yellow lines in operation along Tintagel Drive indicate the present of parking restrictions in place.

3.4.2 Refuse Vehicle Access

Due to the arrangement, width and constrained access, it is not envisaged that access road is used by refuse vehicles. It is assumed that the two properties adjacent to the site no. 12 and no.14 are served from the carriageway.

It is recommended that confirmation is sought from the LB Harrow's waste services department on how vehicles operate.

3.4.3 Pedestrian Access

Footways are provided along the access road to the site and are approximately 1.3m wide. However, both footways do not extend all the way to the site. The access road footways link to the footways on Tintagel Drive and Morecambe Gardens, providing onwards pedestrian connections to the local amenities in Stanmore. The footways along Morecambe Gardens are wider and both streets have street lighting. The site is located 1km walking distance for the local amenities in Stanmore.

1.1.1 Cyclists

There is no specific cycle infrastructure in the vicinity of the site. The Jubilee Cycle was proposed and consulted on by TfL and LBH to run from Stanmore to Queensbury to provide a safer, more direct and more attractive cycle connection between Queensbury, Canons Park and Stanmore. However, to date the scheme has not been brought forward.

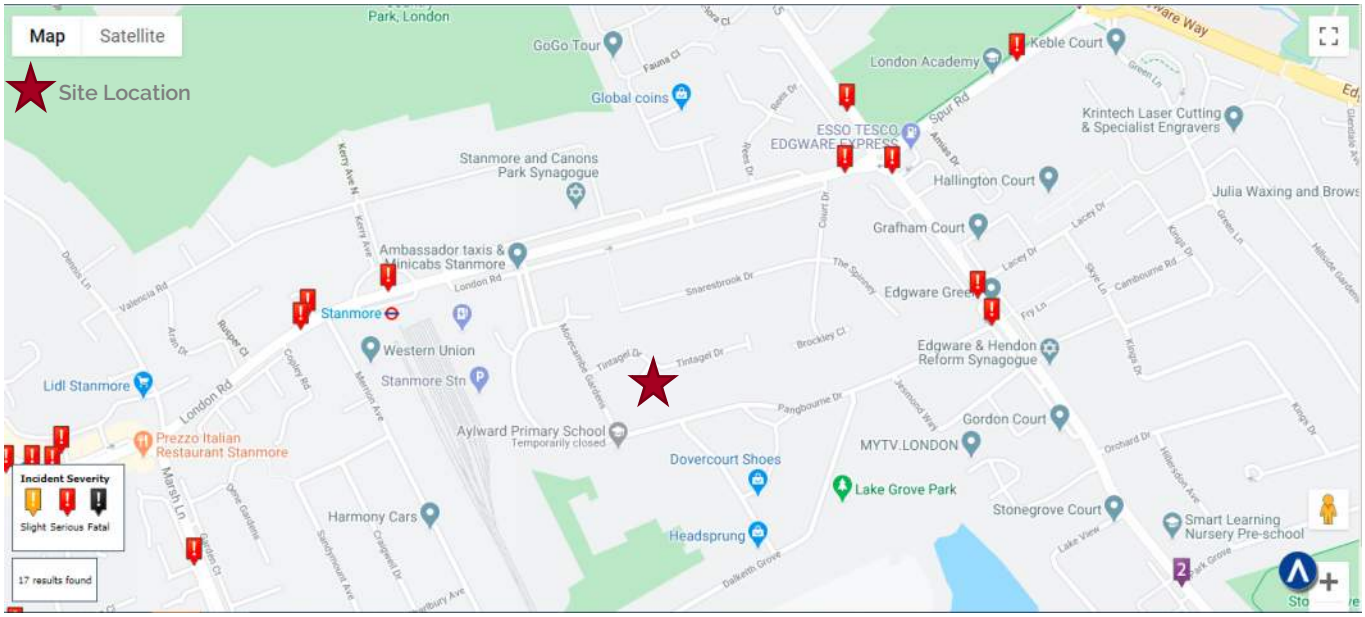
3.5 Collision Review

Personal Injury Collision (PIC) data for the area in the vicinity of the site from Crashmap for the most recent five years (between 2015-2020) has been reviewed and is shown in Figure 8. There were 17 collisions where KSIs (killed or seriously injured) were recorded in this period in the vicinity of the site. All 17 of these collisions were severe. Ten of these collisions involved pedestrians. There were no recorded collisions rated as severe or fatal which involved cyclists. None of these collisions occurred within the estate.

