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WALTHAM FOREST COUNCIL

HYLANDS ROAD,
WALTHAMSTOW, LONDON, E17 4AJ

TRANSPORT ASSESSMENT

August 2019

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Ref: File path P:\ P2147 Hylands Road Transport Assessment August 2019

1.0 INTRODUCTION

- 1.1 Paul Mew Associates is instructed by Waltham Forest Council in relation to the proposed development at Hylands Road, Walthamstow, E17 4AJ. The site currently accommodates 50 residential units, a vacant former community facility, and 15 vacant and dilapidated lock-up style external garages.
- 1.2 The site location is shown on Figure 1 of this report. The existing site plan and red line boundary is shown in Appendix A.
- 1.3 The site is within the Hylands Road Estate and is accessed from Fernhill Court. The estate is located to the south of the A503 Forest Road. To the east the site is bounded by Hyland House which is a former primary school, and Epping Forest. To the north, south, and west the site is adjoined by neighbouring residential buildings.
- 1.4 The area surrounding the site is predominantly residential in character with some commercial uses located to the west. These range from large warehouse stores to small local town centre type shops.
- 1.5 In terms of public transport the site has a public transport accessibility level (PTAL) rating of 2 which is a 'poor' rating as defined by Transport for London (TfL). There are three bus services, the 123, 275 and 230, within a reasonable walking distance of the site. Wood Street Station, on the London Overground, is approximately 950 metres to the south west of the site.
- 1.6 The site is located within the Wood Street East 'WSE' controlled parking zone (CPZ) which is in operation Monday to Friday between 10am and 4pm. On the northern side of Forest Road, the Hale End CPZ has been recently introduced under an experimental traffic order for a period of up to 18 months. This is in operation Monday to Friday between the hours of 10am and 4pm.
- 1.7 The proposal forming the redevelopment of the site comprise of the demolition of the existing dwellings and garages and the construction of three new blocks providing 51 one-bedroom (2-person), 32 two-bedroom (3-4 person), and 37 three-bedroom (5-6 person) dwellings. All 120 of the proposed dwellings will be provided for the 'Social Rent' market.

- 1.8 A total of nine on-site Blue Badge parking spaces will be provided for the 120 total dwellings. The level of on-site car parking provision has been discussed and agreed with the Council during formal pre-application correspondence. All of the on-site parking bays will be provided with the underlying infrastructure for electric vehicle (EV) charging facilities and 20% of the spaces will be provided with an 'active' EV charge point at the outset. High quality secure and sheltered cycle parking spaces will be provided across the site in accordance with the minimum policy requirements set out in the draft new London Plan (July 2019).
- 1.9 It should be noted that all of the dwellings will be exempt from purchasing permits to the adjoining CPZ 'WSE' through a S106 Legal Agreement secured as part of any future planning permission. The 'permit-free' arrangement will mean that the development will not generate any additional demand for kerb side parking on the roads adjoining the site.
- 1.10 Furthermore, each of the 120 dwellings will be provided with two years' free membership to Zipcar car club plus £50 free driving credit from the outset of the development being occupied. There is a dedicated Zipcar parking bay on Ulverston Road within around 250 metres to the north of the site and Waltham Forest is a 'Zipzone' Borough where members can pick up and drop off 'Flex' vehicles in CPZs. There is therefore good availability of car club vehicles in proximity to the site to accommodate any potential demand generated by the development.
- 1.11 The proposed site plan (hard landscaped) is presented in Appendix B.
- 1.12 This Transport Assessment has been undertaken following consultation with Waltham Forest Council as highway authority and in accordance with TfL guidance on the Healthy Streets approach to transport assessment.
- 1.13 A Residential Travel Plan and an Outline Construction Logistics Plan have been produced and submitted with the planning application under separate covers.

2.0 TRANSPORT POLICY CONTEXT

- 2.1 This section of the report outlines relevant transport policy and considers how the proposed development complies with policy. There are three tiers of transport policy relevant to these proposals, at a national, regional and local level, being:
- National Planning Policy Framework, February 2019;
 - The London Plan, current version March 2016 and draft July 2019;
 - The Mayor's Transport Strategy, 2018, and,
 - Waltham Forest Local Plan, 2012.

National Planning Policy Framework

- 2.2 The National Planning Policy Framework (NPPF) was initially published in 2012 and revised in 2019. It sets out the Government's planning policies for England and how these should be applied. The overarching aim of the NPPF is the achievement of sustainable development.
- 2.3 Transport planning policy is set out in section 9 of the NPPF. It recognises the importance of transport in creating sustainable development. In considering development proposals, the NPPF states at paragraph 108:

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

- a) *appropriate opportunities to promote sustainable transport modes can be - or have been - taken up, given the type of development and its location;*
- b) *safe and suitable access to the site can be achieved for all users; and*
- c) *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

- 2.4 The development site is located in an established residential area with links to sustainable transport and active travel modes. The proposed development has been designed to allow safe and convenient access for all users and to encourage the use of sustainable transport. This is described in further detail in sections 3 and 4 of this report.

- 2.5 The NPPF further states that development should only be refused on highways grounds “*if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*”
- 2.6 The proposed development will result in negligible changes to the surrounding highway network and will not result in any unacceptable impacts.
- 2.7 Paragraph 110 sets out the expectation that planning applications should:
- “*a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- “*b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- “*c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- “*d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- “*e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*”
- 2.8 The proposals have been designed to encourage walking and cycling and reduce reliance on the private car. Full details of site access, parking and servicing arrangement are set out in section 4 of this report.
- 2.9 The NPPF states that:
- “*All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.*”
- 2.10 This Transport Assessment has been undertaken in line with best practice and as required by policy. It is also accompanied by a standalone Residential Travel Plan which sets out measures to encourage travel by sustainable means.

The London Plan

2.11 The current London Plan (adopted March 2016) sets out the strategic policy context within which boroughs should set their detailed planning policies and the policy framework for the Mayor's own decisions on the strategic planning applications referred to him. The London Plan is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

2.12 The policies relevant to the proposed development are considered here.

2.13 Policy 6.3 of the Plan addresses how the effects of development on transport capacity should be assessed. With regard to planning decisions, the policy states:

"A Development proposals should ensure that impacts on transport capacity and the transport network, at both a corridor and local level, are fully assessed. Development should not adversely affect safety on the transport network.

B Where existing transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans exist for an increase in capacity to cater for this, boroughs should ensure that development proposals are phased until it is known these requirements can be met, otherwise they may be refused. The cumulative impacts of development on transport requirements must be taken into account.

C Transport assessments will be required in accordance with TfL's Transport Assessment Best Practice Guidance for major planning applications. Workplace and/or residential travel plans should be provided for planning applications exceeding the thresholds in, and produced in accordance with, the relevant TfL guidance. Construction logistics plans and delivery and servicing plans should be secured in line with the London Freight Plan and should be co-ordinated with travel plans."

2.14 In encouraging cycling, Policy 6.9 sets out that developments should:

a provide secure, integrated, convenient and accessible cycle parking facilities in line with the minimum standards set out in Table 6.3 and the guidance set out in the London Cycle Design Standards (or subsequent revisions)

b provide on-site changing facilities and showers for cyclists

c contribute positively to an integrated cycling network for London by providing infrastructure that is safe, comfortable, attractive, coherent, direct and

adaptable and in line with the guidance set out in the London Cycle Design Standards (or subsequent revisions)

- d provide links to existing and planned cycle infrastructure projects including Cycle Superhighways, Quietways, the Central London Grid and the 'mini-Hollands'*
- e facilitate the Mayor's cycle hire scheme through provision of land and/or planning obligations where relevant, to ensure the provision of sufficient capacity."*

2.15 The policy with regard to walking is set out in Policy 6.10 which states:

"Development proposals should ensure high quality pedestrian environments and emphasise the quality of the pedestrian and street space by referring to Transport for London's Pedestrian Design Guidance."

- 2.16 Policy 6.13 Parking in the London Plan references Table 6.2 within the parking standards addendum. This relates maximum parking standards to public transport accessibility, location and housing density. For the subject site, in a suburban area with a PTAL of 2, a maximum of 1.5 spaces per unit is permitted.
- 2.17 The current 2016 London Plan is still the adopted Development Plan, however the new draft London Plan (July 2019) is a material consideration in planning decisions. For ease of reference the parking standards for residential schemes within the draft London Plan have been copied herein:

Table 10.3 - Maximum residential parking standards

Location	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	Car free~
Inner London PTAL 3	Up to 0.25 spaces per dwelling unit
Inner London PTAL 2 Outer London PTAL 4 Outer London Opportunity Areas	Up to 0.5 spaces per dwelling unit
Inner London PTAL 0 – 1 Outer London PTAL 3	Up to 0.75 spaces per dwelling unit
Outer London PTAL 2	Up to 1 space per dwelling unit
Outer London PTAL 0 – 1	Up to 1.5 spaces per dwelling unit ^{+^}
<p>* Where Development Plans specify lower local maximum standards for general or operational parking, these should be followed</p> <p>~ With the exception of disabled persons parking, see Policy T6.1 G</p> <p>^{+^} 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</p>	

Table 10.2 - Minimum cycle parking standards

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

- 2.18 The proposed development is car free with the exception of parking for disabled users. This is in accordance with the emerging London Plan policy as well as formal pre-application dialogue with the local Council. In addition the proposals will be provided with cycle parking in line with the minimum

standards. These will comprise a mix of Josta two-tier stands, Sheffield type stands, and parking space for disabled adapted bicycles.

Mayor's Transport Strategy

- 2.19 The Mayor's Transport Strategy sets out how it is aimed to change the transport mix across London, providing viable and attractive alternatives to reduce dependence on the private car.
- 2.20 The ambitious aim of the strategy is set out in Policy I which states:

"The mayor, through TfL and the boroughs, and working with stakeholders, will reduce Londoners' dependency on cars in favour of active, efficient and sustainable modes of travel, with the central aim for 80 per cent of all trips in London to be made on foot, by cycle or using public transport by 2041."

- 2.21 The strategy seeks to achieve this by adopting the "Healthy Streets" approach in transport planning. This seeks to ensure that policies for regeneration, new developments and growth areas reduce car dependency and promote active travel thereby allowing growth in a sustainable way.

Waltham Forest Local Plan

- 2.22 The Waltham Forest Local Plan comprises the Core Strategy (adopted March 2012) and Development Management Policies Development Planning Document (adopted October 2013).
- 2.23 The policy with regard to transport is set out in Policy CS7 which sets out the Council's aims to support a sustainable transport network. It seeks to achieve this by:

"requiring Transport Assessments and Travel Plans where appropriate in support of planning applications to determine potential transport impacts and to demonstrate how the development minimises and mitigates the expected impacts and working with and encouraging existing high trip generating organisations to prepare a Travel Plan;"

- 2.24 Sustainable development will be facilitated by:

"actively encouraging walking and cycling by providing an attractive public realm and safe, convenient and accessible routes and facilities throughout the Borough;"

2.25 With regard to reducing travel by private car, the policy states that this will be facilitated by:

H) managing the demand for private car travel by protecting the continued provision of existing and promoting the expansion of cab services, car clubs, pool cars, and low emission motor vehicles, and working with the Mayor of London's to implement the electric car strategy;

I) managing parking requirements effectively across the Borough to minimise the negative impacts of traffic and reducing reliance on car for journeys by requiring car, motorcycle and cycle parking facilities in accordance with the maximum car and minimum cycle parking standards set out in the Development Management Policies DPD, managing on street parking, and promoting car free and car-capped developments;"

2.26 It is proposed to develop the site as car-free with the exception of parking for disabled users. This is in line with the maximum car parking standards and given the site location surrounded by existing CPZs this is considered an appropriate location to promote car free development.

2.27 The policies with regard to transport are set out in more detail in the Development Management Policies document. Policy DM13 relates to Land Use and Transport and seeks to ensure that development is properly integrated with the transport network, by:

D) requiring developments with significant transport impacts to submit a Travel Plan, in accordance with Department for Transport and Transport for London guidance and emerging local standards; including defined targets, implementation and funding, and monitoring regime;

E) requiring development proposals to submit Construction Logistics Plans, Delivery and Servicing Plans and the uptake of the Freight Operators Recognition Scheme where appropriate in accordance with the London Freight Plan and coordinated with travel plans;"

2.28 The proposed development is supported by a Travel Plan to promote travel by sustainable means. In addition, a Construction Logistics Plan will accompany the planning application. This will be developed further upon appointment of a main contractor. In addition, a Delivery and Servicing Plan will be put in place to

ensure that deliveries and servicing of the proposed development are managed efficiently to mitigate any adverse effects on the local transport network.

2.29 Policy DM14 states that:

"The Council will actively encourage sustainable travel by:

A) prioritising the needs of sustainable transport modes in accordance with the following street user hierarchy:

- *pedestrians;*
- *cyclists;*
- *public transport users;*
- *special vehicle services (including taxis, delivery, and servicing needs); and*
- *other motorised transport.*

Inclusive design for all users, including the elderly and people with disabilities will be a key principle throughout this movement hierarchy.

B) requiring major development to develop and contribute to, a well-connected network of streets that optimises permeability and legibility;

C) ensuring that development does not have a harmful impact on the walking and cycling environment;

D) requiring proposals for transport infrastructure to take full account of the requirements for walking and cycling, ensuring that pedestrian and cycle facilities are high quality, safe and comfortable and consider provision of complementary infrastructure including lighting, wayfinding and signage;

This is further enforced by Policy DM16 with regard to parking which states:

The Council will seek to effectively manage parking and to ensure the provision of safe and attractive parking facilities by;

A) encouraging car-free and car-capped development in locations that are highly accessible by public transport; are accessible to opportunities and services, and/or have high levels of parking stress;

B) where a car-free and car-capped development is implemented, limiting on-site car parking for these developments to spaces designed for disabled people and operational and service needs and introducing controlled parking zones in the vicinity of the development; occupants of car free developments will not be issued with on-street parking permits;

C) resisting proposals that are likely to;

- *hinder pedestrian movement or prove injurious to highway safety;*
 - *provide inadequate sight lines for vehicles leaving the site;*
 - *and/or reduce on-street parking provision in areas where on-street parking spaces cannot meet existing demand;*
- 2.30 The proposed development is car-free and has been designed to provide a public realm conducive to active travel.
- 2.31 Maximum car parking and minimum cycle parking standards are set out in Appendix 4 of the Development Management Policies document.
- 2.32 The residential car parking standards are related to PTAL and site location with regard to CPZs as well as the number of bedrooms. These are summarised in Table 1.

Table 1. Car Parking Standards

	Low PTAL (1 -2)		Medium PTAL (3-4)		High PTAL (5-6)	
	Outside CPZ	Within CPZ	Outside CPZ	Within CPZ	Outside CPZ	Within CPZ
One/Two-bed houses or flats	1.0	0.75	0.6	0.4	0.3	0.25
Three/Four-bed houses or flats	1.0	1.0	1.0	0.75	0.75	0.5

- 2.33 It is proposed to develop the site as car free with the exception of the provision of Blue Badge parking for residents. This is in accordance with the Waltham Forest parking policy which seeks to restrict parking provision especially within CPZ. No parking permits will be allocated to residents of the development.
- 2.34 The minimum cycle parking standards for residential development require one cycle space for dwellings with one bedroom and two cycle spaces for dwellings with two or more bedrooms.
- 2.35 The proposed development complies with these parking requirements.

3.0 SITE ACCESSIBILITY AUDIT

Site & Surrounding Area

- 3.1 The site is located within the Hylands Road Estate to the south of Forest Road (A503). To the east the site is bounded by Hyland House which is a vacant former primary school, and recreational open space (Epping Forest) dominated by woodland. To the south and west the site is adjoined by allotments and residential land.
- 3.2 Vehicular access to the site is from Hylands Road which leads on from Fernhill Court. Fernhill Court connects with Forest Road (A503) to the north. Forest Road provides access to the North Circular (A406) to the north east of the site and Tottenham to the west. There is access to Wood Street to the south via Winsbeach, Fyfield Road and Upper Walthamstow Road.
- 3.3 There is a pedestrian link from Hylands Road to Forest Road in the north eastern corner of the site.
- 3.4 The site is currently occupied by 50 residential units, a vacant former community building, and associated parking and amenity areas. There are 15 lock-up garages on the site, all of which are vacant and in a state of disrepair.

Active Travel

- 3.5 It is generally accepted that walking and cycling provide important alternatives to the private car, and should also be encouraged to form part of longer journeys, via public transport. Indeed, it is noteworthy that the Chartered Institution of Highways and Transportation (CIHT) has prepared several guidance documents that provide advice with respect to the provision of sustainable travel in conjunction with new developments. Within these documents it is suggested that:
 - Most people will walk to a destination that is less than one mile (approximately 1.6 kilometres) (Planning for Walking, 2015);
 - The bicycle is a potential mode of transport for all journeys under five miles (approximately 8 kilometres) (Planning for Cycling, 2015); and,

- Walking distances to bus stops should not exceed 400 metres, whilst people are prepared to walk twice as far to rail stations (Planning for Walking, 2015).
- 3.6 The CIHT document 'Guidelines for Providing Journeys on Foot' (2000) suggests acceptable, desirable and preferred maximum walking distances ('acceptable' walking distances would vary between individuals). Table 2 summarises the suggested walking distances for pedestrians without mobility impairment for some common trip purposes.

Table 2. Suggested Appropriate Walking Distances

	Town centres (metres)	Commuting/school (metres)	Elsewhere (metres)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred maximum	800	2,000	1,200

Source: 'Providing for Journeys on Foot', CIHT, 2000

- 3.7 The TfL website includes an online map which shows current and proposed cycle routes in London, including cycle superhighways and 'quietways'. The route nearest to the site shown on the map is Q2, a Quietway, connecting Waltham town centre with Kings Cross Road in inner London. This commences approximately 2.5 kilometres to the south west of the site.
- 3.8 LB Waltham Forest is a 'mini-hollands' Borough. In 2013, Waltham Forest was one of just three boroughs selected to share funding from TfL and the Mayor of London to upgrade streets and the road network to help tackle key issues surrounding road safety, air quality and public health. "Mini-Holland" is one of many projects which have been underway since 2013 to make Waltham Forest safer for walking and cycling and is made up of a total of 13 schemes.
- 3.9 In addition to the on-line map, TfL has published Local Cycling Guides covering all of London. Local Cycling Guides 4 and 5 cover Hylands Road and the surrounding area. Within each guide, cycle routes are categorised as follows:
- Yellow – routes on quieter roads recommended by cyclists
 - Blue – routes signed for cyclists that may be on busier roads
 - Brown – provision for cyclists adjacent to busy roads

- Light Green – routes through parks for walking
- Green – routes on canal towpaths for walking and cycling

3.10 A review of these guides shows that the site is well served by 'yellow' and 'blue' cycle routes as defined by TfL. Forest Road to the north is a blue route, and Winsbeach Road to the west is a yellow route leading towards Wood Street Station.

Active Travel Zone

- 3.11 The Active Travel Zone (ATZ), as defined by TfL, is a 20 minute cycle around the site. This has been established using the TfL WebCAT planning tool. This is a GIS based system which plots travel distances by time by mode from a specified location.
- 3.12 The ATZ map and TIM report are included as Appendix C to this report. It can be seen that the site is well within walking and cycling distance of a number of amenities as well as public transport opportunities.
- 3.13 The distances to local amenities and the approximate walk and cycle times from the site are summarised in Table 3 below. The average walking speed has been taken as 1.4 m/s (5 km/hr) and the cycling speed is assumed to be 4.2 m/s (15 km/hr).