Considering the size and potential quantum of development at the site, any proposed development is unlikely to generate significant additional traffic which could impact on the local road network.

Therefore, from the evidence observed from Crashmap, it is not believed mitigation of collisions will be required be a developer of the site.

Figure 8 Crashmap Collision Data



Source: Crashmap; Background Mapping: Google Maps

4. Access Requirements

4.1 Current Access

As outlined in Section 3 the site is accessed via the site access road off Tintagel Drive and Morecambe Gardens which lead to London Road (A410).

Considering the area comprises of low density housing, the constrained nature of the site and the parking provision as set out by the draft London Plan (see Appendix A) it is not envisaged that a development on this site would generate any significant amount of traffic that would warrant any junction redesign at Tintagel Drive and London Road. In Highways terms, any increase in trips will likely have negligible impacts on the network. A trip generation analysis based on the proposed accommodation schedule and trip distribution exercise will be undertaken as part of a Transport Statement for the site and will confirm the number of additional trips that any future development is likely to generate.

4.2 Waste Access Requirements

Refuse vehicle access requirements are outlined in LB Harrow's Code of Practice for the Storage and Collection of Refuse Materials for Recycling in Domestic Properties (2016) in Appendix A

Depending on the development proposals this will affect how waste is collected from the site.

If the proposed development of the site comprises of flats, bin stores will have to be located so as they are collected from a position no greater than 10m from the refuse vehicle (see Harrow's waste guidance in Appendix A). In the event of a flatted development at the site, access to the bin stores would be further that the 10m rule. A refuse vehicle typically cannot reverse more than its overall length resulting in a refuse vehicle on Tintagel Drive being further than prescribed distance to access a bin store at the site. Agreement would have to be sought with LB Harrow on the location and collection arrangements.

If individual homes are proposed, typically 25m is the prescribed distance from dwelling to the waste collection point as stated by Building Regulation Guidance H6, section 1.8. Harrow provides flexibility by stating that *'Collections from households are made from a position as close to the front boundary of the property as possible, i.e. immediately adjacent to but not on the pavement. Residents are responsible for moving their bins to the collection point on collection days. Developers should ensure that there is sufficient temporary storage area at the front of the property and that this does not obstruct either the pedestrian or vehicular access to the property.'*

For a future flatted development, agreement should be sought with Harrow's waste services to determine what threshold of development would trigger the 10m rule and if there is any relaxation possible. For individual dwellings there is flexibility in the guidance and there is sufficient distance to allow collection to take place without having to reverse into the site.

4.3 Fire

As the access to the site is less than 3.7m wide and is longer than 20m, it is recommended that LBF is consulted at the design stage to ensure appropriate access and distances are maintained.

For access requirements, London Fire Brigade's Fire Safety Guidance Note: Access for Fire Appliances GN29 is extracted in Appendix B

4.4 Pedestrian Access

As identified in Section 3, the current footways on the access road are narrow and do not link directly to the site, terminating at the access to house no. 14 and no.12. The rights of way will need to be established. To support pedestrian movement and sustainable travel, any proposed development would have to provide adequate pedestrian footways which tie into the existing pedestrian network.

4.5 Cycling

To encourage cycling any proposed development will have to provide cycle parking facilities to the Draft London Plan minimum cycle parking standards as outlined in Appendix A and space consideration should be made from the offset to provide cycle storage which is designed in accordance with London Cycle Design Guide.

4.6 Car Parking

Harrow states that car parking provision should be consistent with London Plan policies and this is derived in part based on PTAL rating.

The levels of parking provision are set out in the Intend to Publish London Plan (2019) standards. The site has a PTAL of 1b therefore, as shown in the tables in Appendix A, the following parking levels summarized in Table 1 should be provided.

Table 1 Parking Standards for the Site

PTAL	Maximum Car Parking Standards (from Intend to Publish London Plan 2019)	Maximum Disabled Car Parking Standards	Electric Charging Provision

2	Up to 1.5 spaces per dwelling ^ (^ Where small units (generally studios and one bedroom flats) make up a proportion of a development, parking provision should reflect the resultant reduction in demand so that provision across the site is less than 1.5 spaces per unit)	at least one designated disabled persons parking bay per dwelling for three per cent of dwellings is available from the outset (for proposals delivering 10 or more units). It is proposed that Parking Design and Management Plan should be prepared to demonstrate how an additional 7% of dwellings could be provided with one designated disabled parking bay per dwelling in the future.	At least 20 per cent of spaces should have active charging facilities with passive provision for all remaining spaces.