Table 3. Local Amenities within Active Travel Zone

Amenity	Distance (m)	Walk Time (mins)	Cycle Time (mins)
Holy Family Catholic School	1,250	15	5
Homebase	980	12	4
Tesco Express	890	11	4
Texaco Service Station	990	12	4
The William Morris Bar and Kitchen	1,000	12	4
Job Centre Plus	1,200	14	5
Wood Street Library	760	9	3
Waltham Forest Housing Department	1,200	14	5
Waltham Forest Council	1,600	19	6
Chapel End Early Years Centre	1,700	20	7
Emmanuel Community School	1,500	18	6
Woodside Primary Academy	970	12	4
Frederick Bremer School	1,200	14	5
Whitefield Academy Trust	1,000	12	4
Waltham Forest College	1,200	14	5
Thorpe Hall Primary School	1,200	14	5
Falzan-e-Islam Mosque	970	12	4
St. Gabriels Church and Family Centre	1,200	14	5
Chestnuts Field	1,300	15	5
Bisterne Avenue Park	500	6	2
Wood Street Railway Station	950	11	4

Public Transport

- 3.14 In terms of public transport, in order to demonstrate the accessibility attributes of the application site in the context of its surroundings, a public transport accessibility level (PTAL) assessment has been undertaken. The PTAL system, widely used by local authorities and the Greater London Authority (GLA), assigns a 'score' to any given location based on the level of public transport accessible from the site within reasonable walking distances and wait times.
- 3.15 TfL's online GIS-based PTAL tool, WebCat, was used as a basis to research the application site's PTAL score. The results indicate that the application site has a PTAL score of 2 which is a 'poor' accessibility rating as defined by TfL. The full PTAL output file is presented in Appendix D.
- 3.16 Table 4 shows the four London bus routes that can be accessed within a 640m PTAL prescribed walking distance from the site. Figure 2 demonstrates the locations of the nearest bus stops and services.

Table 4. Local Bus Services

Bus	Route	Operator	Frequency (vph)	Nearest bus stop	Distance (m)
123*	Ilford - Gants Hill - Southend Road - Forest Road - Tottenham Hale - Tottenham - Tumpike Lane Station - Wood Green Station	Arriva London	5.5	Forest Road/ Castleton Road	13
20	Debden - Loughton - Woodford Green - Whips Cross - Leyton Green - Walthamstow	London General	4	Waterworks Corner (South Side)	450
275	Barkingside Tesco - Woodford Bridge - Woodford - Hale End - Walthamstow St James Street Station	Stagecoach London	5	Hale End Road/ Forest Road	460
230	Upper Walthamstow - Leyton Green - Walthamstow - Tottenham Hale - Philip Lane - Wood Green Station	Arriva London	5	Upper Walthamstow Stand	630

Source: TfL

Note: *Operates Saturday and Sunday mornings only

Rail Accessibility

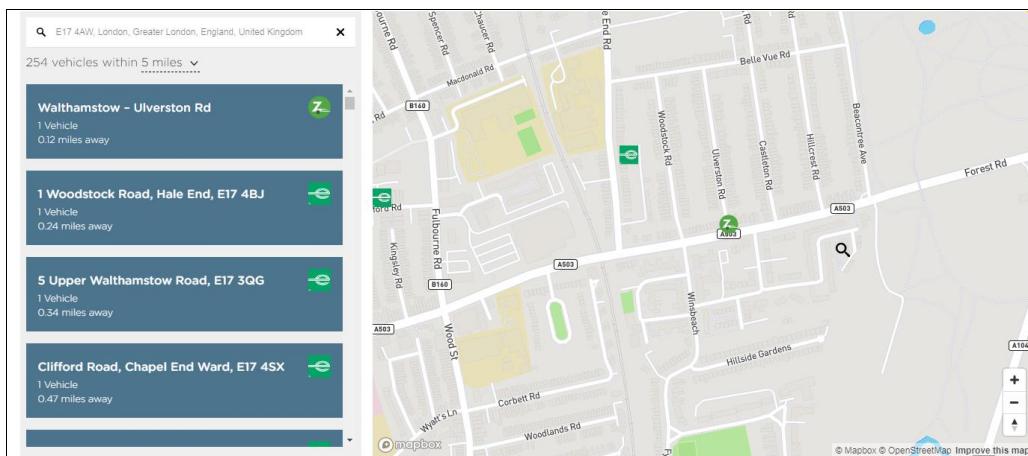
- 3.17 The site is not within a 900 metre PTAL prescribed walking distance for rail stations. However, guidance outlined previously in this section, outlines acceptable walking distances for different purposes. It indicates that the preferred maximum walking distance for commuting/school/sight-seeing trips is 2km, 800m for town centres, and 1.2km for trips elsewhere. The site is within a 1km walk of Wood Street Rail Station which is within the CIHT preferred walking distance for commuting/school/sight-seeing trips and for trips elsewhere.
- 3.18 Wood Street Station is served by London Overground and is on the Chingford Branch Line of the Lea Valley Lines network. There is an off-peak weekday service of four trains per hour in each direction between Liverpool Street and Chingford.
- 3.19 The location of Wood Street Station is illustrated in Figure 2 of this report.

Local Amenities

- 3.20 The site is well located with regard to accessing local amenities and public transport opportunities by foot and cycle. Forest Road is accessible via a footway from the north eastern corner of the site.

Car Club

- 3.21 There are two car club vehicles in proximity to the site. One is a Zipcar vehicle on Ulverston Road close to the junction with Forest Road. There is also an Enterprise car club vehicle on Woodstock Road close to the junction with Forest Road. Refer to the below map extract from the Como UK website:



Source: Como UK

- 3.22 As well as fixed bay car club services, Zipcar now offers the 'Zipzone' which is where members can pick up and drop off 'Flex' vehicles. Waltham Forest is a Borough within which Zipcar offers a Flex service. As discussed, each of the 120 dwellings will be provided with two years' free Zipcar membership and £50 free driving credit to encourage the use of local car club availability.

4.0 BASELINE TRAFFIC CONDITIONS

Existing Parking Conditions

- 4.1 The site is located to the east of the Wood Street East 'WSE' controlled parking zone (CPZ) which is in operation Monday to Friday between 10am and 4pm. On the northern side of Forest Road the Hale End CPZ has been introduced under an experimental traffic order for a period of up to 18 months. This is in operation Monday to Friday between the hours of 10am and 4pm.
- 4.2 In order to establish the existing demand for car parking in the area, a parking survey has been undertaken. This has been carried out in accordance with the Lambeth Methodology which is accepted by Waltham Forest Council's Highways Officers. The full document is presented at Appendix E.
- 4.3 This records overnight parking demand on two weekday nights within a 200 metre distance of the site. Where it is considered that drivers would travel a short distance further to find a parking space, the distance has been extended as appropriate. The extent of the parking survey is shown on Figure 3.
- 4.4 Two overnight surveys were undertaken on the nights of Monday 10th June and Tuesday 11th June 2019 in accordance with the Lambeth methodology. These were carried out at 0130 and 0300 respectively.
- 4.5 The parking survey inventory and the full results of the parking surveys are included at Appendix F of this report. Detailed maps of the various kerb side restrictions within the 200 metre study area are shown in Figures 4 a-f.
- 4.6 The results of the survey have been considered separately for the two CPZ areas on either side of Forest Road. The average results for the 'WSE' area to the south of Forest Road adjacent to the site are summarised in Table 5 below.

Table 5. Average Overnight Parking Stress Wood Street East Area

Road	Overnight Parking Survey Average					
	Permit Holder Only (WSE)			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Hylands Road	8	5	56%	4	4	100%
Fernhill Court	47	21	44%	-	-	-
Hempstead Road	22	17	75%	-	-	-
Nagle Close	2	2	100%	-	-	-
Tristram Close	9	8	89%	-	-	-
Total	88	52	59%	4	4	100%

- 4.7 The results show that all the available unrestricted parking opportunities are utilised overnight, which comprises of an anomalous stretch of unrestricted kerb space on Hylands Road outside no.s 46-51. Within the CPZ 'WSE' the overall demand for parking is only 59% of the supply demonstrating that there is ample parking available. It is noted that within Nagle Close and Tristram Close the demand for parking corresponds closely with the supply with only one spare space overnight, which is expected in cul de sacs with relatively little parking.
- 4.8 Table 6 includes the results for the Hale End area to the north of Forest Road. It is noted that there was no unrestricted parking within this survey area.

Table 6. Average Overnight Parking Stress Hale End Area

Road	Overnight Parking Survey Average		
	PHO 'HE'		
	Total Spaces	Cars Parked	Parking Stress (%)
Beacontree Avenue	47	26	54%
Castleton Road	14	11	79%
Hillcrest Road	40	38	94%
Total	101	74	73%

- 4.9 It can be seen from the above that the parking demand within the Hale End CPZ currently being trialled is higher than in the Wood Street East area in the immediate vicinity of the site.

Car Ownership

- 4.10 The existing level of car ownership in the area has been established with reference to data extracted from the 2011 Census for the Middle Layer Super

Output Area of Waltham Forest 013 in which the site is located. The results are shown in Table 7 below.

Table 7. Existing Car Ownership

Car or Van Availability by Flat, Maisonette, Apartment (LC4415EW) - 2011	Waltham Forest 013	
	Middle Layer Super Output Area	
	Count	%
All Categories: Car or Van Availability	2,723	-
No Cars or Vans in Household	1,739	64%
1 Car or Van in Household	867	32%
2+ Cars or Vans in Household	117	4%

Source: Office for National Statistics

- 4.11 The results in Table 7 demonstrates that the prevailing car ownership levels of flat, maisonette and apartment households in the area immediately adjoining the application site is very low with 64% being car-free.

Modal Split

- 4.12 Table 8 sets out the method of travel to work for the resident population of the Middle Layer Super Output Area of Waltham Forest 013 in which the site is situated. People not in employment or who work at or from home have been excluded from the calculations.

Table 8. Method of Travel to Work; Resident Population

Method of Travel to Work - msoa2011:E02000907 : Waltham Forest 013	Raw Data	
	Count	Modal Share
All categories: Method of travel to work	3,723	100%
Underground, metro, light rail, tram	1,214	33%
Train	506	14%
Bus, minibus or coach	537	14%
Taxi	22	1%
Motorcycle, scooter or moped	24	1%
Driving a car or van	863	23%
Passenger in a car or van	74	2%
Bicycle	105	3%
On foot	346	9%
Other method of travel to work	32	1%

- 4.13 As is shown the majority of the local population travel to work by public transport (62%), and in terms of active travel a further 9% walk to work and 3% cycle.

Baseline Traffic Flow & Speed

- 4.14 As part of the preparation of this Transport Assessment a traffic volume and speed survey has been carried out on Fernhill Court and the A503 Forest Road in the immediate vicinity of the application site for the period of one typical week in June 2019.
- 4.15 The surveys were carried out by means of a MetroCount automatic traffic counter (ATC) machine being placed on Fernhill Court (outside no. 43) and Forest Road (adjacent to the pedestrian link to Hylands Road) from Monday 10th June to Sunday 16th June 2019.
- 4.16 The ATC unit is attached to two rubber pneumatic tube axle sensors. The tube sensors were placed laterally across the road at an exact spacing of 1000 mm so as to accurately record vehicle flow as well as speed.
- 4.17 A summary of the results of the ATC vehicle flow survey is presented in Table 9, full details are provided at Appendix G.

Table 9. Fernhill Court & Forest Road ATC Summary, Average Weekday Flow

Time	Fernhill Ct Weekday Average Flow			Forest Rd Weekday Average Flow		
	EB	WB	Total	EB	WB	Total
0000-0100	1	1	2	122	119	242
0100-0200	1	1	1	76	73	149
0200-0300	1	1	2	48	40	88
0300-0400	2	1	3	44	42	86
0400-0500	2	2	4	62	64	125
0500-0600	1	1	2	108	188	297
0600-0700	1	3	5	188	477	665
0700-0800	2	5	7	346	710	1056
0800-0900	4	8	11	404	762	1167
0900-1000	6	5	11	387	602	989
1000-1100	2	4	6	325	493	818
1100-1200	7	7	15	352	489	842
1200-1300	9	6	15	387	485	873
1300-1400	5	8	13	423	461	884
1400-1500	7	7	14	469	480	948
1500-1600	7	8	15	563	506	1069
1600-1700	5	5	10	687	542	1229
1700-1800	9	6	15	683	582	1265
1800-1900	9	8	16	544	578	1122
1900-2000	5	7	13	410	555	966
2000-2100	7	6	13	326	395	721
2100-2200	6	6	12	264	312	576
2200-2300	5	5	10	243	249	492
2300-2400	3	2	5	193	186	379
Total	108	111	220	7658	9389	17047

Source: DCA Monisyst

- 4.18 The results in Table 9 demonstrate that Fernhill Court carries an average total of just 220 total two-way vehicle movements on a typical weekday, comprising of 108 eastbound vehicle trips and 111 westbound vehicle trips (arithmetic error is due to rounding). The AM and PM peak periods on Forest Road are 0800-0900 and 1700-1800 respectively with 1,167 and 1,265 total two-way trips recorded in the hours. This is largely as expected as the A503 Forest Road is a key local distributor road which leads from the A406 North Circular in the east to the A10 High Road in the west.

- 4.19 A summary of the results of the ATC vehicle speed surveys is presented in Table 10.
- 4.20 Whereas for speed limits the 85 percentile 'dry weather' spot speed of cars is required, for improvement of alignments and major/minor junctions or accesses, and for new major/minor junctions or accesses on existing roads (such as in this case), the normal design methods are based on the 85 percentile 'wet weather' journey speed of vehicles.
- 4.21 To get from the dry weather spot speed of vehicles measured to the wet weather journey speed used in design, one of the following correction factors should be used as defined in TA 22/81:
- For all purpose dual carriageways ... deduct 8 kph (5 mph)
 - For all purpose single carriageways ... deduct 4 kph (2.5 mph)
- 4.22 The weather conditions in the survey period were fine and dry and therefore the wet weather adjustment of minus 2.5 mph has been applied, in accordance with TA 22/81.

Table 10. Fernhill Court & Forest Road ATC Summary, Average 85th %ile Speed

Time	Average 85%ile Speed (mph)			
	Fernhill Court		Forest Road	
	Eastbound	Westbound	Eastbound	Westbound
85th %ile Speeds	20.5	20.2	31.4	30.0
Adjusted per TA22/81	18.0	17.7	28.9	27.5

Source: DCA Monisyst/PMA

- 4.23 The results in Table 10 demonstrate that the recorded 85th percentile design speed of traffic on Fernhill Court in the immediate vicinity of the site is 18 mph for both eastbound and westbound travelling traffic which is very low. On Forest Road the recorded 85th percentile design speed of traffic is 29 mph for both eastbound travelling traffic and 28 mph for westbound travelling traffic.

5.0 SITE ACCESS, PARKING, & SERVICING

- 5.1 The proposed development comprises the demolition of the existing 50 residential buildings, community building, and the vacant and dilapidated lock-up garages on the site and the construction of 120 new dwellings.
- 5.2 The proposed site layout (hard landscaped) is shown in Appendix B of this report.

Vehicle Access

- 5.3 Vehicular access to the site will be via Hylands Road as in the existing situation. In order to make most efficient use of the land available an area of highway at the end of Hylands Road will be stopped up and a new turning head will be provided adjoining the access to the proposed Blue Badge parking bays in the northern part of the site.
- 5.4 The re-provided turning head will be larger than the existing turning head which will be an improvement under the proposals.
- 5.5 In order to maintain safe access and egress to the Blue Badge parking bays, as well as to maintain an effective turning head, it will be necessary to remove the anomalous stretch of unrestricted kerb side parking on Hylands Road outside no. 46-51 by providing additional double yellow lines. This will require a change to the traffic regulation order (TRO). This aspect of the proposal will result in the loss of four existing unrestricted kerb side parking opportunities.
- 5.6 A further vehicle access will be provided to serve the proposed Blue Badge parking bays in the southern part of the site. Two CPZ 'WSE' kerb side parking opportunities will be lost which are currently to the front of 1-10 Hylands Road. Again this will require a change to the TRO to remove the CPZ bays and provide double yellow lines around this stretch of new kerb space.
- 5.7 The proposed site plan in Appendix B adequately illustrates the proposed changes to the highway and the TRO in the vicinity of the site. The provision of the new vehicular accesses and associated highways works together with the proposed changes to the TRO and any other highways improvement works

which are required as part of the scheme (to be discussed with LB Waltham Forest) will be covered by a S278 Agreement and secured as a condition of any future planning permission.

- 5.8 In total the proposed vehicular accesses will result in the loss of six existing kerb side parking opportunities locally, comprising of two CPZ 'WSE' bays and four unrestricted kerb side parking spaces. The existing site plan and the proposed site plan (hard landscaped) in Appendices A and B of this report respectively clearly illustrate the existing and proposed kerb alignment and TROs on Hylands Road in the immediate vicinity of the site.
- 5.9 All of the four unrestricted kerb side parking opportunities on Hylands Road were observed to be parked in during the overnight surveys, as set out in Table 5.
- 5.10 The loss of two 'WSE' parking bays and an additional four cars parked in the Zone arising from the proposed development would increase the observed parking stress by 6% from 59% to 65%. There will still be 30 available kerb side parking spaces in zone 'WSE' bays should the highways works described herein go ahead.
- 5.11 The Lambeth methodology does not prescribe specific thresholds for when a parking survey area is deemed to suffer from undue parking stress. However it is widely perceived that an observed parking stress of 90% or more is deemed to represent a high uptake of kerb side parking.
- 5.12 The impact of the loss of kerb side parking arising from the proposals will therefore be adequately absorbed within the existing substantial reserve in capacity in the adjacent CPZ and will not result in conditions prejudicial to highway capacity, road safety, or neighbouring amenity.
- 5.13 The vehicle to vehicle visibility sightlines from the new site accesses have been assessed to ensure that there are no adverse safety issues arising from the proposals. The DfT publication 'Manual for Streets' (MfS) prescribes Stopping Sight Distance (SSD) standards for roads with speeds of 37 mph or less. Fernhill Court and Hylands Road have a speed limit of 20 mph and the measured design

speed on Fernhill Court itself is 18 mph, the MfS design principles are therefore comfortably passable for this assessment.

- 5.14 Table 7.1 of MfS prescribes SSD's in accordance with measured traffic speeds, directly extracted as follows:

Table 7.1 Derived SSDs for streets (figures rounded).

Speed	Kilometres per hour	16	20	24	25	30	32	40	45	48	50	60
	Miles per hour	10	12	15	16	19	20	25	28	30	31	37
SSD (metres)	9	12	15	16	20	22	31	36	40	43	46	56
SSD adjusted for bonnet length. See 7.6.4	11	14	17	18	23	25	33	39	43	45	48	59

Additional features will be needed to achieve low speeds

Source: Manual for Streets

- 5.15 From the standards set out above and the speed survey results on Fernhill Court, the SSD requirements from the proposed site accesses are 22 metres (the 'Y' distance) in both the leading and the trailing direction. The usual practice set-back distance from the highway verge is 2.4 metres for SSD measurement (the 'X' distance).
- 5.16 Figure 5 of this report presents the required SSD measurements plotted on a surveyed base map looking in both the leading and trailing directions from the new site access in the northern part of the site. As is shown in Figure 5, the site access can easily accommodate sufficient sightlines looking in both directions within highway land or land within the application site boundary. It should be noted that vehicles will not be travelling westbound along Hylands Road at this stretch owing to the fact that beyond the site access is a cul-de-sac and there are no further accesses or parking opportunities. Furthermore traffic speeds at this point are likely to be substantially less than 18 mph owing to the 90 degree bend in Hylands Road immediately west of the site.

5.17 Figure 6 of this report presents the required SSD measurements plotted on a surveyed base map looking in both the leading and trailing directions from the new site access in the southern part of the site. As is shown in Figure 6, the site access can easily accommodate sufficient sightlines looking in both directions within highway land or land within the application site boundary.

Parking

- 5.18 It is proposed to provide car parking for disabled residents of the development only as discussed and agreed with Waltham Forest Council during formal pre-application discussions. There will be a total of nine Blue Badge parking spaces provided for the proposed development. This equates to a provision of 7.5% of the 120 total dwellings which is the minimum figure that has been requested by Waltham Forest Council during formal pre-application correspondence (email from Neil Bullen sent on 08/17/19). These will be provided in two separate parking areas as is shown in Appendix B.
- 5.19 All of the on-site parking bays will be provided with the underlying infrastructure for electric vehicle (EV) charging facilities and 20% of the spaces will be provided with an 'active' EV charge point at the outset in accordance with the emerging new London Plan (July 2019).
- 5.20 Residents of the site will not be granted parking permits for the local CPZs, which will be secured as a S106 Agreement attached to any future planning permission. The proposal will therefore have no further impact on the adjacent CPZ.
- 5.21 Given the proposed 'car free' nature of the development it is proposed that as part of the Travel Plan, residents of the site will be offered two years' free car club membership and £50 free driving credit. The Travel Plan has been prepared under separate cover and submitted with the planning application as a standalone document. The Travel Plan is expected to be secured by the Council as a condition of any future planning permission.
- 5.22 Cycle parking is proposed to be provided in accordance with the minimum standards prescribed in the draft London Plan (July 2019), at a level of 1.5 long-

stay spaces per one-bedroom two-person flat, and two long-stay spaces per two or more bedroom dwelling, plus a minimum of two short-stay spaces for the first 40 dwellings and one short-stay space per 40 dwellings thereafter.

- 5.23 The cycle parking will be provided in communal cycle stores in each individual block at ground floor level and close to the main access to buildings. These will be secure and covered facilities. A mixture of two-tier spaces and Sheffield stands and spare space for adapted bicycle spaces will be provided as is shown in Appendix B. A minimum of four short-stay cycle parking spaces is proposed to be provided for visitors.
- 5.24 The layout of both of the proposed parking areas has been assessed using the industry standard AutoTrack vehicle swept path analysis program. As is shown in Figures 7 a-d the Blue Badge parking bays can be easily accessed in minimal manoeuvres and with access and egress from the adjoining highway in a forward gear.

Servicing & Deliveries

- 5.25 It is not anticipated that the development proposals would result in any significant changes to the servicing arrangements for the site. Servicing currently takes place on-street and the proposed development would continue to be serviced from the street. Bin stores will be located at ground floor level such that waste collection operatives will not be required to carry bags or transport Eurobins more than 15 metres in total.
- 5.26 A turning area is provided within the proposed new highway layout on Hylands Road which allows larger vehicles such as refuse collection vehicles, delivery vehicles, and fire tenders to comfortably turn around.
- 5.27 A swept path analysis has been undertaken using AutoTrack, the industry standard software for assessing vehicle manoeuvres, to demonstrate these turning movements. Figures 8-12 demonstrate the three-point-turn manoeuvre of a Waltham Forest narrow access refuse collection vehicle, a 7.5 tonne box van, and a London Fire Brigade (LFB) fire tender performing a three-point-turn

in the turning heads provided adjacent to the northern and southern accesses. As is shown all manoeuvres are comfortably achievable in a three-point-turn.

- 5.28 It should be noted that a gated access is provided at both of the proposed parking areas and segregated footpaths between the parking bays and the buildings are provided under the proposals therefore the infrequent use of the turning heads for these larger vehicles will not conflict with the users of the parking bays and accordingly this arrangement is deemed to be entirely safe and satisfactory.
- 5.29 Dropped kerbs are provided adjacent to each of the proposed new bin stores so that refuse collections can be carried out safely and efficiently from the kerb side as per the extant established arrangements both for the current properties on the site as well as all neighbouring buildings.
- 5.30 In respect to ad-hoc deliveries it is expected that these would take place from the kerb as per the extant established arrangements for both the existing/former dwellings on the site as well as the neighbouring properties on Hylands Road and Fernhill Court.
- 5.31 There are multiple safe and legal kerb side loading/unloading opportunities on Fernhill Court and Hylands Road in the immediate vicinity of the application site which are expected to adequately serve the servicing demands generated by the proposal. Two such locations are illustrated on the proposed site plan (hard landscaped) in Appendix B of this report, one is on Fernhill Court and one is towards the end of the Hylands Road cul-de-sac.
- 5.32 Both of the aforementioned delivery loading/unloading opportunities are on double yellow line kerb space and do not impede access to parking bays, adjoining properties, and free-flowing traffic. As per the Highway Code loading and unloading is permitted on single and double yellow lines for a maximum of 40 minutes if loading is observed and on the basis that such activity must not cause an obstruction. There is no loading ban along Fernhill Court or Hylands Road.

- 5.33 The swept path diagrams in Figures 8-12 demonstrate that a variety of large vehicles will be able to comfortably perform a three-point-turn at each of the proposed site accesses on Fernhill Court and on Hylands Road such that reverse manoeuvres will be kept to an absolute minimum.
- 5.34 The traffic flow and speed data for Fernhill Court in Tables 9 and 10 and Appendix G of this report demonstrate that Fernhill Court carries an average of just 12 total two-way vehicle movements (six arrivals and six departures) in a given hour from 0700-1900 on a typical weekday. The recorded 8th %ile speed of traffic on Fernhill Court is under the posted speed limit of 20 mph.
- 5.35 Accordingly kerb side loading from ad-hoc delivery demand generated by the proposed development as well as the existing adjoining neighbours are entirely safe and practical and will not result in conditions detrimental to highway capacity, road safety, or neighbouring amenity.

6.0 TRIP GENERATION & DEVELOPMENT IMPACT

Modal Split

- 6.1 As set out in Chapter 4, the modal split for the area has been obtained from Census 2011 Middle Layer Super Output Area of Waltham Forest 013 in which the site is situated. People not in employment or who work at or from home have been excluded from the calculations.
- 6.2 Given the proposed development will be car free and only essential Blue Badge parking bays will be provided for the development, the baseline figures have been adjusted to reflect that travel by car will be inherently limited in the proposed situation. The proportion of people travelling by car has therefore been redistributed amongst the other modes. The baseline and revised anticipated modal split is summarised in Table 11 below.

Table 11. Method of Travel to Work; Resident Population

Method of Travel to Work - msoa2011:E02000907 : Waltham Forest 013	Raw Data	
	Existing Modal Split	Anticipated Modal Split
All categories: Method of travel to work	100%	100%
Underground, metro, light rail, tram	33%	44%
Train	14%	18%
Bus, minibus or coach	14%	19%
Taxi	1%	1%
Motorcycle, scooter or moped	1%	1%
Driving a car or van	23%	-
Passenger in a car or van	2%	-
Bicycle	3%	4%
On foot	9%	12%
Other method of travel to work	1%	1%

- 6.3 The proposals comprise of 120 residential flats of 100% 'Social Rent' tenure. For the C3 'Dwelling houses' land use, multi-modal surveys within the 03-Residential, D – Affordable/Local Authority Flats TRICS dataset have been examined.
- 6.4 The trip generation results are based on trip rates from three sites within the database which are comparable to the proposed development. For the purpose

of the assessment, the total all mode trips generated by the TRICS assessment have been extracted, and these trips are distributed by mode, based on the 2011 Travel to Work Census data for the Middle Layer Super Output Area of Waltham Forest 013, in which the site is located.

- 6.5 Morning, evening and daily (0800-0900, 1700-1800, and 0700-1900 respectively) person trip rates per unit and resultant trip rates for the proposed 120 dwellings are presented in the TRICS derived trip generation calculation information attached at Appendix H of this report. Table 12 presents the anticipated trips for the development, by mode of travel.

Table 12. TRICS Residential Trip Generation Projections by Mode

Mode of Travel	Adjusted Modal Split	AM Peak 0800-0900		PM Peak 1700-1800		Daily 0700-1900	
		Arr	Dep	Arr	Dep	Arr	Dep
Underground	44%	6	55	20	12	166	193
Train	18%	3	23	9	5	69	81
Bus, minibus, coach	19%	3	24	9	5	73	86
Taxi	1%	0	1	0	0	3	4
Motorcycle or scooter	1%	0	1	0	0	3	4
Driving a car or a van	-	-	-	-	-	-	-
Pass. in a car or a van	-	-	-	-	-	-	-
Bicycle	4%	1	5	2	1	14	17
On-foot	12%	2	16	6	3	47	55
Other	1%	0	1	1	0	4	5
Total	100%	14	126	47	27	380	444

- 6.6 The table above indicates that the proposed 120 residential units are expected to generate 824 total all modal two-way person trips over the course of a typical weekday as derived from the TRICS database.
- 6.7 As is shown the majority of the trips generated by the development (668 total two-way person trips daily) are expected to be undertaken by public transport. A total of 31 total two-way daily cycling trips are anticipated as well as 102 total two-way daily trips made solely on-foot.

- 6.8 The development provides nine Blue Badge parking bays and therefore there may be a small number of residual car driver and passenger trips generated by this aspect of the proposal however the overall proportion will be extremely limited.
- 6.9 It is noted that the site currently accommodates 50 residential dwellings with associated parking and no restrictions on access to parking permits in the adjacent CPZ. These dwellings will have a level of traffic generation associated with them. Whilst the proposals will result in an increase in the overall total number of person trips to and from the site on a daily basis, there will be a reduction in the number of vehicular trips which will be of benefit to the local environment and neighbouring amenity.

7.0 SUMMARY & CONCLUSIONS

- 7.1 To summarise, Paul Mew Associates has been appointed on behalf of Waltham Forest Council in relation to the redevelopment of 50 residential units, a vacant former community facility, and 15 vacant and dilapidated lock-up style external garages at Hylands Road, E17 4AJ. It is intended to redevelop the site to provide 120 'Social Rent' dwellings.
- 7.2 This report has assessed the transport implications of the proposals including access, parking, servicing, and trip assessment. The planning application is supported by a Travel Plan and an Outline Construction Logistics Plan also prepared by Paul Mew Associates.
- 7.3 The area surrounding the site is predominantly residential in character with some commercial uses located to the west. The site has a PTAL rating of 2 which is a 'poor' rating as defined by Transport for London (TfL). There are three bus services, the 123, 275 and 230, within a reasonable walking distance of the site. Wood Street Station, on the London Overground, is approximately 950 metres to the south west of the site.
- 7.4 The site is located within the Wood Street East 'WSE' controlled parking zone (CPZ) which is in operation Monday to Friday between 10am and 4pm. On the northern side of Forest Road, the Hale End CPZ has been recently introduced under an experimental traffic order for a period of up to 18 months. This is in operation Monday to Friday between the hours of 10am and 4pm.
- 7.5 A total of nine on-site Blue Badge parking spaces will be provided for the 120 total dwellings. The level of on-site car parking provision has been discussed and agreed with the Council during formal pre-application correspondence. All of the on-site parking bays will be provided with the underlying infrastructure for electric vehicle (EV) charging facilities and 20% of the spaces will be provided with an 'active' EV charge point at the outset. High quality secure and sheltered cycle parking spaces will be provided across the site in accordance with the minimum policy requirements set out in the draft new London Plan (July 2019).

- 7.6 Each of the 120 dwellings will be provided with two years' free membership to Zipcar car club plus £50 free driving credit from the outset of the development being occupied. There is a dedicated Zipcar parking bay on Ulverston Road within around 250 metres to the north of the site and Waltham Forest is a 'Zipzone' Borough where members can pick up and drop off 'Flex' vehicles in CPZs.
- 7.7 Vehicular access to the site will be via Fernhill Court and Hylands Road as per the existing situation. In order to make most efficient use of the land available an area of highway at the end of Hylands Road will be stopped up and a new turning head will be provided adjoining the access to the proposed Blue Badge parking bays in the northern part of the site. The re-provided turning head will be larger than the existing turning head which will be an improvement under the proposals.
- 7.8 In order to maintain safe access and egress to the Blue Badge parking bays, as well as to maintain an effective turning head, it will be necessary to remove an anomalous stretch of unrestricted kerb side parking on Hylands Road by providing additional double yellow lines. This will require a change to the traffic regulation order (TRO). This aspect of the proposal will result in the loss of four existing unrestricted kerb side parking opportunities.
- 7.9 A further vehicle access will be provided to serve the proposed Blue Badge parking bays in the southern part of the site. Two CPZ 'WSE' kerb side parking opportunities will be lost as a result of the development proposals in this part of the site. Again this will require a change to the TRO to remove the CPZ bays and provide double yellow lines around this stretch of new kerb space. The provision of the new vehicular accesses and associated highways works together with the proposed changes to the TRO and any other highways improvement works which are required as part of the scheme (to be discussed with LB Waltham Forest) will be covered by a S278 Agreement and secured as a condition of any future planning permission.
- 7.10 In total the proposed vehicular accesses will result in the loss of six existing kerb side parking opportunities locally, comprising of two CPZ 'WSE' bays and four

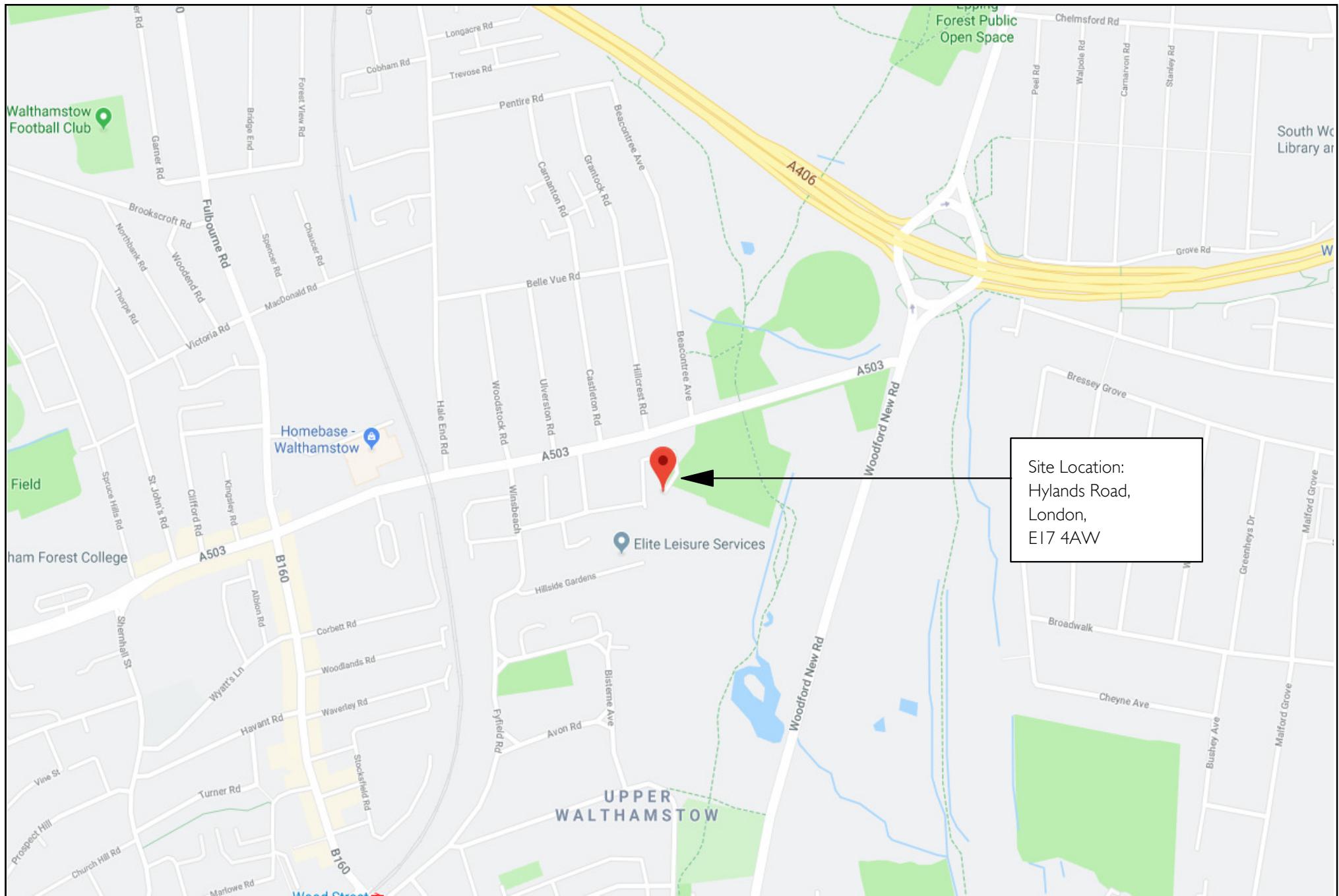
unrestricted kerb side parking spaces. The existing site plan and the proposed site plan (hard landscaped) in Appendices A and B of this report respectively clearly illustrate the existing and proposed kerb alignment and TROs on Hylands Road in the immediate vicinity of the site.

- 7.11 The loss of four unrestricted kerb side parking opportunities and two 'WSE' parking bays arising from the proposed development would increase the observed parking stress by 6% from 59% to 65%. There will still be 30 available kerb side parking spaces in zone 'WSE' bays should the highways works described herein go ahead. The impact of the loss of kerb side parking arising from the proposals will therefore be adequately absorbed within the existing substantial reserve in capacity in the adjacent CPZ and will not result in conditions prejudicial to highway capacity, road safety, or neighbouring amenity.
- 7.12 The vehicle to vehicle visibility sightlines from each of the new site accesses are in accordance with the measured design speed of the road and the stopping sight distance requirements set out in the DfT publication MfS.
- 7.13 It is not anticipated that the development proposals would result in any significant changes to the servicing arrangements for the site. Servicing currently takes place on-street and the proposed development would continue to be serviced from the street.
- 7.14 Bin stores will be located at ground floor level such that waste collection operatives will not be required to carry bags or transport Eurobins more than 15 metres in total. A turning area is provided within the proposed new highway layout on Fernhill Court and Hylands Road which allows larger vehicles such as refuse collection vehicles, delivery vehicles, and fire tenders to comfortably turn around. As is shown in the vehicle swept path diagrams presented within this report, all manoeuvres are comfortably achievable in a three-point-turn.
- 7.15 It should be noted that a gated access is provided at both of the proposed parking areas and segregated footpaths between the parking bays and the buildings are provided under the proposals therefore the infrequent use of the turning heads for these larger vehicles will not conflict with the users of the

parking bays and accordingly this arrangement is deemed to be entirely safe and satisfactory.

- 7.16 In respect to ad-hoc deliveries it is expected that these would take place from the kerb as per the extant established arrangements for both the existing/former dwellings on the site as well as the neighbouring properties on Hylands Road and Fernhill Court.
- 7.17 There are multiple safe and legal kerb side loading/unloading opportunities on Fernhill Court and Hylands Road in the immediate vicinity of the application site which are expected to adequately serve the servicing demands generated by the proposal. Two such locations are illustrated on the proposed site plan (hard landscaped) in Appendix B of this report.
- 7.18 Accordingly kerb side loading from ad-hoc delivery demand generated by the proposed development as well as the existing adjoining neighbours are entirely safe and practical and will not result in conditions detrimental to highway capacity, road safety, or neighbouring amenity.
- 7.19 The site currently accommodates 50 residential dwellings with associated parking and no restrictions on access to parking permits in the adjacent CPZ. These dwellings will have a level of traffic generation associated with them. Whilst the proposals for the redevelopment of the site to provide 120 new dwellings will result in an increase in the overall total number of person trips to and from the site on a daily basis, there will be a reduction in the number of vehicular trips which will be of benefit to the local environment and neighbouring amenity.
- 7.20 In summary all of the highways aspects of the proposed development are considered to be safe and satisfactory and compliant with the relevant policy requirements and considerations at the local, regional, and national level.