If on street parking is proposed, a parking beat survey should be undertaken to determine the car parking capacity on Tintagel Drive. As explained, this was unable to take place at current time due to the Covid-19 social distancing guidelines.

If any parking is to be provided on site, adequate space should be provided for safe manoeuvring.

5. Requirements for planning

Depending on the size of the proposed development and from any scoping discussions with LBH, either a Transport Assessment (TA) or Transport Statement (TS) could be required for the development alongside a Travel Plan (TP).

Where car parking is proposed, the Draft London Plan states that a Car Park Design and Management Plan should be submitted alongside all applications which include car parking provision, indicating how the car parking will be designed and managed, with reference to Transport for London guidance on car parking management and car parking design.

Although the site is located within a CPZ, it borders the section of Tintangel Drive which is not covered by a parking controls. A parking beat survey is recommended to understand the level of capacity on the surrounding streets.

6. Recommendations for the Developer/Purchaser

The following is a list of recommendations that any developer/purchaser or developer for this site should consider:

- The developer/purchaser may wish to consider a publicly adoptable highway boundary/private land ownership boundaries to identify gaps between the site and the highway which could lead to a ransom situation. Information is available (to purchase) from the local council (LB Harrow)

- It is recommended that a separate study to understand individual titles, leaseholds, rights of access and parking rights affecting the development is undertaken. This will confirm any potential issues with tying in footways to the development which have to potentially pass existing property boundaries.

- It is recommended that a parking beat survey is undertaken once normality returns given the availability of parking is the main concern with these types of infill developments.

- Refuse: For a potential flatted development, confirmation on the potential relaxation of the 10m distance rule should be sought. For individual dwellings, the site is just beyond 25m distance (from Tintagel Drive). It is recommended that confirmation is sought from LB Harrow's waste services department on how vehicles operate to formulate an appropriate waste management strategy.

- It is recommended that LBF is consulted at the access road is narrower than 3.7m

Appendix A. Transport Policy and Guidance

National Policy

A1.1 National Planning Policy Framework (2019)

The National Planning Policy Framework (NPPF) sets out the planning policies for England and outlines how they should be applied. It provides a framework for which local plans for housing and development can be produced. At the heart of this framework is a presumption in favour of sustainable development which is to be evidenced, aided and achieved through all plans, developments and planning decisions. In order to achieve sustainable development, planning policy has three overarching objectives which are:

- An economic objective
- A social objective
- An environmental objective

Section 9 of the NPPF outlines the transport considerations for placemaking and development proposals.

Paragraph 102 outlines that, 'transport issues should be considered form the earliest of stages of plan-making and development proposals', in order to ensure that:

- The potential impacts of the development can be addressed
- Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage are realised
- Opportunities to promote walking, cycling and public transport are identified and pursued
- The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account, and
- Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places

Paragraph 110 explains that applications for development should:

- '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;
- Address the needs of people with disabilities and reduced mobility in relation to all modes of transport; and,
- Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicle, avoid unnecessary street clutter, and respond to local character and design standards.'

Crucially, as outlined in Paragraph 111, 'all developments that 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 proposals can be assessed.'

Regional Policy

A1.2 London Plan (2016)

The London Plan is the current adopted strategic plan for London setting out a comprehensive integrated framework for the development of the capital until 2031.

The London Plan outlines maximum car parking standards and minimum cycle parking standards. The maximum car parking standards for residential developments are shown in Table 2.

Table 2 Maximum Car Parking Standards

Number of Beds	1-2 Bedrooms	3 Bedrooms	4 + Bedrooms
Maximum number of parking spaces	Less than 1 per unit	Up to 1.5 per unit	Up to 2 per unit

It is noted that all developments in good public transport accessibility (in all part of London) should aim for significantly less than 1 parking space per unit. However, in outer London (generally PTALs 0-1) boroughs should consider higher levels of provision in particular to address 'overspill' parking pressures. It is also noted that adequate parking should be provided for disabled people, preferably on site. Disabled parking should be provided in line the Accessible London Supplementary Planning Guidance document (April 2004) which states that the needs of disabled residents will need to be taken into account in developments with low car parking provision, so that adequate spaces, either on site or convenient dedicated on-street spaces, are identified for occupants. At least one accessible car parking bay designed for use by disabled people should be provided, even if no general car parking is provided. All development with associated car parking should provided a minimum of two accessible parking bays. As stated in the London Plan, Boroughs should take into account local issues and estimates of local demand in setting appropriate standards and should develop monitoring and enforcement strategies to prevent misuse of accessible parking spaces.

Of all car parking spaces provided, 20% must provide electric vehicle charging facilities with an additional 20% passive provision for electric vehicles in the future.

The minimum cycle parking standards are shown in Table 3.

Table 3 Minimum Cycle Parking Standards

Land Use		Long Stay Parking Standards	Short Stay Parking Standards
C3-C4	Dwellings (all)	1 space per studio and 1 bedroom unit	1 space per 40 units

		2 spaces per all other dwellings	

For both long and short stay cycle parking, consideration should be given to providing spaces of less convenient cycle types including tricycles, cargo bicycles and bicycles with trailers. Where it is not possible to provide suitable visitor parking within the curtilage of a development or in a suitable location in the vicinity agreed by the planning authority, the planning authority may at their discretion instead accept, in the first instance, additional long-stay provision or, as a last resort, contributions to provide cycle parking in an appropriate location in the vicinity of the site.

Where it is not possible to provide adequate cycle parking within residential dwellings, boroughs are encouraged to engage with developers that propose innovative alternatives that meet the objectives of these standards. This may include options such as providing the required spaces in secure, conveniently located, on-street parking such as bicycle hangars. TfL will work with boroughs and developers to provide guidance for such a mechanism.

The London Plan also states that all cycle parking provided should be consistent with the London Cycle Design Standards or subsequent revisions.

The London Plan also outlines standards for refuse collection requirements. Suitable waste and recycling storage facilities are required in all new developments.

The London Plan also outlines standards for density levels. In Policy 2.7 Outer London: Economy it states that enhancing the vibrancy of town centres should be achieved through higher density retail, commercial and mixed use development including housing. Areas in and around town centres with good public transport accessibility to accommodate leisure, retail and civic needs, especially higher density housing should identified and brought forwards.

A1.3 Intend to Publish London Plan (2019)

The London Plan: Intend to Publish is the London's Mayor's new draft spatial strategy for London, covering a period between 2019 up until 2041.

The plan sets out the new direction for planning in London, centred around providing 65,000 new homes a year, achieving a zero-carbon target by 2050 and ensuring 80% of all trips are made by foot, cycle or public transport by 2041. Furthermore, it states that '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'.

The plan outlines a series of specific tangible policies and planning issues to address in order to formulate concrete plans for action and how and where plans for major developments and infrastructure will be delivered.

The plans and policies are centred around the concept of 'Good Growth', growth that is socially and economically integrated, inclusive and environmentally sustainable, ensuring the plan is focused on sustainable development. Each area of the plan has been informed by the six Good Growth policies which are:

- Policy GG1: Building strong and inclusive communities
- Policy GG2: Making best use of land

- Policy GG3: Creating a healthy city
- Policy GG4: Delivering the homes Londoners need
- Policy GG5: Growing a good growth economy
- Policy GG6: Increasing efficiency and resilience

To achieve these goals an emphasis has been placed on designing 'Healthy Streets' that facilitate residents making short, regular trips either by foot or cycle. This has been embedded in The Draft New London Plan under Policy T2 Healthy Streets which also incorporates 'Vision Zero'. Vision Zero aims for all deaths and serious injuries from road collisions to be eliminated from London streets by 2014. This will be achieved by designing and managing a street system that accommodates human error and ensures impact levels are not sufficient to cause fatal or serious injury. This will require reducing the dominance of motor vehicles and targeting danger at source.

Furthermore, Policy T4 – Assessing and mitigating transport impacts outlines the requirements for Transport Assessments. It states that transport assessments should be submitted with development proposals to ensure that any 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 in accordance with relevant Transport for London guidance.

Policy T5 – Cycling includes specific policy for cycling in order to help achieve the Mayor's target of 80% of all trips within London by 2041 to be made by foot, cycle or public transport. As a result, the parking standards within this document are above those set in the current Intend to Publish London Plan (2019).Updates to the minimum cycle parking standards applicable to the proposed development include minor increases in residential provision for 1-bed flats from 1 to 1.5 cycle parking spaces.

The minimum cycle parking standards applicable to the proposed development are outlined in Table 4 below.