FIGURES

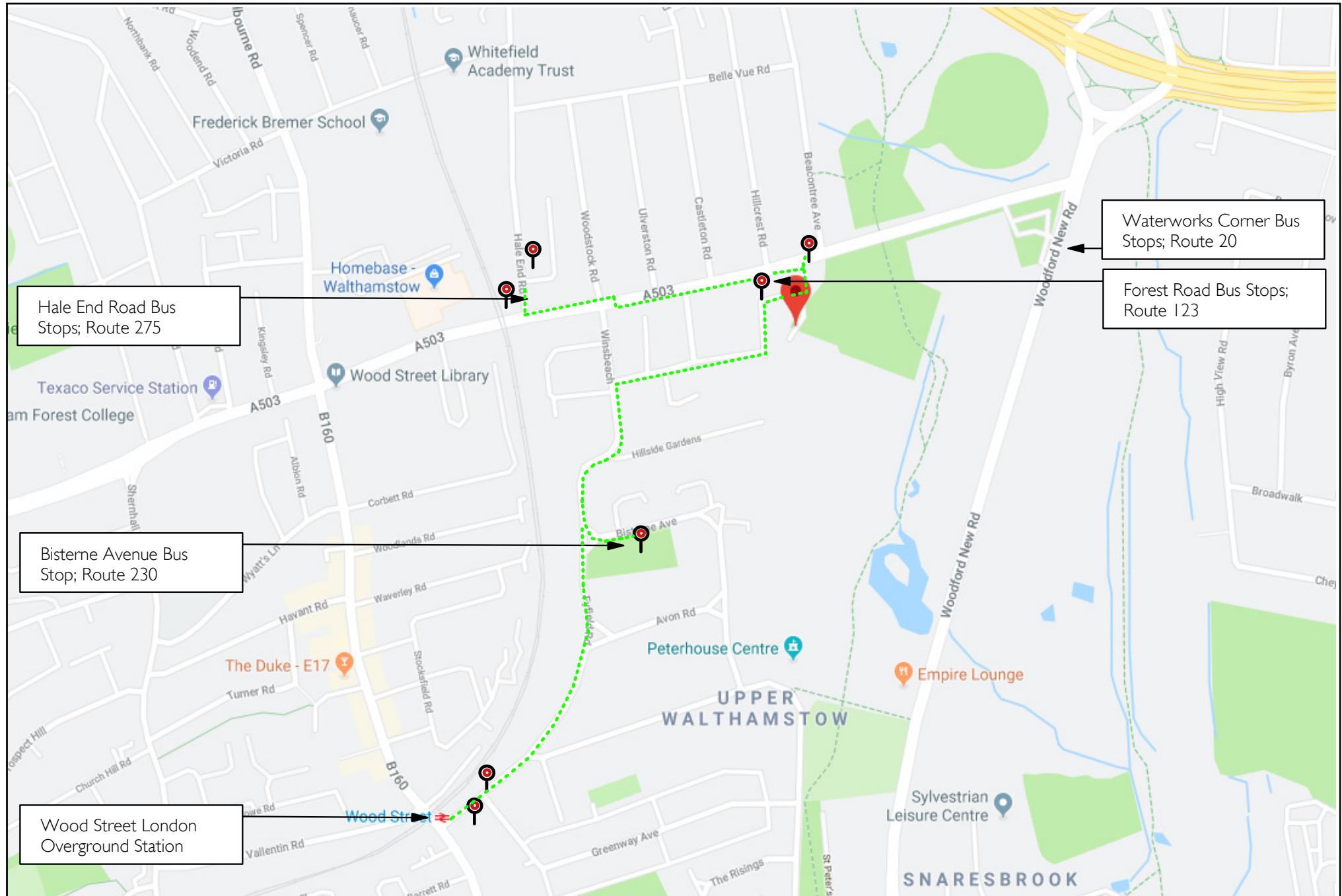


Date: 29-July-2019
 Scale: NTS
 Source: Google Maps
 Drawing No: P2147/TA/01



P2147: Hylands Road, Waltham Forest, E17 4AW
 Figure 1
 Site Location

 PAUL MEW ASSOCIATES
 TRAFFIC CONSULTANTS

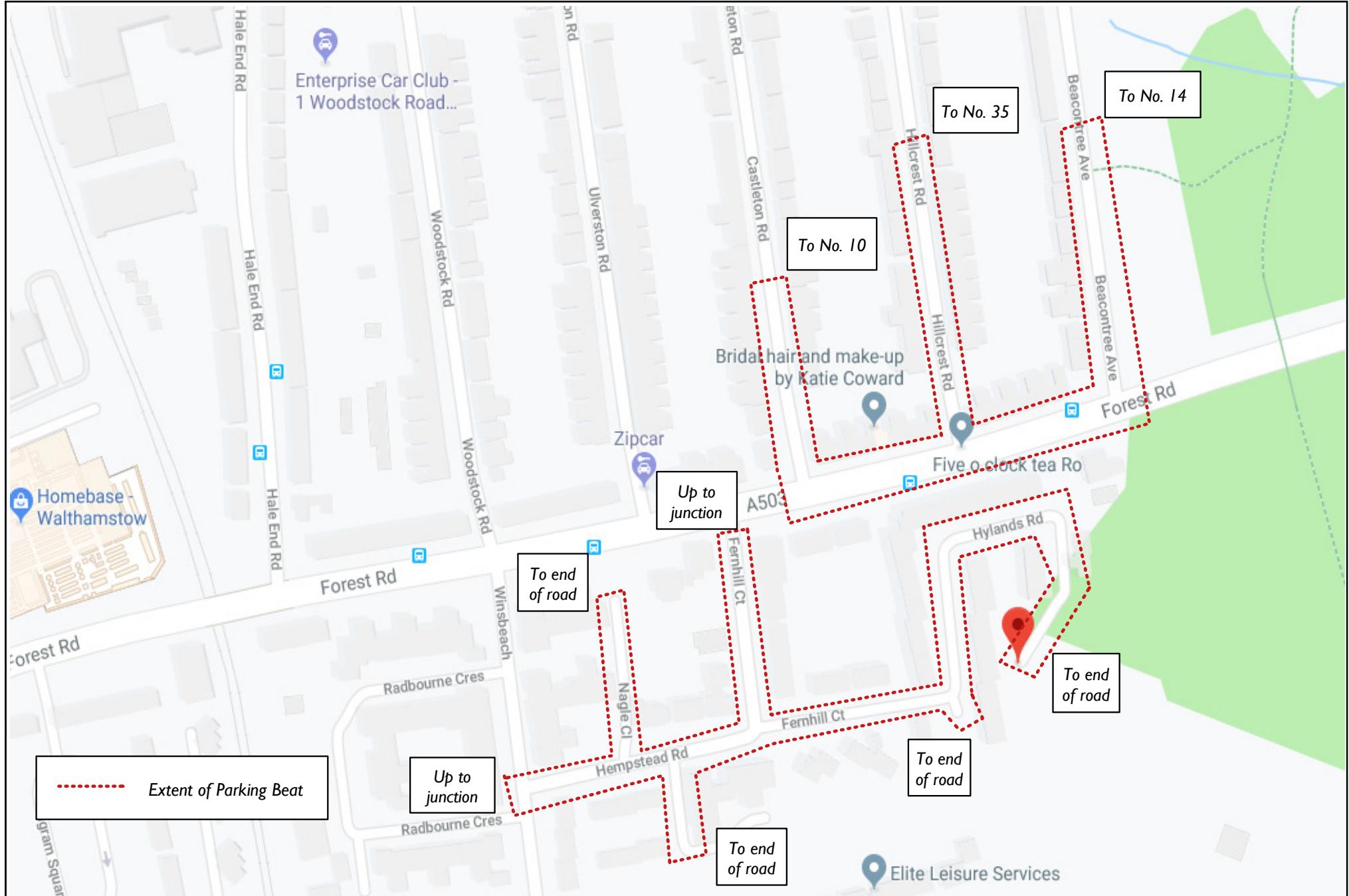


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 Scale: NTS
 Source: Google Maps
 Drawing No: P2147/TA/02



P2147: Hylands Road, Waltham Forest, E17 4AW
 Figure 2.
 Public Transport Accessibility Map

 PAUL MEW ASSOCIATES
 TRAFFIC CONSULTANTS

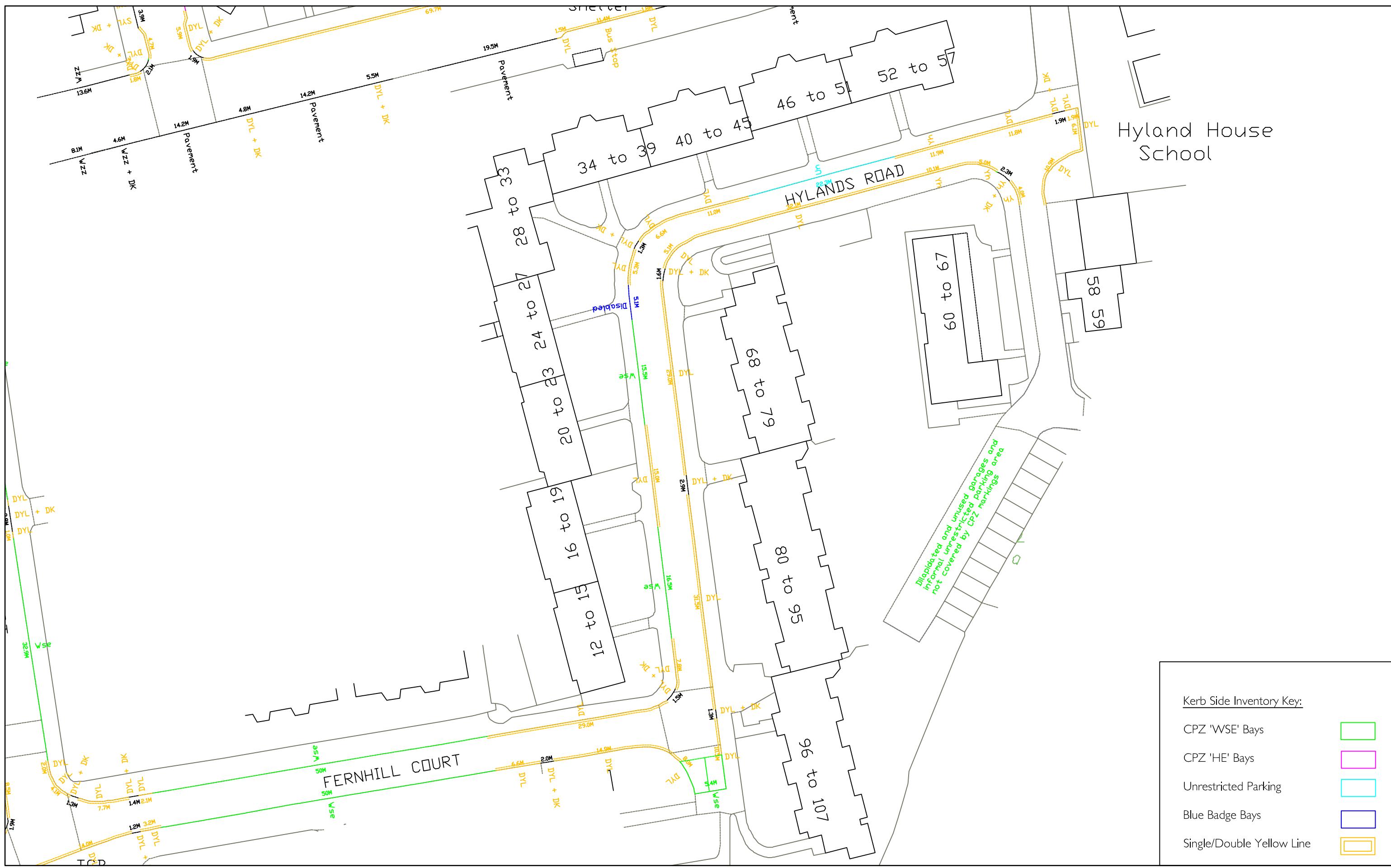


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 Drawing No: P2147/TA/03

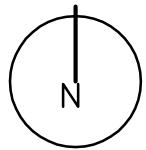
P2147: Hylands Road, Waltham Forest, E17 4AW

Figure 3.
 Parking Survey Area

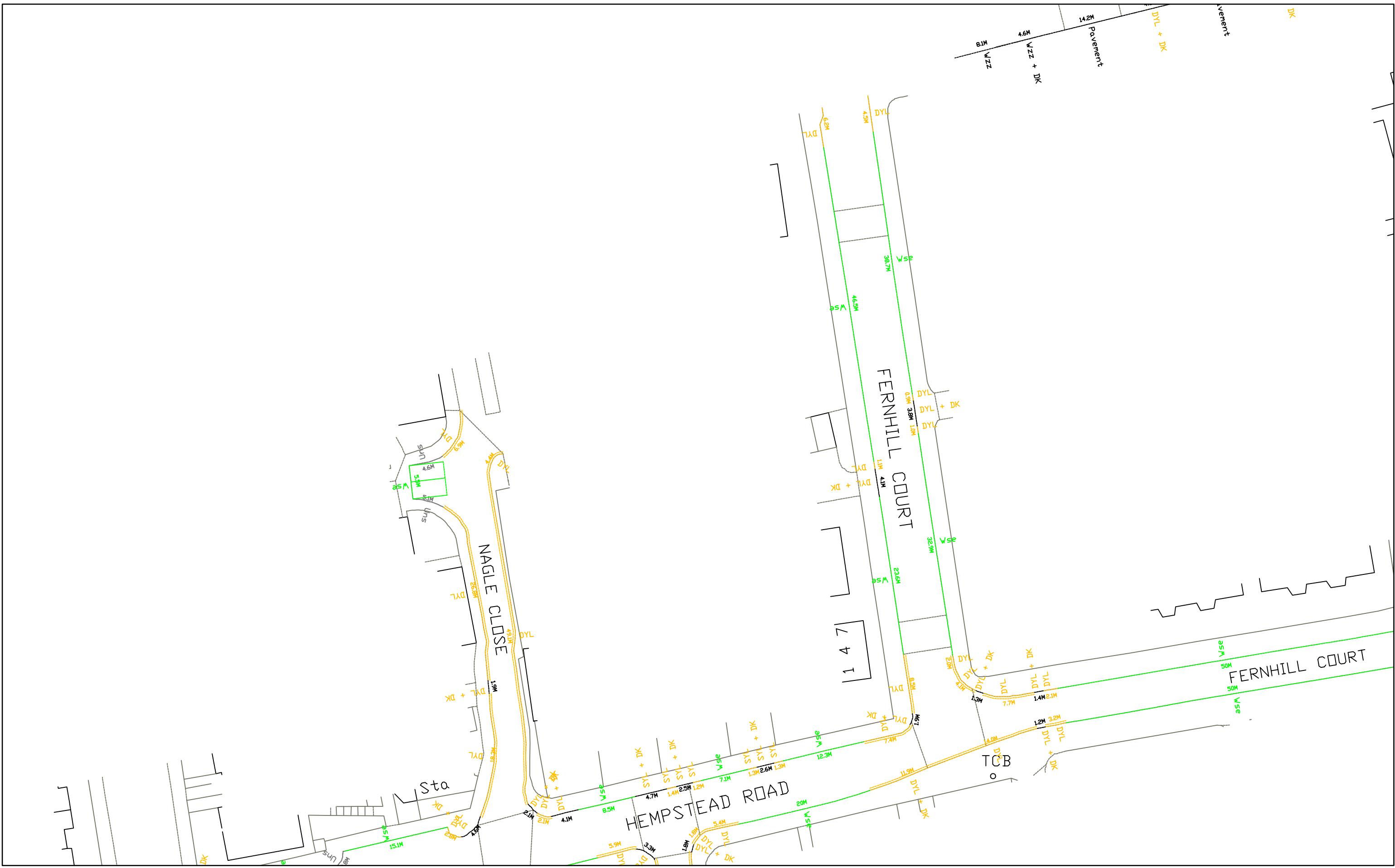
 PAUL MEW ASSOCIATES
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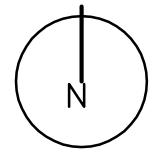
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Scale: 1:500@A3
Source: OS/PMA
Drawing No. P2147/TS/04



P2147: Hylands Road, Waltham Forest, E17 4AW
Figure 4a.
Parking Survey Inventory; South East Extent

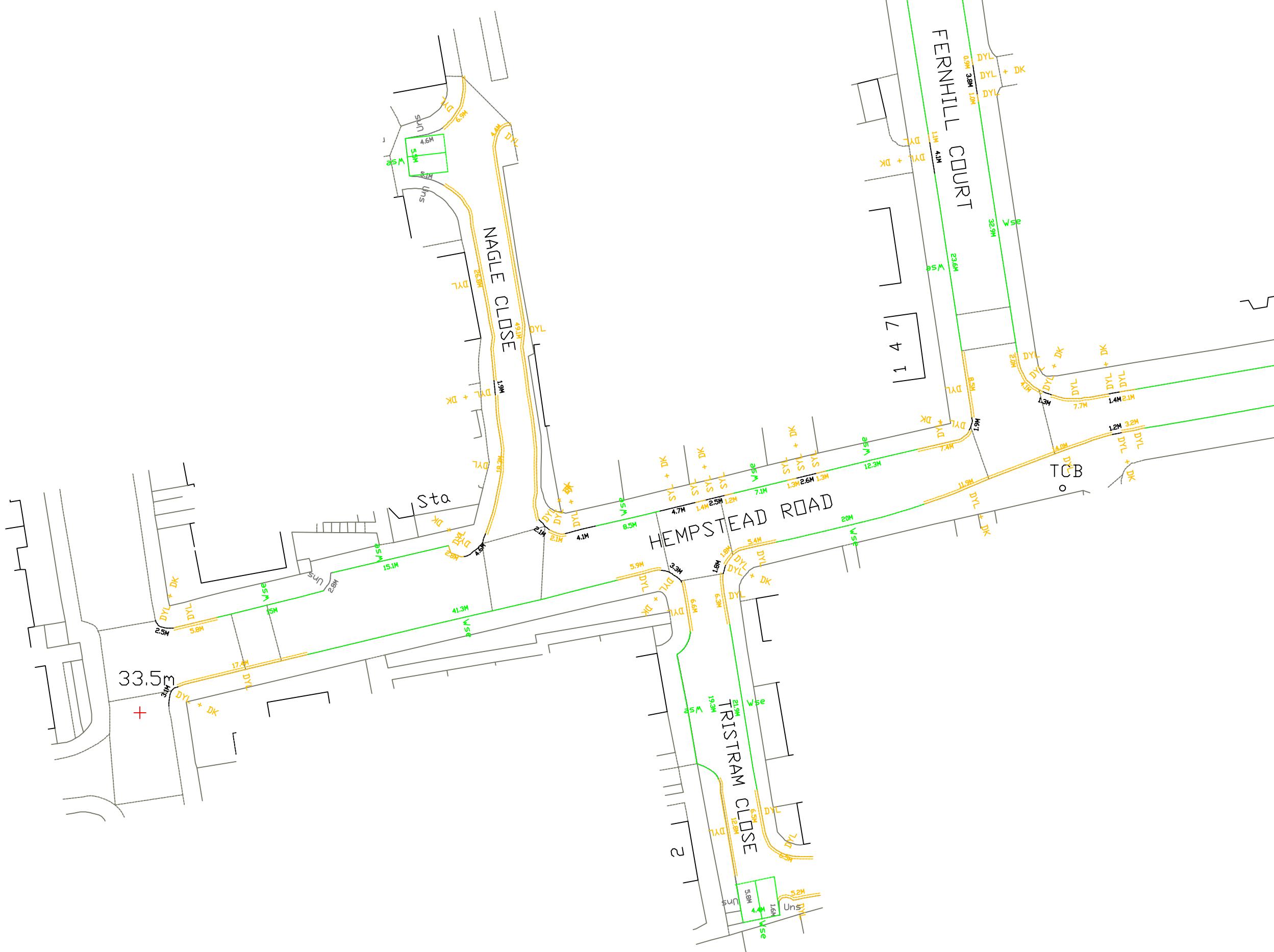


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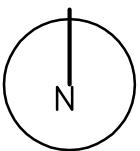


P2147: Hylands Road, Waltham Forest, E17 4AW
Figure 4b.
Parking Survey Inventory; South Central Extent


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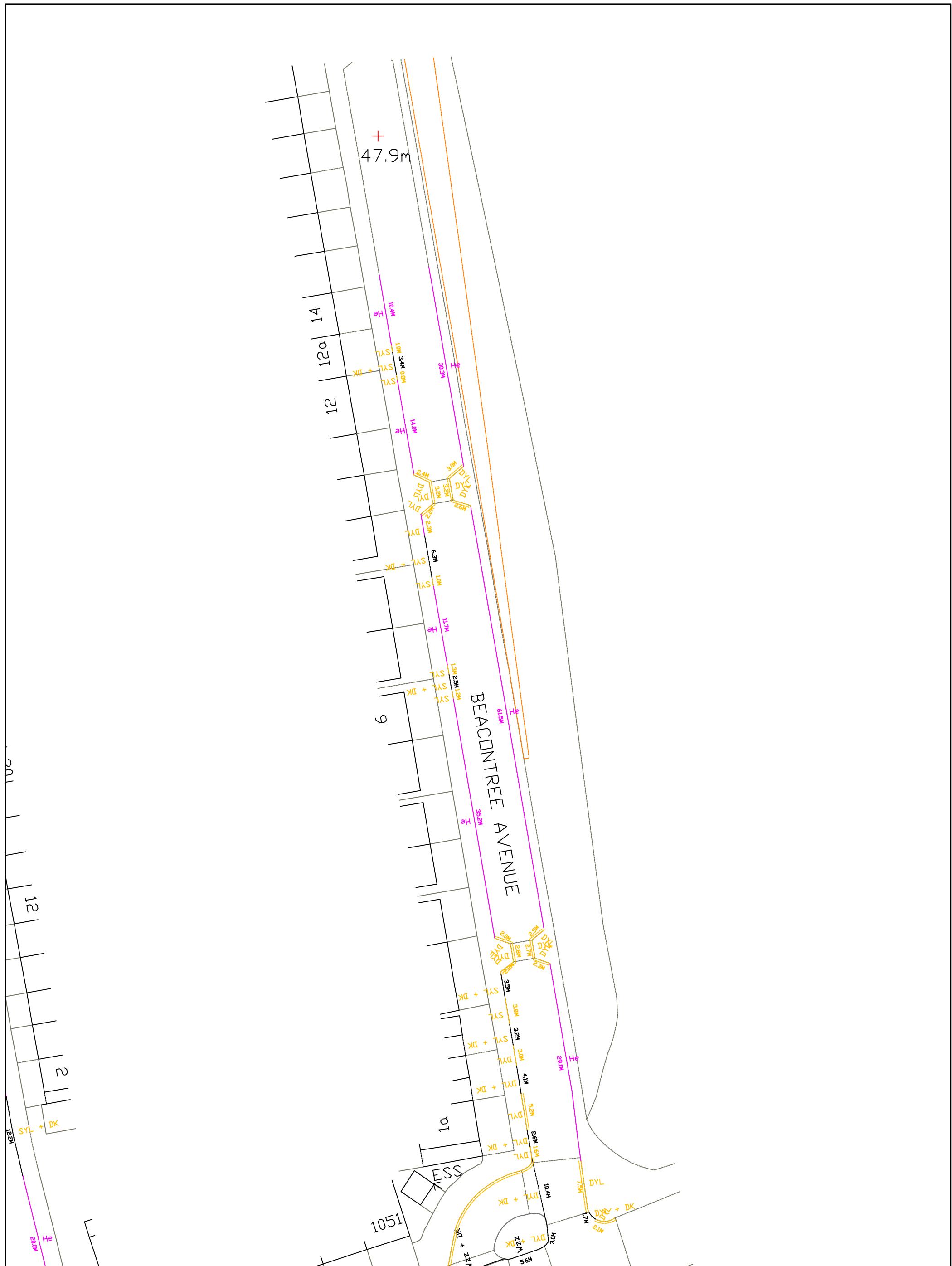


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Drawing No. P2147/TS

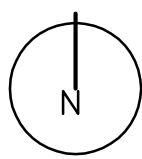


P2147: Hylands Road, Waltham Forest, E17 4AW
Figure 4c.
Parking Survey Inventory; South West Extent


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Date: 26-June-2019
Scale: 1:500@A3
Source: OS/PMA
Drawing No. P2147/TS/0



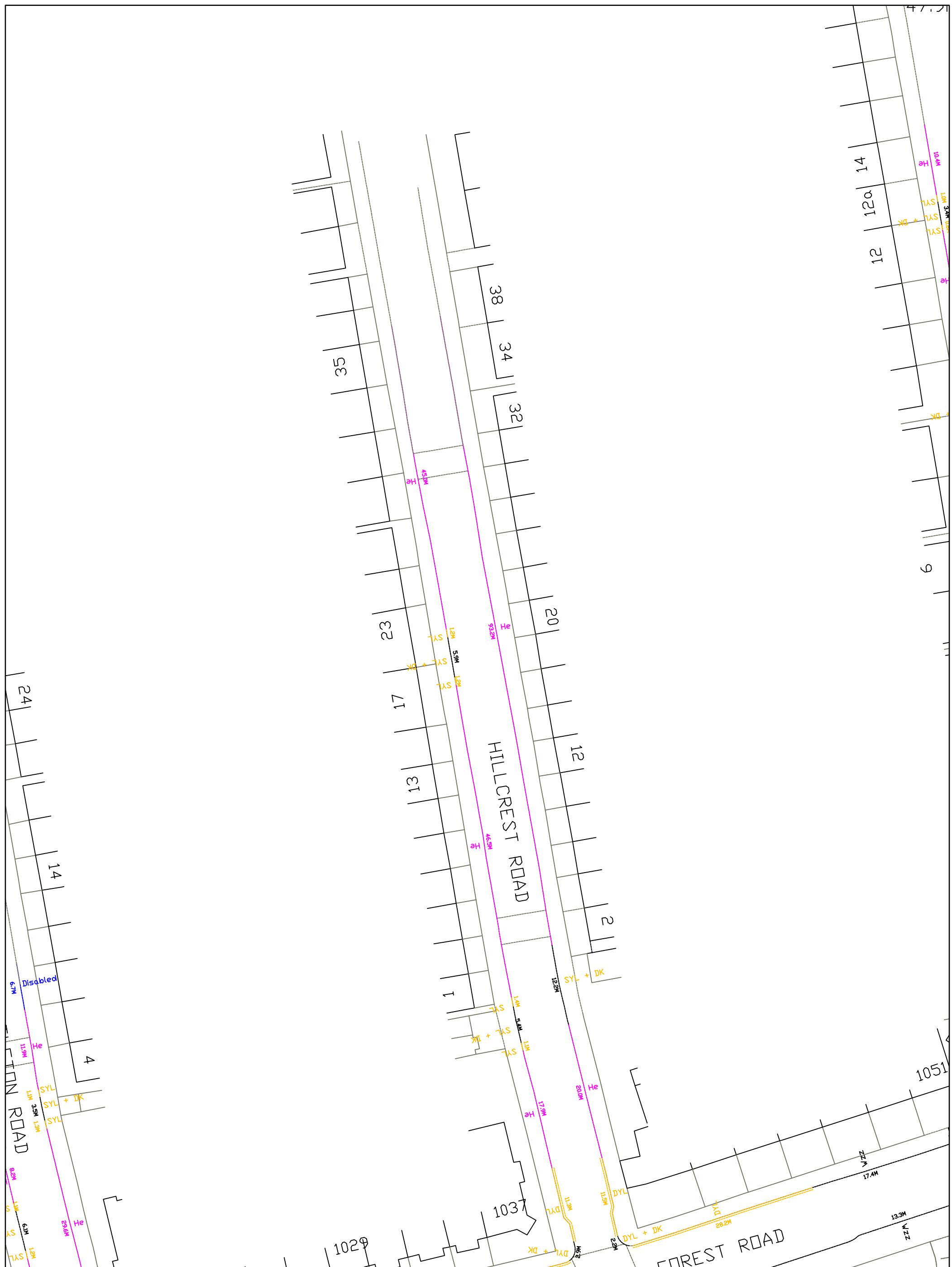
P2147: HYLANDS ROAD, WALTHAM FOREST
Figure 4d.
Parking Survey Inventory; North East Extent

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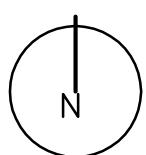
Unit 1, Plym House, 21 Enterprise Way, London SW18 0FZ

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Date: 26-June-2019
Scale: 1:500@A3
Source: OS/PMA
Drawing No. P2147/TS/04

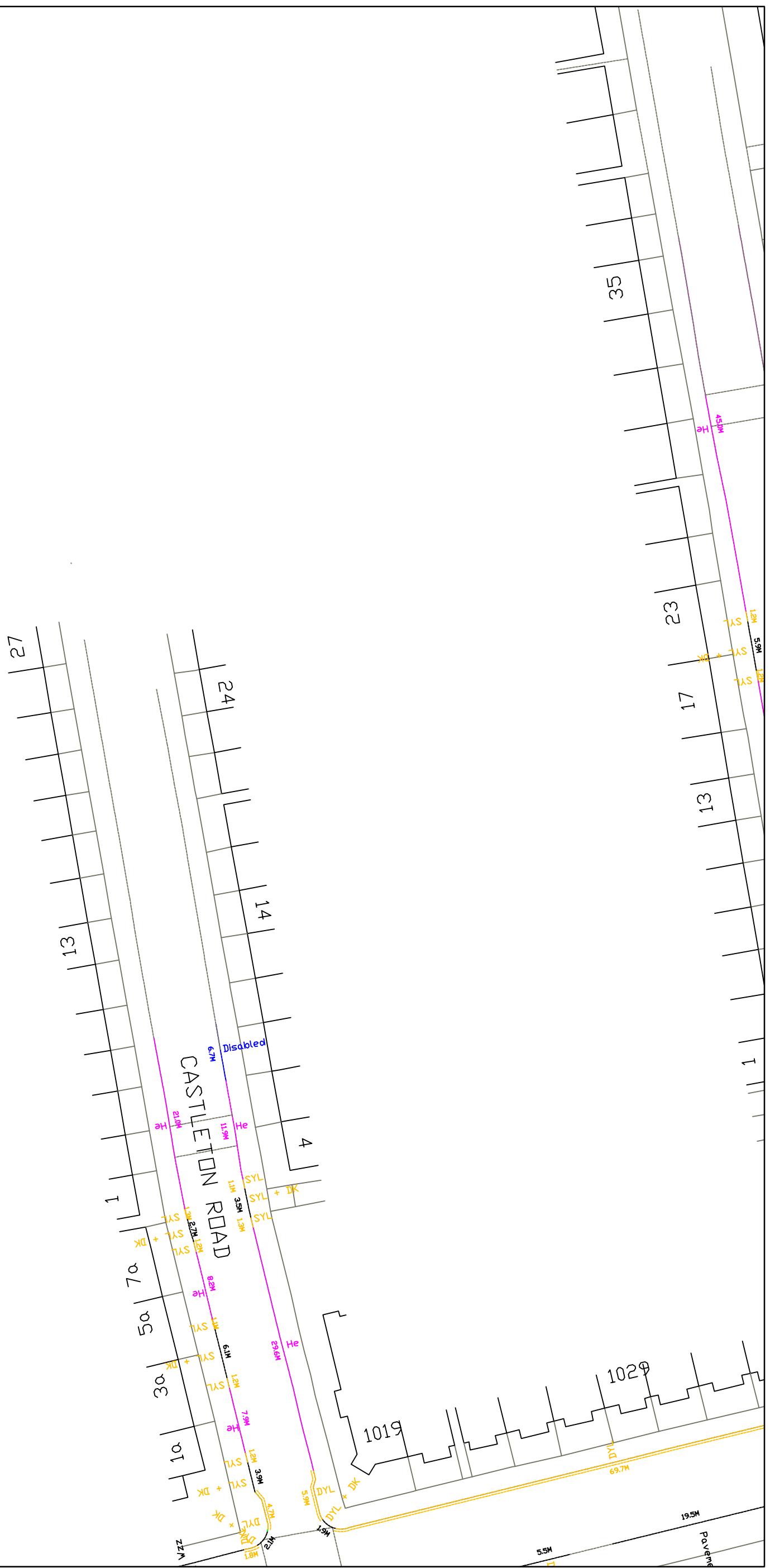


P2147: HYLANDS ROAD, WALTHAM FOREST
Figure 4e.
Parking Survey Inventory: North Central Extent

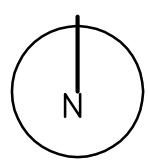
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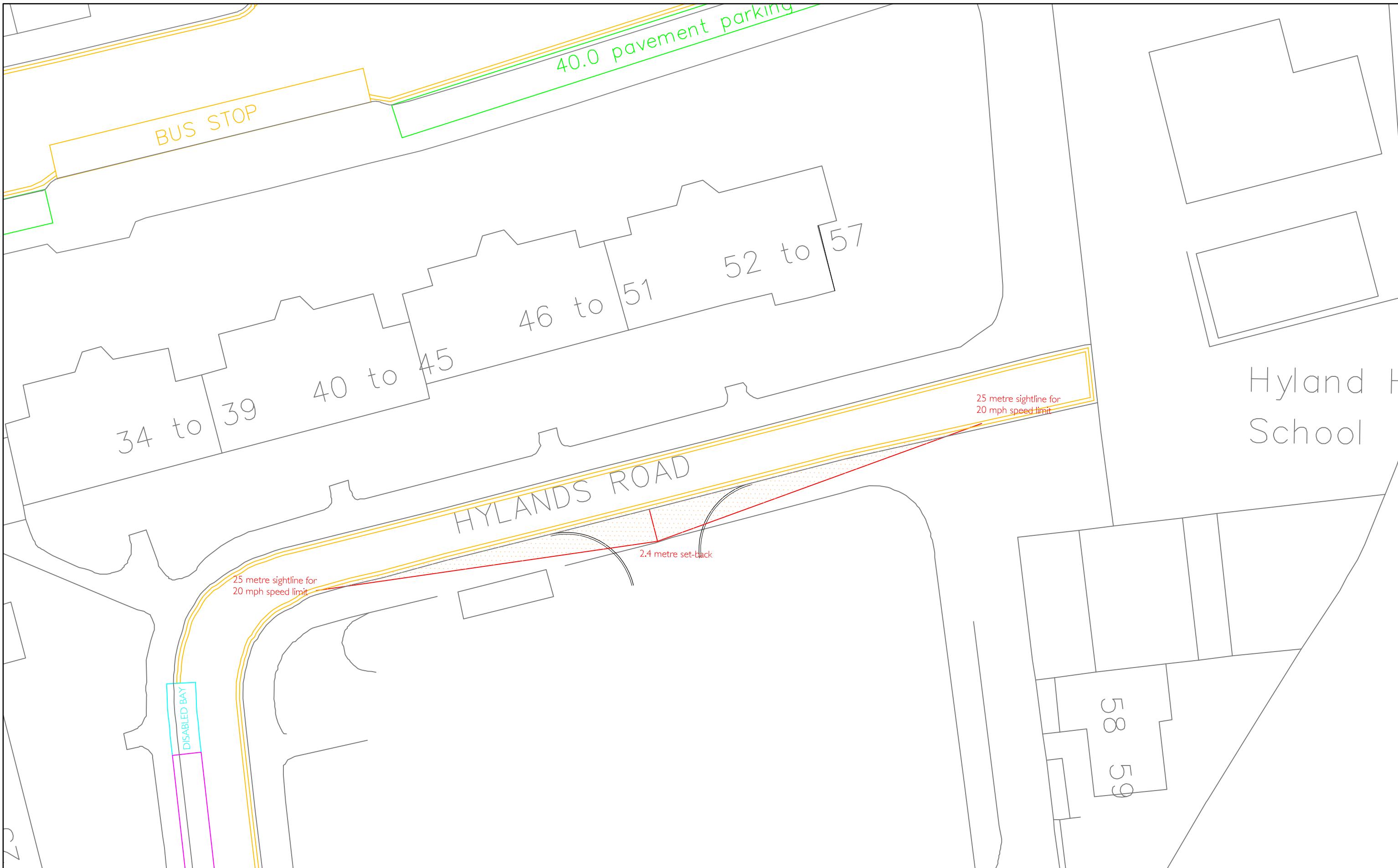


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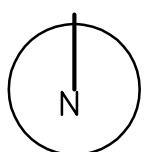


P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 4f.
 Parking Survey Inventory; North West Extent

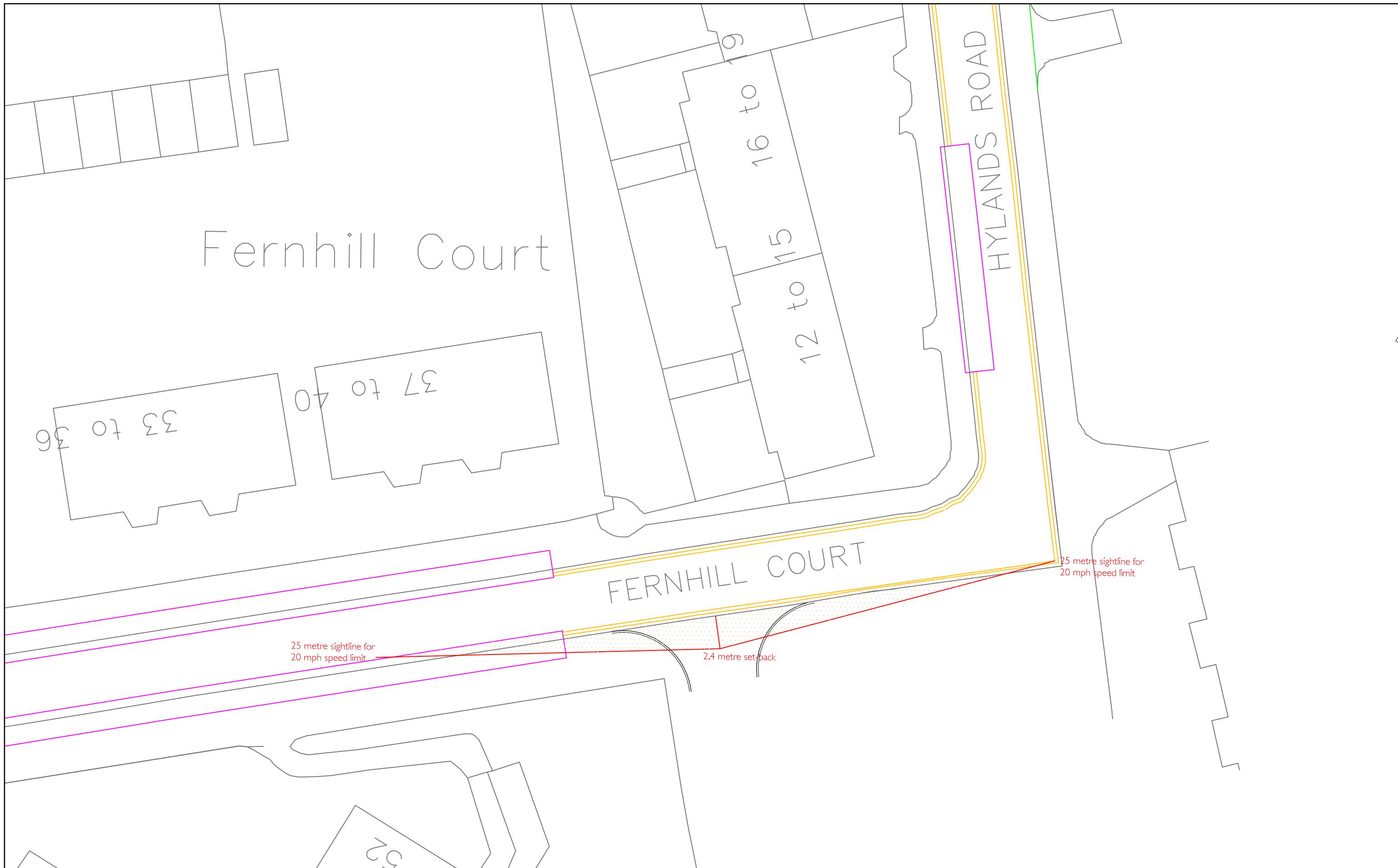
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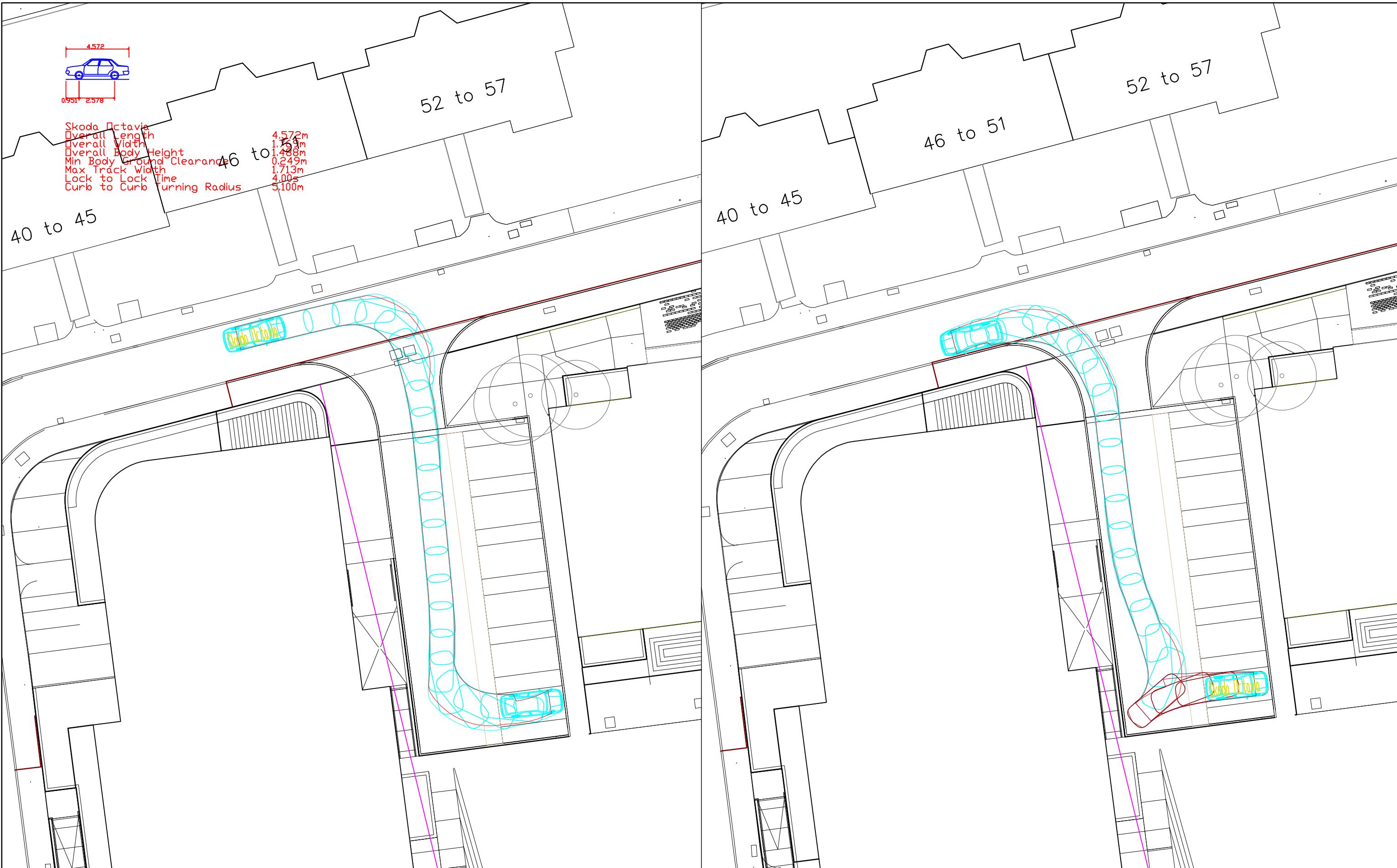