Table 4 Policy T5 - Minimum Cycle Parking Standards

Land Use Classification	Short Stay Minimum Cycle Parking Standards	Long Stay Minimum Cycle Parking Standards
C3-C4 Dwellings	1 space per studio, 1,5 spaces per 1-bedroom unit, 2 spaces per all other dwellings	1 space per 40 units

Policy T6 states that that 'car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity' and that 'car-free development should be the starting point for all development proposals in places that are (or planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking'.

The Intend to Publish London Plan maximum standards for residential car parking considers Public Transport Accessibility Levels (PTAL). Areas with high PTAL (5-6 and inner London PTAL 4) are

expected to be car free for residential developments. Developments elsewhere should be designed to provide the minimum necessary parking with the necessary infrastructure provided for electric and Ultra-Low Emission vehicles. At least 20 per cent of spaces should have active charging facilities with passive provision for all remaining spaces.

The maximum car parking standards are outlined in Table 5 below.

Table 5 Maximum Car Parking Standards

Location	Maximum Car Parking Standards	Maximum Disabled Car Parking Standards
Central Activities Zone Inner London Opportunity Areas Metropolitan and Major Town Centres All areas of PTAL 5 – 6 Inner London PTAL 4	Car-Free	at least one designated disabled persons parking bay per dwelling for three per cent of dwellings is available from the outset (for proposals delivering 10 or more units). It is proposed that Parking Design and Management Plan should be prepared to demonstrate how an additional 7% of dwellings could be provided with one designated disabled parking bay per dwelling in the future.
Inner London PTAL 3	Up to 0.25 spaces per dwelling	
Inner London PTAL 2 Outer London PTAL 4 Outer London Opportunity Areas	Up to 0.5 spaces per dwelling	
Inner London PTAL 0 – 1 Outer London PTAL 3	Up to 0.75 spaces per dwelling	
Outer London PTAL 2	Up to 1 space per dwelling	
Outer London PTAL 0 – 1	Up to 1.5 spaces per dwelling ^ (^ Where small units (generally studios and one bedroom flats) make up a proportion of a development, parking provision should reflect the resultant reduction in demand so that provision across the site is less than 1.5 spaces per unit)	

Where Development Plans specify lower local maximum standards for general or operational parking, than the Intend to Publish London Plan, these should be followed. Outside of the CAZ, and to cater for infrequent trips, car club spaces may be considered appropriate in lieu of private parking. Any car club spaces should have active charging facilities.

Appropriate disabled persons parking for Blue Badge holder should be provided, with a minimum of one space provided. All disabled parking bays associated with residential developments should:

- Be for residents use only
- Not be allocated to specific dwellings unless provided within the curtilage of the dwelling
- count towards the maximum parking provision for the development

- be designed in accordance with the design guidance in BS8300vol.1

- be located to minimise the distance between disabled persons parking bays and the dwelling or the relevant block entrance or lift core, and the route should be preferably level or where this is not possible, should be gently sloping (1:60-1:20) on a suitable firm ground surface.

Policy T7 Deliveries, Servicing and Construction outlines that development proposals should facilitate safe, clean, and efficient deliveries and servicing. Provision of adequate space for servicing, storage and deliveries should be made off-street, with on-street loading bays only used where this is not possible. Construction Logistics Plans and Delivery and Servicing Plans will be required and should be developed in accordance with Transport for London guidance and in a way which reflects the scale and complexities of developments. During the construction phase of development, inclusive and safe access for people walking or cycling should be prioritised and maintained at all times.

Furthermore, Policy D6 Housing Quality and Standards outlines that new developments should be designed and managed so that deliveries can be received outside of peak hours and if necessary in the evening or night-time without causing unacceptable nuisance to residents. Appropriate facilities will be required to minimise additional freight trips arising from missed deliveries. It also states within the Intend to Publish London Plan that shared and easily accessible storage space supporting separate collection of dry recyclables, food waste and other waste should be considered in the early design stages to help improve recycling rates, reduce smell, odour and vehicle movements, and improve street scene and community safety.

Furthermore, Policy D2 Infrastructure requirements for sustainable densities states that the density of development proposals should:

- consider, and be linked to, the provision of future planned levels of infrastructure rather than existing levels

- be proportionate to the site's connectivity and accessibility by walking, cycling, and public transport to jobs and services (including both PTAL and access to local services)

A1.4 Mayor's Transport Strategy (2018)

The Mayor's Transport Strategy (MTS) emphasises the need to reduce car use and increase the use of walking, cycling and public transport. It proposes to use the Healthy Streets Approach to prioritise human health and experience in planning the city. A central pillar of the MTS is to reduce Londoners' dependency on cars in favour of active, efficient and sustainable modes of travel, with the bold aim for 80% of all trips in London to be made on foot, by cycle or using public transport by 2041.