Date: 17-July-2019
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 Source: Breeze/OS/PMA
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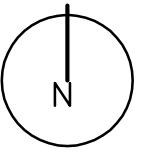


P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 5.
 Vehicle to Vehicle Sightlines from the Northern Proposed Site Access

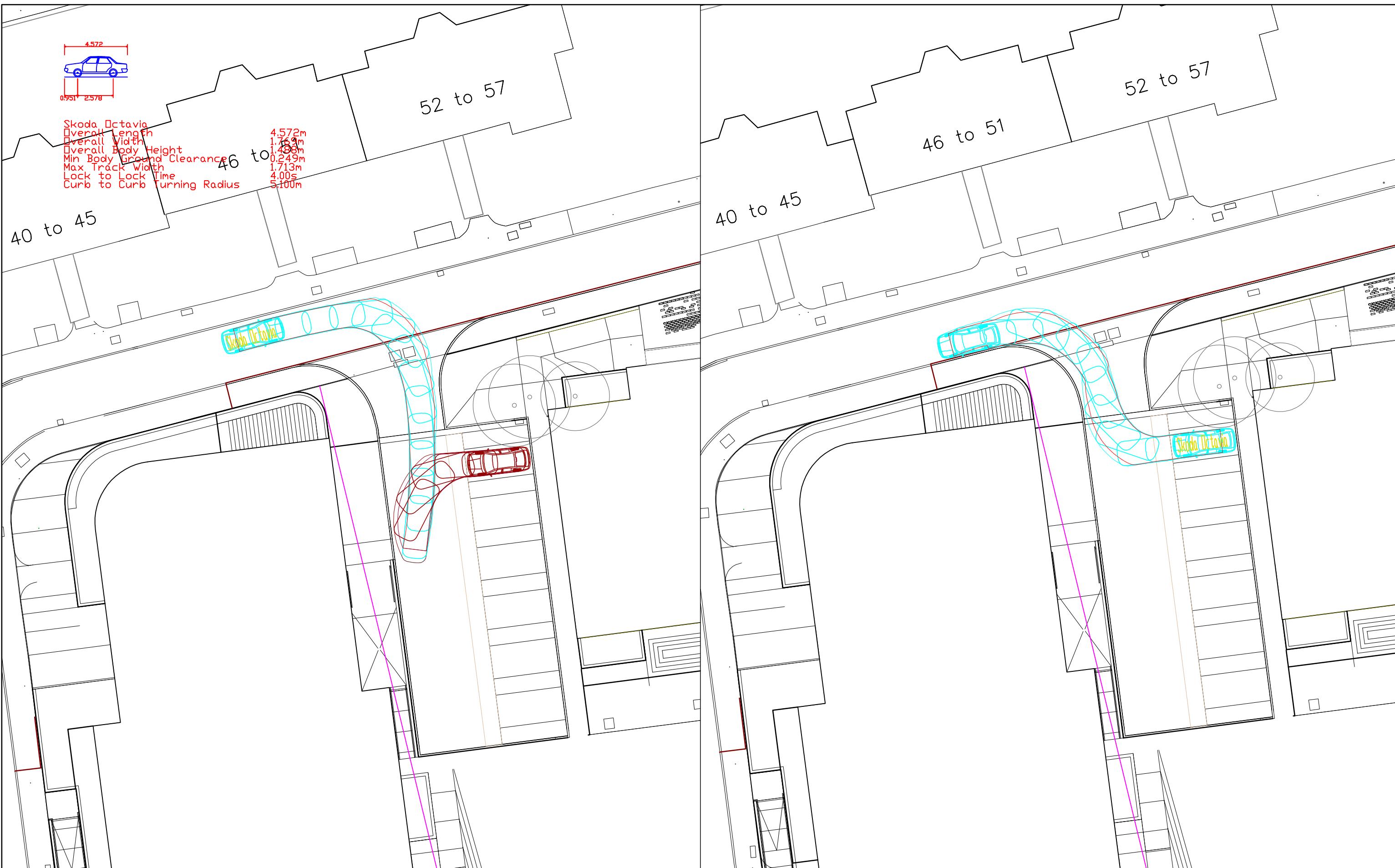




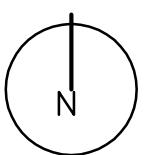
Date: 15-July-2019
 Scale: 1:250@A3
 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/07a



P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 7a.
 AutoTrack; Car Accessing Blue Badge Bay from Northern Access (1)



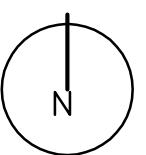
Date: 15-July-2019
 Scale: 1:250@A3
 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/07b



P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 7b.
 AutoTrack; Car Accessing Blue Badge Bay from Northern Access (2)



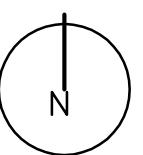
Date: 15-July-2019
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Source: Breeze/AutoTrack
Drawing No. P2147/TA/07c



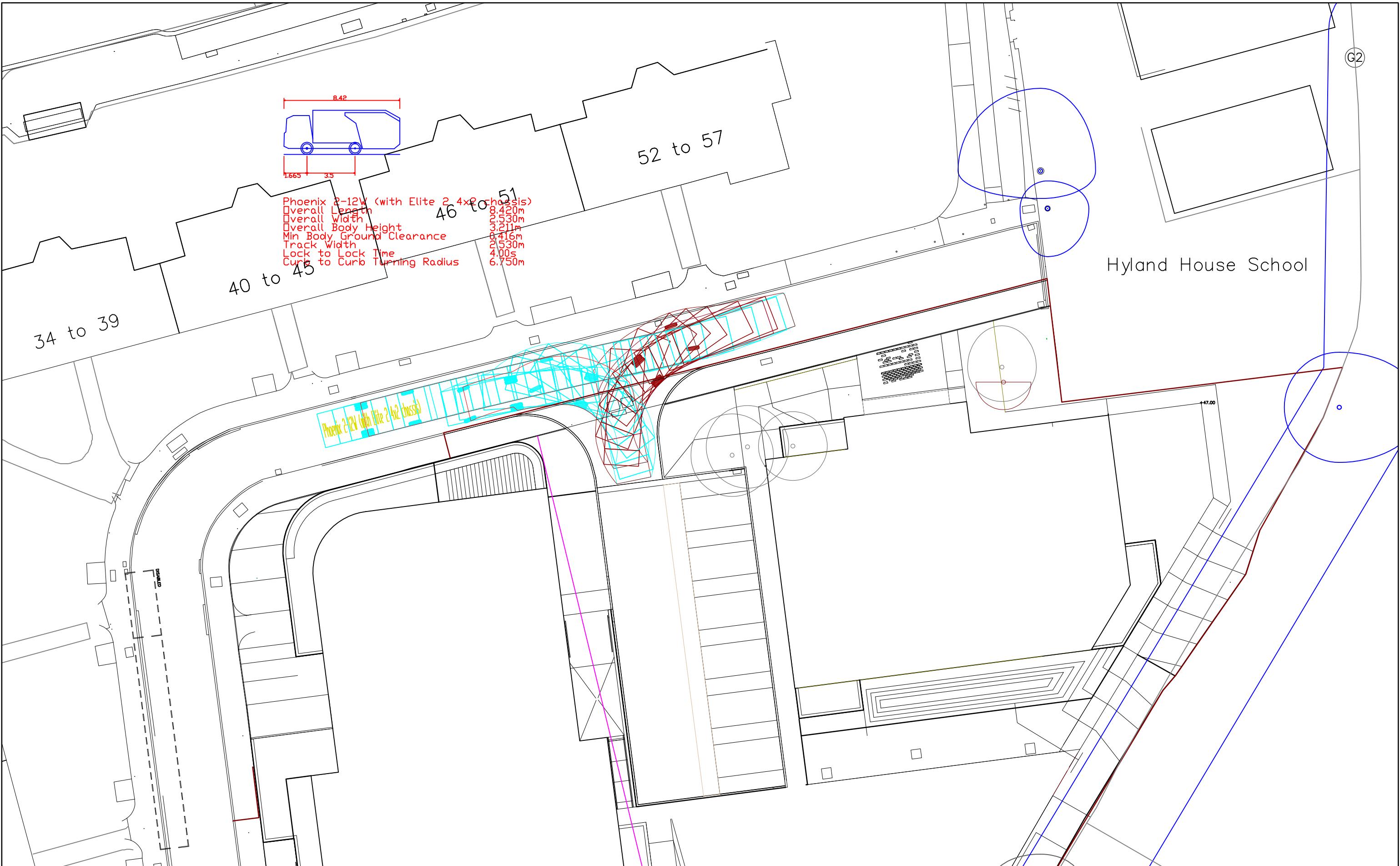
P2147: HYLANDS ROAD, WALTHAM FOREST
Figure 7c.
AutoTrack; Car Accessing Blue Badge Bay from Southern Access (1)



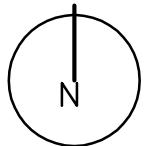
Date: 15-July-2019
 Scale: 1:250@A3
 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/07d



P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 7d.
 AutoTrack; Car Accessing Blue Badge Bay from Southern Access (2)



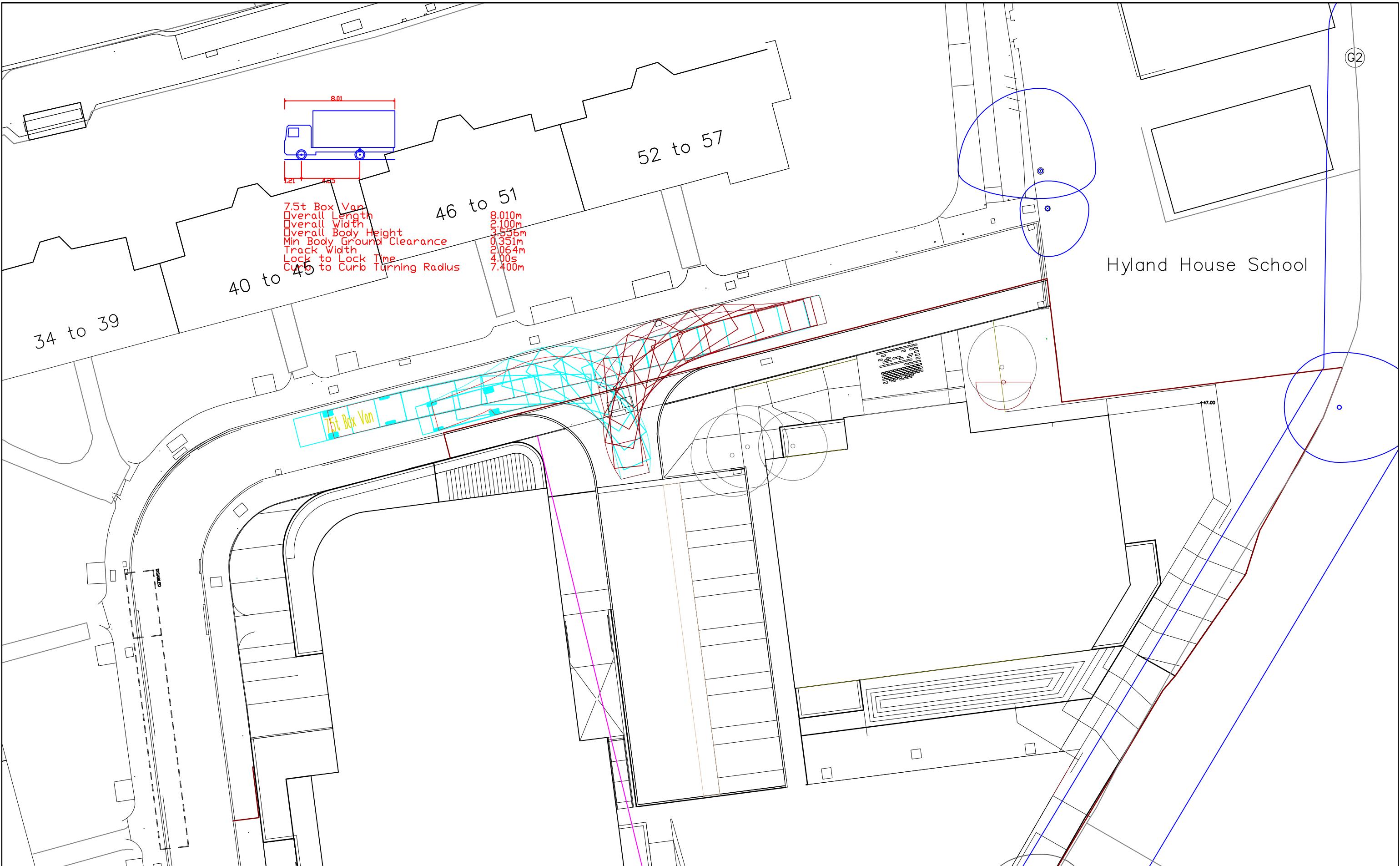
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 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/08



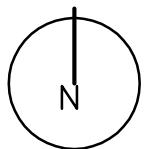
P2147: HYLANDS ROAD, WALTHAM FOREST

Figure 8.

AutoTrack; Waltham Forest Narrow Access Refuse Truck Three-Point-Turn in Proposed New Turning Head

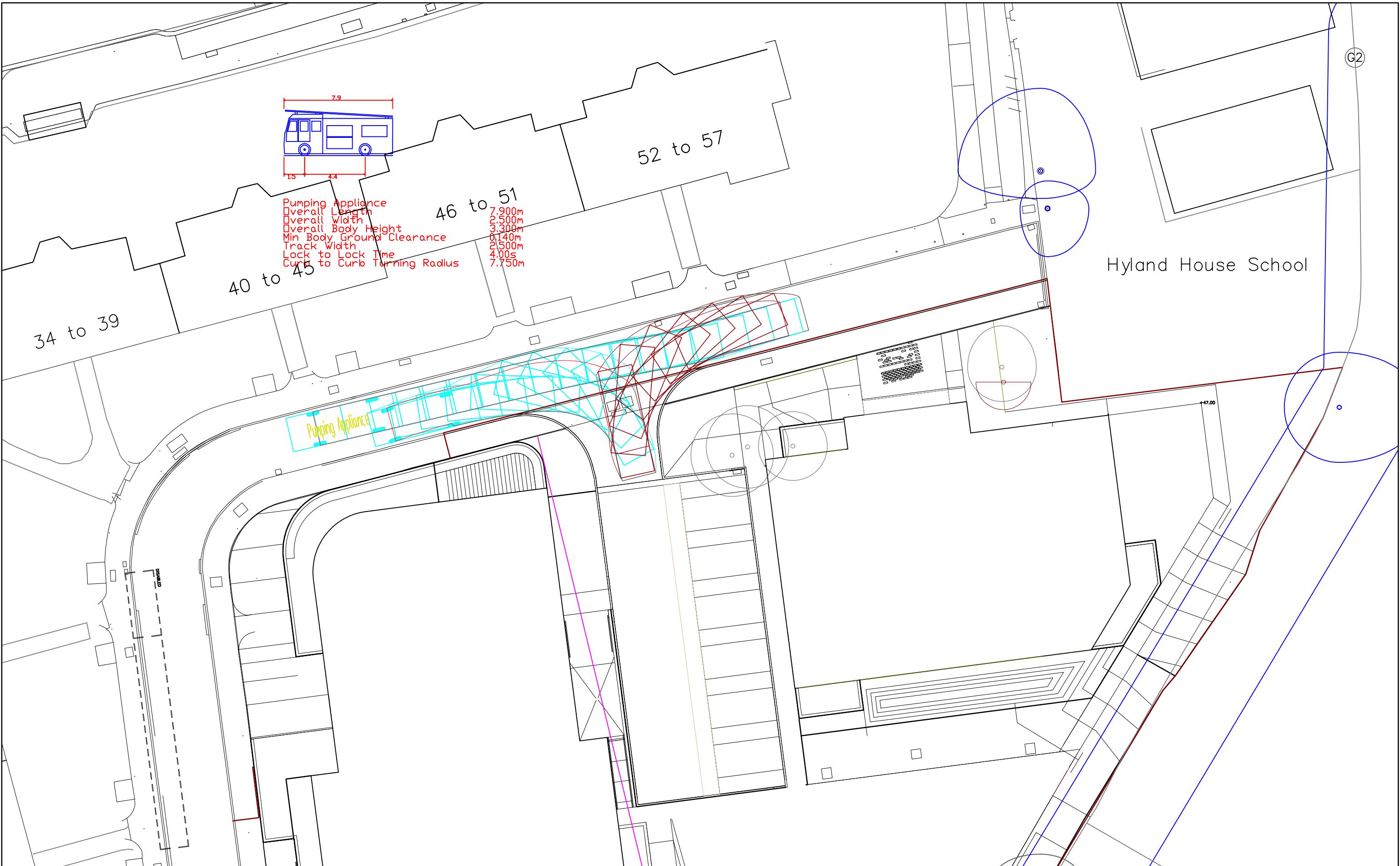


Date: 15-July-2019
 Scale: 1:250@A3
 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/09

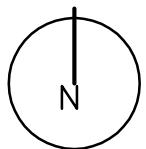


P2147: HYLANDS ROAD, WALTHAM FOREST

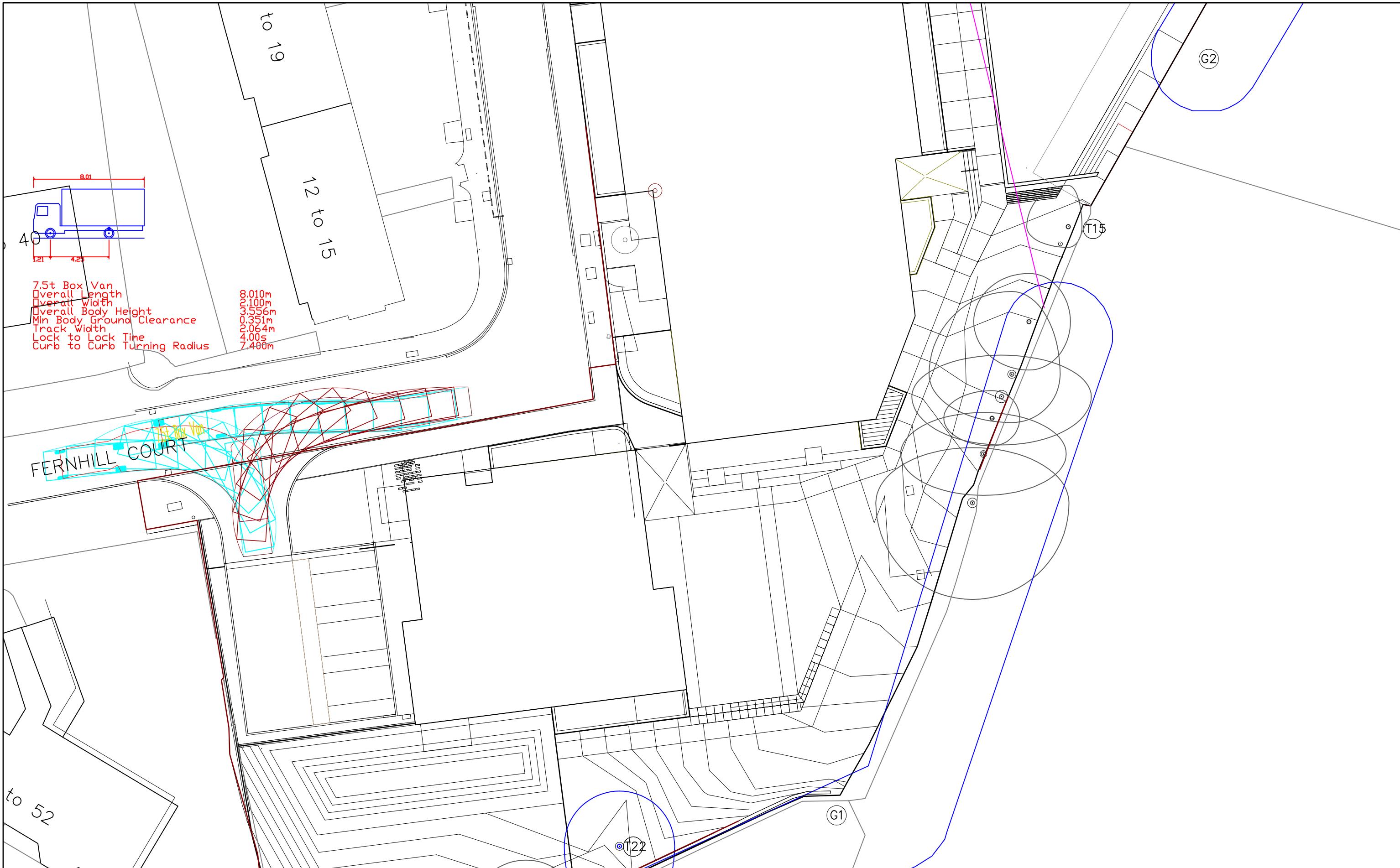
Figure 9.
 AutoTrack; 7.5 tonne Box Van Three-Point-Turn in Proposed New Turning Head



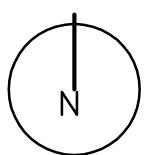
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 Source: Breeze/AutoTrack
 Drawing No. P2147/TA/10



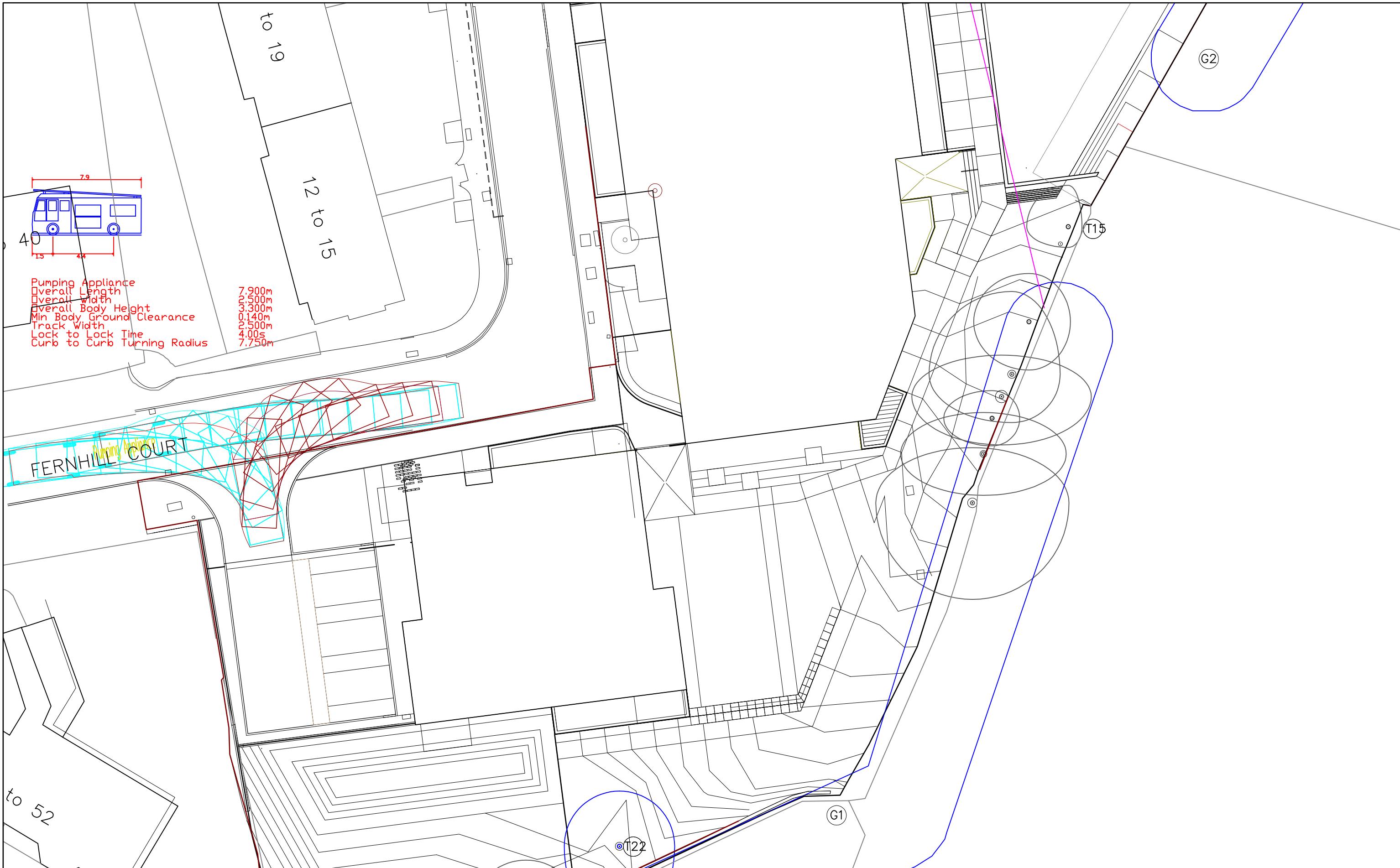
P2147: HYLANDS ROAD, WALTHAM FOREST
 Figure 10.
 AutoTrack; LFB Fire Tender Three-Point-Turn in Proposed New Turning Head



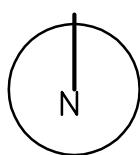
Date: 15-July-2019
Scale: 1:250@A3
Source: Breeze/AutoTrack
Drawing No. P2147/TA/11



P2147: HYLANDS ROAD, WALTHAM FOREST
Figure 11.
AutoTrack; 7.5 tonne Box Van Three-Point-Turn in Southern Access



Date: 15-July-2019
Scale: 1:250@A3
Source: Breeze/AutoTrack
Drawing No. P2147/TA/12



P2147: HYLANDS ROAD, WALTHAM FOREST
Figure 12.
AutoTrack; LFB Fire Tender Three-Point-Turn in Southern Access

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APPENDIX A Existing Site Plan

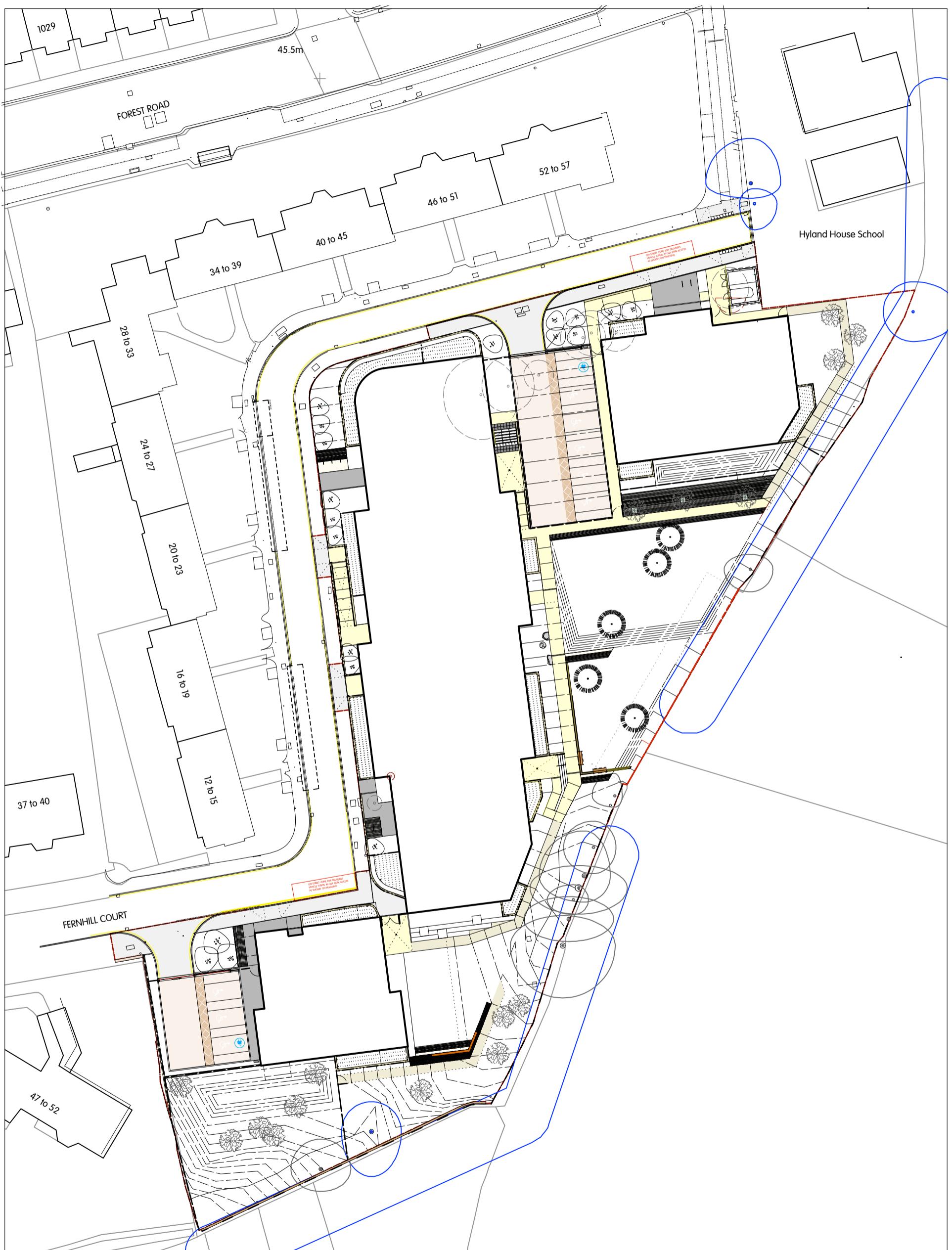
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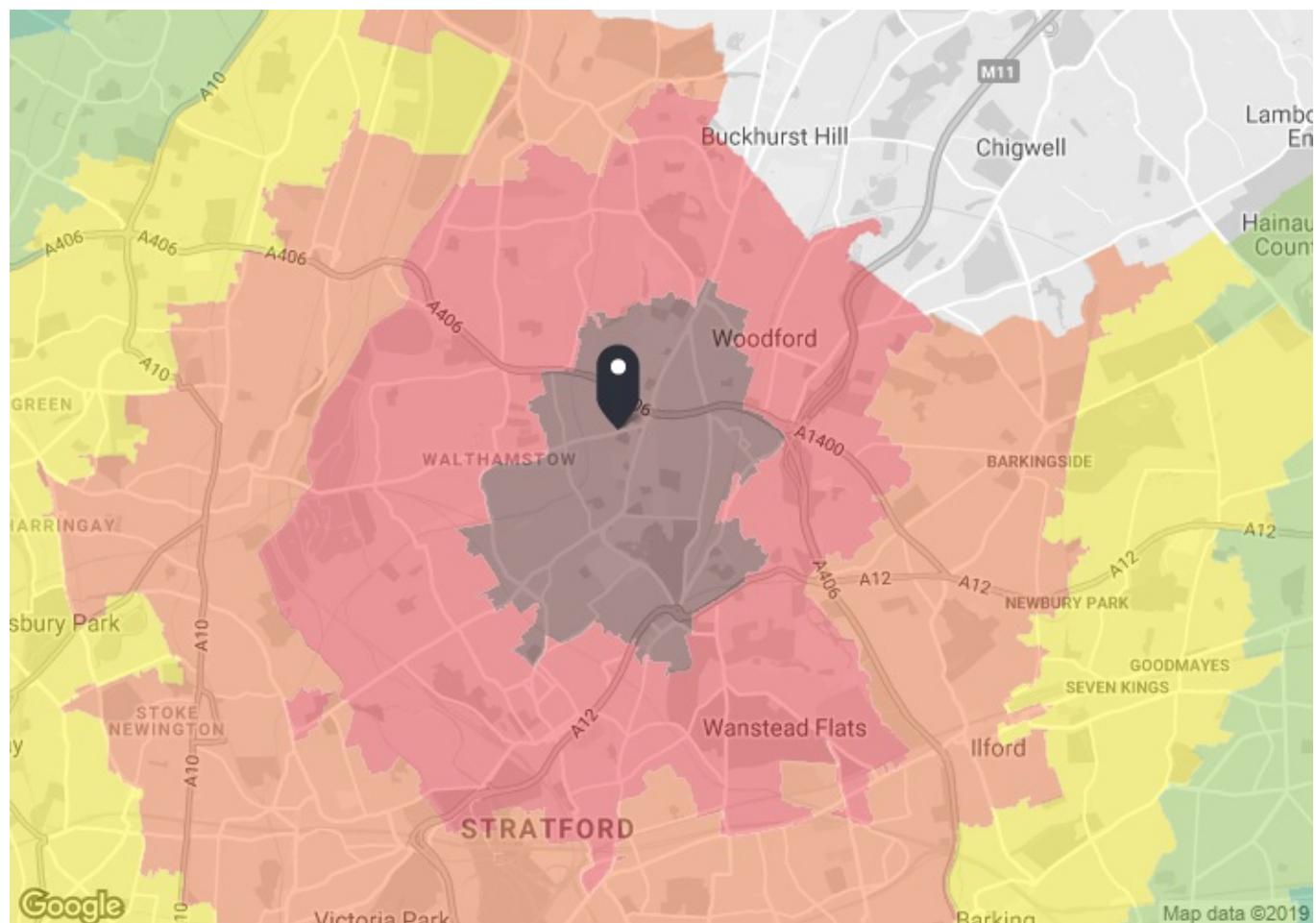
This drawing and the design are the copyright of ON Architecture Ltd only.
This drawing should not be copied or reproduced without written consent.
All dimensions are to be checked on site prior to fabrication and ON Architecture Ltd should be notified of any discrepancy prior to proceeding further.
Do not scale from this drawing, only the illustrated dimensions are to be used.
Illustrated information from 3rd party consultants/specialists is shown as indicatively only. See other consultant / specialist drawings for full information and detail.



APPENDIX B
Proposed Site Plan (Hard Landscaped)



APPENDIX C
Active Travel Zone Map



TIM output for Base Year

Scenario: Base Year Mode: Cycle only, Time of day: Between peaktimes, Direction: From location

E17 4AW

Hylands Rd, Walthamstow London E17 4AW, UK
Easting: 539006, Northing: 190152

Report generated: 02/07/2019

Population and employment: GLA forecasts 2016
Town Centres: GLA 2016
Education: EduBase 2016
Health: NHS Direct, CQC 2016

Code: NWMAT001

Map key - Travel Time

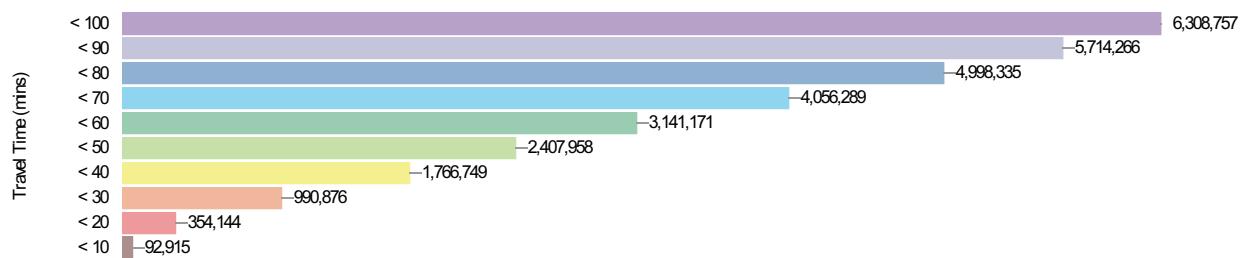
< 10 mins	10 - 20 mins
20 - 30 mins	30 - 40 mins
40 - 50 mins	50 - 60 mins
60 - 70 mins	70 - 80 mins
80 - 90 mins	90 - 100 mins

Map layers



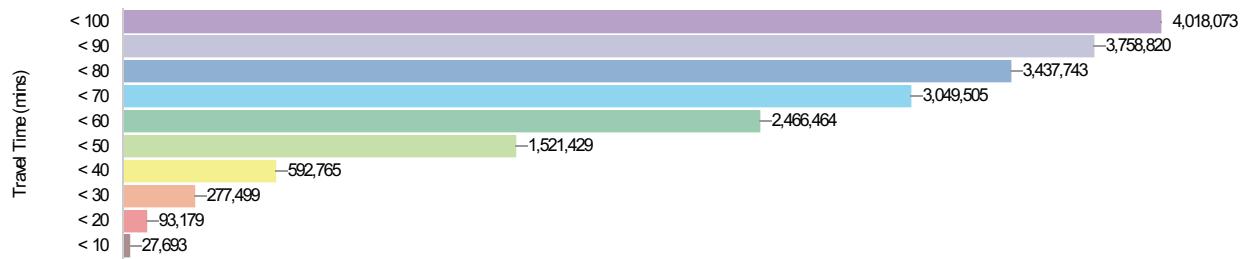
Catchment data for your current selection

Population - Total: London 2011



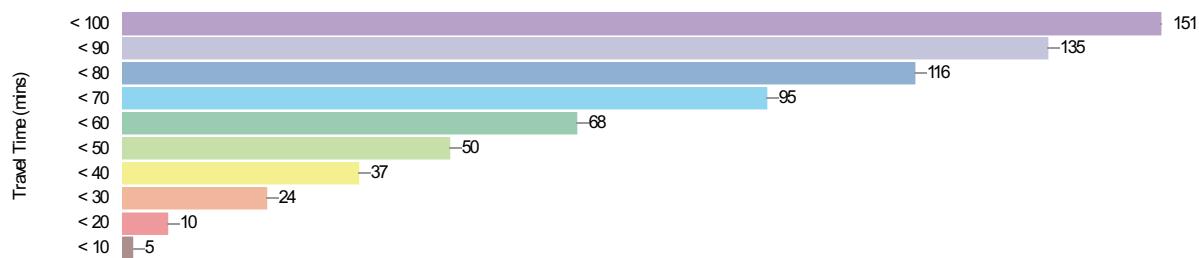
Total: London (2011) 8,217,475

Employment - Jobs: London 2011



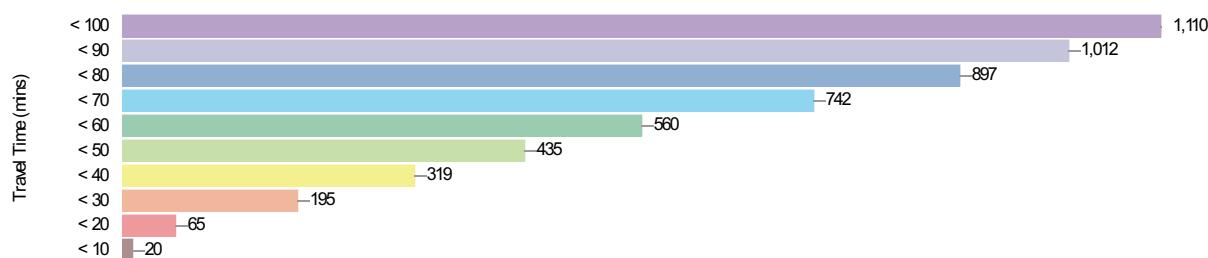
Jobs: London (2011) 4,895,753

Town centres - Metropolitan, major and district: London



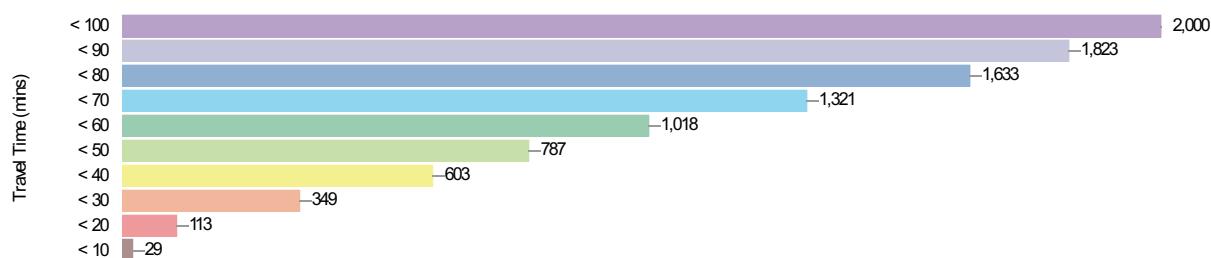
Metropolitan, major and district: London - 191