There are three key themes are at the heart of the strategy:

- Healthy streets and healthy people: Creating streets and street networks that encourage walking, cycling and public transport use will reduce car dependency and the health problems it creates.

- A good public transport experience: Public transport is the most efficient way for people to travel over distances that are too long to walk or cycle, and a shift from private car to public transport could dramatically reduce the number of vehicles on London's streets.

- New homes and jobs: More people than ever want to live and work in London. Planning the city around walking, cycling and public transport use will unlock growth in new areas and ensure that London grows in a way that benefits everyone.

The MTS therefore provides a strategic vision of how transport and movement should function in London in the future. It is the role of TfL, London Boroughs, and all developments to help work towards these objectives and sustainable vision for the future.

Local Policy

A1.5 Harrow Council London - Harrow Core Strategy (February 2012)

The Harrow Core Strategy outlines the spatial strategy and vision for the Borough's future between 2011 – 2026, setting out the Council's strategy for achieving this vision. The Core Strategy is the integral component of the Harrow Local Development Framework (LDF). The LDF is a portfolio of separate planning policy document that plan for and manage development and land use in the London Borough of Harrow (LBH) between 2011-2026. The LDF is used to guide development within the borough and to determine individual planning applications. Alongside the Core Strategy the LDF consists of the following documents:

- Harrow and Wealdstone Area Action Plan
- Development Management Policy DPDs
- Site Specific Allocation DPD
- West London Waste Plan DPD
- Proposals Map
- Supplementary Planning Documents (SPDs)

All policies contained within the Core Strategy are required to be in general conformity with the London Plan.

Car parking provision should be consistent with London Plan policies. There are no standards for cycle parking provision provided in the Core Strategy nor standards for electric vehicle charging provision. London Plan standards should be used for density matrix and minimum spaces standards for new developments to provided the broad parameters for the quantum of residential development that can be achieved on any particular site.

Development in Harrow will be expected to contribute to the waste management hierarchy of reduce, re-use and recycle from design and construction stage through to end use and activity.

A1.6 Harrow Council Site Allocations Local Plan (July 2013)

The site is not located within an existing designated site allocation.

Appendix B. Fire and Waste Guidance

B1.1 Waste Guidance

This Harrow Council Community Directorate Code of Practice for the Storage and Collection of Refuse Materials for Recycling in Domestic Properties (February 2016) provides guidance for the storage and collection of refuse and materials for recycling in domestic properties within the LBH.

The document outlines the following frequencies, shown in Table 6, for refuse collection.

Table 6 Refuse Collection Frequency

Type of Development	Bin System	Collection Frequency
Houses, Maisonettes, Bungalows and Residential Conversions	Three Bin System (Blue Bins for Recycling, Grey Bins for Residual Waste, Food Caddies for Food Waste)	Blue Bins – Alternate Weeks Grey Bins – Alternate Weeks
Flats, Communal and High Rise Developments	Two Bin System (Blue Bins for Recycling, Grey Bins for Residual Waste)	Blue Bins – Weekly Grey Bins - Weekly

For developments where a three-bin system is in place, one 240 litre blue bin and one 240 litre grey bin should be provided per house. Each house should be provided with a suitable storage area or enclosure in an inconspicuous place for the bins to be stored. For maisonettes and conversions, the total required number of bins can be reduced, where appropriate, by using communal coloured bins so long as the development as a whole has sufficient storage for the waste.

For development where a two-bin system is in place, one 1100 litre Waste Bin and one 1280 litre Blue Bin should be provided for every eight flats. Communal storage should be provided in storage enclosures within the development or in buildings that are set apart from the residential buildings

For houses, maisonettes, bungalows and residential conversions, in order for refuse bins to be collected, bins must be placed immediately adjacent to the front boundary of a property not on the pavement. Sufficient temporary storage space should be provided at the front of a property for the bins to be placed for collection. This space should not obstruct pedestrian nor vehicular access to the property.

For refuse collections from flats, communal and high rise developments, refuse bins should be collected from a position no greater than 10m from the refuse vehicle.

In designing the access paths from the storage location to the collection vehicle the following design requirements must be followed: -

- a minimum width of 1.5m;
- completely free of kerbs and steps
- a suitable dropped kerb or shallow ramp shall be provided where paths meet roadways;
- solid foundations suitable to withstand the loading imposed by the castors of large wheeled bins;
- a smooth hard-wearing surface to allow the bins to be easily pushed / pulled;
- roads and access paths to buildings or refuse enclosures should be level or have a gradient no steeper than 1:12;

- Any gradient should be of a minimum to allow easy collection and return of the receptacles. • not obstructed by car parking spaces

Roads giving access to individual houses or refuse chambers or housing should not be less than 5.5 metres in width, have corners of 6 metres radius and be built to withstand the weight of refuse vehicles having a maximum laden weight of 26 tonnes.

Roads should be laid out to ensure reasonable convenience for the collection vehicle and should be a minimum of 5.5 metres wide and arranged for the collection vehicle to continue in a forward direction. Adequate space for turning must be provided.

In all instances, the road crossing the footway shall be designed so that the vehicle does not encroach onto the footway when reversing.

Where roads are likely to be parked with cars, the developer must ensure that access for the collection vehicle is still maintained.

Covers over manholes, gully gratings and the like shall, in private roads which the refuse vehicle is required to use, be of the heavy-duty type.

The likely refuse vehicle dimensions are provided in Table 7.

Table 7 Typical LBH Refuse Vehicle Dimensions, Turning Circle and Fully Laden Weight

	Dimensions
Overall Length	11.1 metres
Overall Width	3.0 metres
Overall Width including mirrors	3.5 metres
Overall Height	3.5 metres
Operating Height	4.0 metres
Turning Circle Between Kerbs	17.0 metres
Turning Circle Between Walls	18.0 metres
Maximum Laden Weight	25.5 tonnes

B1.2 Fire Guidance - London Fire Brigade Fire Safety Guidance Note GN29 (April 2018)

This guidance note outlines the provisions necessary for providing suitable fire brigade access for appliances to and around buildings in London.

Access roads to developments are listed within the document as including the following: public highways, private roads, footpaths or specially strengthened and defined routes through the land surrounding the buildings.

The recommendations for pumping appliances, turntable ladders/aerial platforms and special large appliances are as follows:

Table 8 Typical Vehicle Access Route Specification

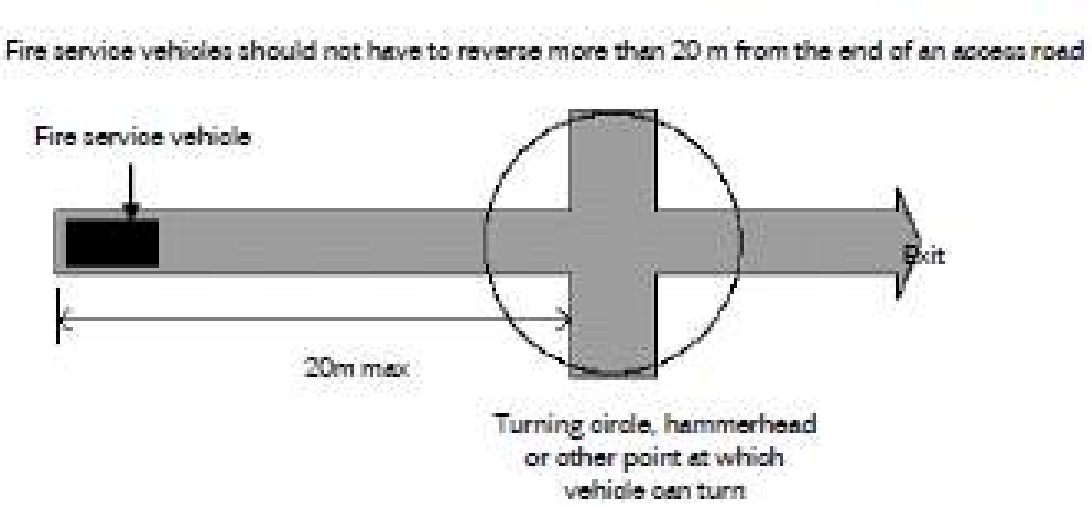
Appliance Type	Min. width of road between kerbs(m)	Min. width of gateways (m)	Min. turning circle between kerbs (m)	Min. turning circle between walls (m)	Min. clearance height (m)	Min. carrying capacity (tonnes)
Pump	3.7	3.1	16.8	19.2	3.7	14.0
High Reach	3.7	3.1	26.0	29.0	4.0	23.0
Special Appliance	4.0	3.1	26.0	29.0	4.27	32.0

Access for pumping appliances should be provided within 6m working area(s) of appropriate locations where appliances are to be positioned and used around the building. Access for a turntable ladder should be a maximum of 2m from the edge of a building, with its furthest edge a minimum of 10m from the building.

The gradients of any access road used by fire appliances should be no greater than 1 in 4 (25%) with the approach and departure gradients not exceeding 12 degrees.

Fire services vehicles should not have to reverse more than 20 metres from the end of an access road. Where an access route is a dead end and more than 20 metres, a turning facilities should be provided, as shown in **Figure 9.**

Figure 9 Fire Service Vehicle Reverse Diagram



The details of a typical pumping appliance are shown in Table 9.

Table 9 Typical Pumping Appliance Dimensions

	Measurement
Maximum Length	7.9m
Maximum Height	3.3m
Maximum Width	2.5m
Maximum Weight	14.0 tonnes
Maximum Wheel Length Base	4.4m
Track Rear Wheels	1.25m
Ground Clearance	140mm

The details of a typical pumping appliance are shown in Table 10.

Table 10 Typical Aerial Platform, Turntable Ladders and Special Appliance Dimensions

	Measurement
Maximum Length	12.0m

Maximum Height	4.5m
Maximum Width	2.55m
Maximum Width (with jacks out)	6.3m
Laden Weight	32.0 tonnes
Maximum Axel Weight on either front axle	7.5 tonnes
Maximum Axel Weight on either rear axle	11 tonnes
Maximum Length Wheelbase	5.6m
Track Rear Wheels	1.25m
Minimum Ground Clearance	130mm

For all buildings not fitted with a fire mains vehicle access should be provided for a pumping appliance to small buildings (those of up to 2000m2) with a top storey of up to 11m above ground level to either:

- 15% of the perimeter, or
- Within 45m of every point on the projected plan area

For single family dwelling houses, there should be vehicle access for a pump appliance to within 45m of all points within the dwelling house. For block of flats/maisonettes, there should be vehicle access for a pumping appliance within 45m of all points within each dwelling. Blocks of flats/maisonettes not able to comply with the requirement for access to within 45m of all points within each dwelling, should be provided with a firefighting main and access for a pumping appliance to within 18m of each fire main inlet connection point.

Appendix C. Acceptable Distance to Public Transport Nodes

CIHT's Buses in Urban Developments[1] (January 2018) recommend the following acceptable maximum walking distances to bus-based public transport:

Table 11 Maximum Walking Distances to Bus-Based Transport (CIHT)

Situation	Maximum Walking Distance
Core bus corridors with two or more high frequency services	500 metres
Single high frequency routes (every 12 minutes or better)	400 metres
Less frequent route	300 metres
Town/city centre	250 metres

TfL's Guideline for Bus Planning services[2] recommends a 5-minute walking time (distance based on average walking speed is 400m) between a place of residence and a bus stop.

Within TfL's Connectivity Data to Inform Spatial Planning – Exploratory Analysis (2016), 960m is regarded as the maximum walking distance to access rail based public transport. However, TfL's surveys have shown 1.5km is the maximum likely walk distance most people would be willing to walk to access rail based public transport. This 960m is used as the maximum distance people would be willing to travel to access rail travel in TfL's Public Transport Accessibility (PTAL) calculations. Within PTAL calculations, 640m is regarded as the maximum distance people would be willing to travel to access bus based public travel.

[1] https://www.ciht.org.uk/media/4459/buses_ua_tp_full_version_v5.pdf
[2] http://content.tfl.gov.uk/bus-service-planning-guidelines.pdf

Table 3.2: Suggested Acceptable Walking Distance.

	Town centres (m)	Commuting/School Sight-seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred maximum	800	2000	1200

Source: http://www.hwa.uk.com/site/wp-content/uploads/2017/09/NR.4.3F-CIHT-Guidelines-for-Providing-Journeys-on-Foot-Chapter-3.pdf

Manchester

Carver's Warehouse
77 Dale Street
Manchester M1 2HG

+44 (0)161 228 6757

London

Reeds Wharf
33 Mill Street
London SE1 2AX

+44 (0)20 7253 2977

Leeds

Unit 02/01 Tower Works
Globe Road
Leeds LS11 5QG

+44 (0)113 2025 130

Glasgow

Gresham Chambers
45 West Nile Street
Glasgow G1 2PT

+44 (0)141 370 1829

civicengineers.com