Health services - GP Surgeries: London



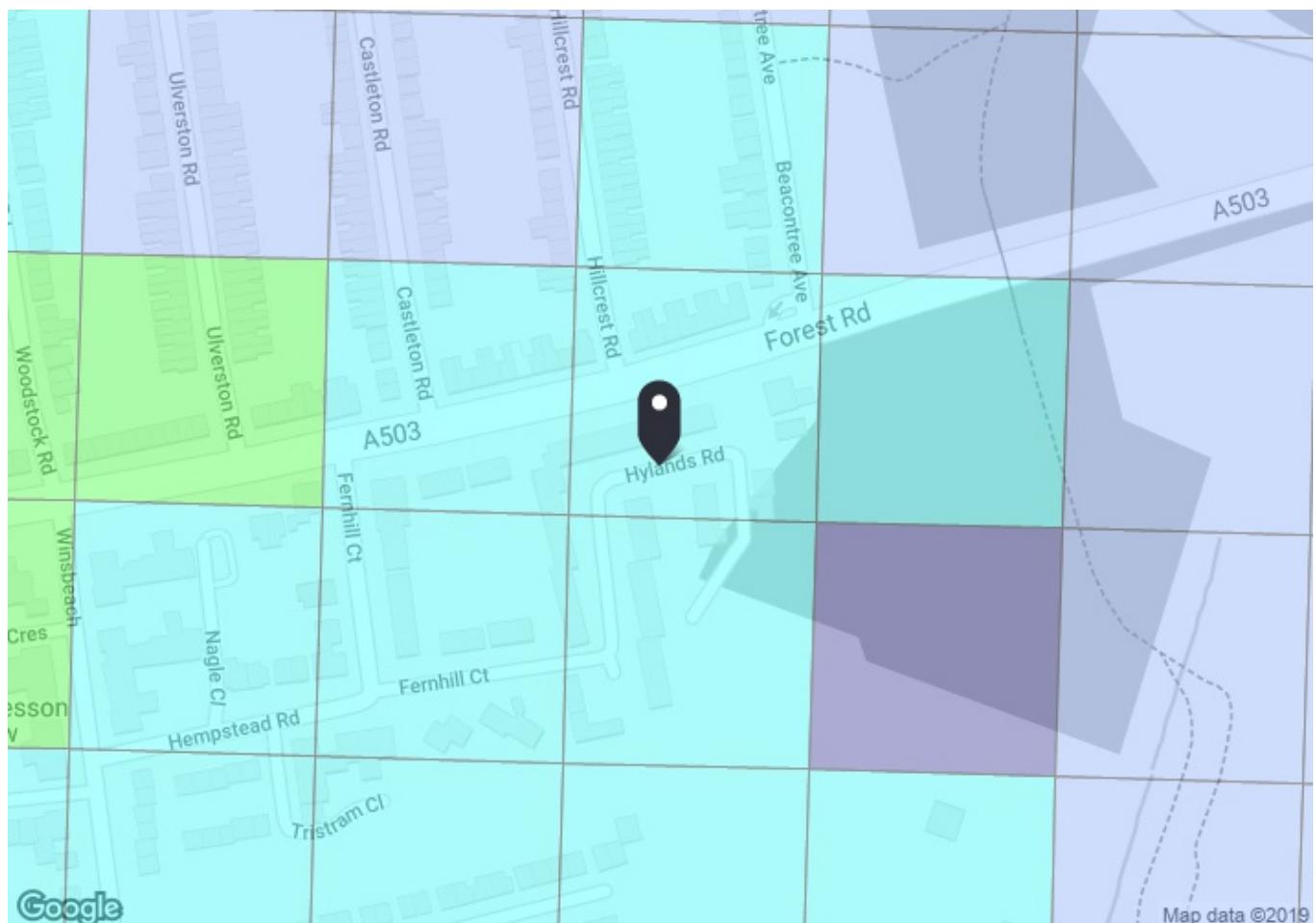
GP Surgeries: London - 1,454

Education establishments - Primary schools: London



Primary schools: London - 2,663

APPENDIX D PTAL Output File



PTAL output for Base Year 2	
46 Hylands Rd, Walthamstow London E17 4AJ, UK	
Easting: 538934, Northing: 190115	
Grid Cell: 132346	
Report generated: 29/07/2019	
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

Map key - PTAL	
0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	
Map layers	
PTAL (cell size: 100m)	

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency(vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	FOREST ROAD CASTLETON RD	123	12.99	5.5	0.16	7.45	7.62	3.94	1	3.94
Bus	WATERWORKS CNR STH SIDE	20	452.91	4	5.66	9.5	15.16	1.98	0.5	0.99
Bus	HALE END ROAD FOREST RD	275	464.9	5	5.81	8	13.81	2.17	0.5	1.09
Bus	UPPER WALTHAMSTOW STAND	230	632.46	5	7.91	8	15.91	1.89	0.5	0.94
										Total Grid Cell AI: 6.96

APPENDIX E
Lambeth Parking Methodology

LAMBETH COUNCIL PARKING SURVEY GUIDANCE NOTE

1. INTRODUCTION AND POLICY BACKGROUND

Most forms of development have the potential to increase the amount of on-street parking, more commonly known as parking stress. High parking stress can affect highway safety, the free-flow of traffic, amenity, access by emergency services, refuse collection and delivery of goods. Investigation of this impact forms an important part of the Council's analysis of proposed developments and therefore it is essential that enough information is submitted by a developer to allow a full analysis of the issue. An unacceptable increase in parking stress, or the submission of an insufficient level of information, can lead to a recommendation for refusal of a planning application.

Lambeth's policies on parking related to new development are based on the Mayor's London Plan, the Core Strategy and the saved policies of the Council's Unitary Development Plan 2007 (UDP). Developers are particularly advised to read Chapter 6 (London's Transport) of The London Plan, and the policies and standards, particularly Table 6.1 Parking Standards, contained therein. Chapter 6 of The London Plan can be viewed on the GLA's website at the following address:

<http://www.london.gov.uk/shaping-london/london-plan/strategy/chapter6.jsp>

Developers are also advised to read Criteria (f) of Core Strategy Policy S4, and the saved elements of UDP policies 14 and 17, although policy 39 may also be relevant. The Core Strategy and the saved policies of the UDP can be viewed on the Council's website at the following address:

<http://www.lambeth.gov.uk/Services/HousingPlanning/Planning/PlanningPolicy/LDFCoreStrategy.htm>

Ordinarily the Planning Department will not validate a residential planning application without a parking survey. In some cases parking surveys are required for commercial developments as well, depending on the scale and nature of the development. Submitting a survey enables the Council to make an informed decision, within statutory planning timescales, and benefits applicants in obtaining a quick decision.

A developer can propose on-site parking bays up to the maximum stated in Table 6.1 of the London Plan but in areas of high PTAL and within a CPZ a car free development (and permit exempt) would be expected unless acceptable justification is provided. However, even where on-site parking is proposed this may not accommodate all cars generated by a development, so a parking survey may still be required. An assessment of likely car ownership of future occupants can then be undertaken to understand the scale of any overspill parking. The cumulative effect of other consented development in the immediate area will also need to be taken into account when assessing the effect of parking on street.

Advice on whether a survey is required can be obtained from the Council's Transport Planning team by emailing transportplanning@lambeth.gov.uk with details of the proposed development. If a survey is not required a written response will be provided confirming this and should be submitted with the planning application.

2. UNDERTAKING A SURVEY

The following guidelines should be followed when undertaking a survey. If these guidelines are not followed the Council may not be able to make a full and proper assessment of the proposal.

Residential Developments

The Council requires a parking survey to cover the area where residents of a proposed development may want to park. This generally covers an area of 200m (or a 2 minute walk) around a site. For further detail see 'Extent of survey' below.

The survey should be undertaken when the highest number of residents are at home; generally late at night during the week. A snapshot survey between the hours of 0030-0530 should be undertaken on two separate weekday nights (ie. Monday, Tuesday, Wednesday or Thursday).

Commercial Developments

Surveys for commercial developments should cover an area within 500m walking distance (or a 5 minute walk) of a site. For further detail, see 'Extent of survey' below. Surveys should generally be done during proposed opening hours on an hourly beat basis.

Excluding the extent and time of the surveys the same principles apply as a survey for a residential development as set out below, but developers should contact the Council for further advice.

Survey times

For sites close to any of the following land uses, additional survey times may be necessary:

- Town centre locations: surveys should be undertaken Monday-Wednesday only.
- Regular specific evening uses close to the site (eg. church, etc): additional surveys should be undertaken when these uses are in operation.
- Commercial uses close to the site: morning and early evening surveys may also be required due to conflict with commuter parking. In these cases surveys between the hours of 0700-0830 and 1800-1900 may be required, noting the amount of parking on a 15-minute basis over this time.
- Railway stations/areas of commuter parking: additional morning and evening peak hour surveys will be required in order to assess the impact of commuter parking. These should be done between 0700-0800 and 1730-1830.

Surveys **should not** be undertaken:

- in weeks that include Public Holidays and school holidays and it is advised that weeks preceding and following holidays should also be avoided;
- on or close to a date when a local event is taking place locally since this may impact the results of the survey.

In some cases, the hours of the survey may need to be extended or amended. Applicants should contact the Council prior to undertaking a survey if there is any doubt.

Extent of survey

All roads within 200 metres (or 500m for commercial uses) walking distance of the site. Note this area is **NOT** a circle with a 200/500m radius but a 200/500m walking distance as measured along all roads up to a point 200/500m from the site.

Since people are unlikely to stop half way along a road at an imaginary 200/500m line so the survey should be extended to the next junction or shortened to the previous one, or taken to a suitable location along a road.

The following areas should be *excluded* from surveys:

- If the site is in a CPZ any parking bays in an adjoining CPZ should be excluded.
- If the site lies adjacent to, but not in, a CPZ then all roads in that CPZ should be excluded.
- Areas that fall outside of Lambeth should be excluded.
- Places where drivers are unlikely to want to park, for example:
 - If there is no possibility of parking somewhere within the 200m boundary
 - If drivers would not wish to park in an area, due to perceived safety issues, or difficulty in accessing the parking for example.

Common sense should be applied in all cases and the extent of the survey area and justification for any amendments should be included in the survey. If inadequate justification is provided for a survey area then amendments may be required or a recommendation made accordingly.

Required Information

The following information should be included in the survey results, to be submitted to the Council:

- The date and time of the survey.
- A description of the area noting any significant land uses in the vicinity of the site that may affect parking within the survey area (eg. churches, restaurants, bars and clubs, train stations, hospitals, large offices, town centres etc).
- Any unusual observations, e.g. suspended parking bays, spaces out of use because of road works or presence of skips, etc.
- A drawing (preferably scaled at 1:1250) showing the site location and extent of the survey area. All other parking and waiting restrictions such as Double Yellow Lines and Double Red Lines, bus lay-bys, kerb build-outs, and crossovers (vehicular accesses) etc should also be shown on the plan.
- The number of cars parked on each road within the survey area on each night should be counted and recorded in a table as shown below. It would be helpful to note the approximate location of each car on the plan (marked with an X).
- Photographs of the parking conditions in the survey area can be provided to back-up the results. If submitted, the location of each photograph should be clearly marked.

Areas Within A Controlled Parking Zone (CPZ)

Only Resident Permit Holder (RPH) Bays and Shared Bays which allow residents parking (these may be shared with Pay-and-Display parking and/or Business Permit Holders) should be counted.

To calculate parking capacity each length of parking bay must be measured and then converted into parking spaces by dividing the length by 5 (each vehicle is assumed to measure 5m) and rounding down to the nearest whole number. For example a parking bay measuring 47m in length would provide 9 parking bays ($47/5=9.4=9$). The capacity of each separate parking bay must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

The results should generally be presented in the following format (figures given as an example):

Street Name	Total Length (m) of parking spaces	No. of RPH parking spaces	No. of cars parked in RPH bays	RPH Parking Stress (%)
A Street	350	70	70	100
B Street	250	50	40	80
C Street	150	30	10	33
Total	750	150	120	80

A separate note should be made of any areas where cars can legally park overnight. These are generally Single Yellow Lines or Single Red Lines (SYL/SRL) or short term parking or Pay-and-Display bays (ST). The number of cars parked in these areas should be counted and presented separately.

Areas Not In A Controlled Parking Zone (CPZ)

All areas of unrestricted parking should be counted. To calculate parking capacity each length of road between obstructions (such as crossovers, kerb build-outs, yellow lines, etc) must be measured and then converted into parking spaces by dividing the length by 5 and rounding down to the nearest whole number. For example a length of road measuring 47m in length would provide 9 parking bays ($47/5=9.4=9$). The capacity of each section of road must be calculated separately and then added together to give a total number of parking spaces for each road in the survey area.

The distance between crossovers should be measured in units of 5m. For example, if the distance between 2 crossovers or a crossover and a junction is 12m then only 10m should be counted in the survey, and any space between crossovers measuring less than 5m should be discounted from the calculation. For reasons of highway safety, the first 5m from a junction should also be omitted from the calculation.

A map or plan showing the measurements used in calculating parking capacity should be supplied so that this can be verified by the Council. The parking survey may not be accepted if this is not supplied.

The results should generally be presented in the following format (figures given as an example):

Street Name	Total Length (m) of kerb space	Length of unrestricted parking (m)	No. of parking spaces	No. of cars parked on unrestricted length of road	Unrestricted Parking Stress (%)
A Street	400	350	70	70	100
B Street	300	250	50	40	80
C Street	200	150	30	10	33
Total	900	750	150	120	80

UNDERSTANDING THE RESULTS

The results of the parking survey will be analysed by the Council in accordance with the London Plan and saved policies in the Council's UDP, any Supplementary Planning Documents produced by the Council in relation to parking, and any other Transport policy guidance produced by the Council, Transport for London, or nationally.

The Council will also take into consideration the impact of any recently permitted schemes in determining the acceptability or not of each proposed development.

Note that stress levels of over 100% stress (or 100% occupancy level) are possible. This is because small cars may need less space than 5 metres to park, meaning that additional cars can be accommodated.

FURTHER ASSISTANCE

For further assistance or explanation please contact the Council's Transport Planning and Strategy team at the address below

Spanish

Si desea esta información en otro idioma, rogamos nos llame al 020 7926 2618.

Portuguese

Se desejar esta informação noutro idioma é favor telefonar para 020 7926 2618.

Yoruba

Tí ẹ ba fè ìmoràn yíí, ní èdè Òmíràn, ejõ, ẹ kàn wà l'ágogo 020 7926 2618.

French

Si vous souhaitez ces informations dans une autre langue veuillez nous contacter au 020 7926 2618.

Bengali

এই তথ্য অন্য কোনো ভাষায় আপনার প্রয়োজন হলে অনুগ্রহ করে ফোন করুন 020 7926 2618.

Twi

Se wope saa nkaeboy yi wo kasa foforo mu a fre 020 7926 2618.

Lambeth Council

Transport Planning & Strategy

1st Floor Blue Star House

234-244 Stockwell Road

London SW9 9SP

Telephone: 020 7926 9000

Fax: 020 7926 9001

Email: transportplanning@lambeth.gov.uk

www.lambeth.gov.uk

APPENDIX F

Parking Survey Inventory & Results

P2147: HYLANDS ROAD, LONDON, E17 4AW

Parking Survey Inventory - CPZ WSE

Road	KERB SIDE INVENTORY					
	PHO 'WSE' ¹		Unrestricted ²		Blue Badge ³	
	Metres	Spaces	Metres	Spaces	Metres	Spaces
Hylands Road *	30	8	20	4	5	1
Fernhill Court	235	47	-	-	-	-
Hempstead Road	110	22	-	-	-	-
Nagle Close *	0	2	-	-	-	-
Tristram Close *	35	9	-	-	-	-
Total	410	88	20	4	5	1

Notes:

1 - Permit Holders Only (PHO) 'WSE' Mon-Fri 10am-4pm

2 - Anomalous stretch of unrestricted public kerb space on Hylands Road

3 - Blue Badge holder disabled parking bay

* plus end-on bays, x2 on Hylands Road, x2 on Nagle Close, x2 on Tristram Close

Parking Survey Inventory - CPZ HE

Road	KERB SIDE INVENTORY					
	PHO 'HE' ¹		Unrestricted		Blue Badge ²	
	Metres	Spaces	Metres	Spaces	Metres	Spaces
Beacontree Avenue	235	47	-	-	-	-
Castleton Road	70	14	-	-	5	1
Hillcrest Road	200	40	-	-	-	-
Total	505	101	-	-	5	1

Notes:

1 - Permit Holders Only (PHO) 'HE' Mon-Fri 10am-4pm

2 - Blue Badge holder disabled parking bay

Source: PMA Survey

P2147: HYLANDS ROAD, LONDON, E17 4AW

Parking Survey 1 - Monday 10th June 2019 - 01:30

Road	Overnight Parking Survey One					
	PHO 'WSE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Hylands Road	8	4	50%	4	4	100%
Fernhill Court	47	20	43%	-	-	-
Hempstead Road	22	17	77%	-	-	-
Nagle Close	2	2	100%	-	-	-
Tristram Close	9	8	89%	-	-	-
Total	88	51	58%	4	4	100%

NB: 6 cars parked at rear of 60-107 Hylands Road, and 2 in the yellow hatch turning head

Source: PMA Survey

Parking Survey 2 - Tuesday 11th June 2019 - 03:00

Road	Overnight Parking Survey Two					
	PHO 'WSE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Hylands Road	8	5	63%	4	4	100%
Fernhill Court	47	21	45%	-	-	-
Hempstead Road	22	16	73%	-	-	-
Nagle Close	2	2	100%	-	-	-
Tristram Close	9	8	89%	-	-	-
Total	88	52	59%	4	4	100%

NB: 6 cars parked at rear of 60-107 Hylands Road, and 1 in the yellow hatch turning head

Source: PMA Survey

Parking Survey AVERAGE

Road	Overnight Parking Survey Average					
	PHO 'WSE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Hylands Road	8	5	56%	4	4	100%
Fernhill Court	47	21	44%	-	-	-
Hempstead Road	22	17	75%	-	-	-
Nagle Close	2	2	100%	-	-	-
Tristram Close	9	8	89%	-	-	-
Total	88	52	59%	4	4	100%

Source: PMA Survey

NB: minor arithmetic anomalies are due to rounding

Road	Overnight Parking Survey One					
	PHO 'HE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Beacontree Avenue	47	26	55%	-	-	-
Castleton Road	14	11	79%	-	-	-
Hillcrest Road	40	37	93%	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
Total	101	74	73%	-	-	-

Source: PMA Survey

Road	Overnight Parking Survey Two					
	PHO 'HE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Beacontree Avenue	47	25	53%	-	-	-
Castleton Road	14	11	79%	-	-	-
Hillcrest Road	40	38	95%	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
Total	101	74	73%	-	-	-

Source: PMA Survey

Parking Survey AVERAGE

Road	Overnight Parking Survey Average					
	PHO 'HE'			Unrestricted		
	Total Spaces	Cars Parked	Parking Stress (%)	Total Spaces	Cars Parked	Parking Stress (%)
Beacontree Avenue	47	26	54%	-	-	-
Castleton Road	14	11	79%	-	-	-
Hillcrest Road	40	38	94%	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
Total	101	74	73%	-	-	-

Source: PMA Survey

NB: minor arithmetic anomalies are due to rounding

APPENDIX G
ATC Flow Data; Fernhill Court & Forest Road

P2147: Hylands Road ATC Survey Data

Total Vehicle Flows on Fernhill Court east of Hempstead Road - Monday 29th April to Sunday 5th May 2019

Time	Monday 10-06-2019		Tuesday 11-06-2019		Wednesday 12-06-2019		Thursday 13-06-2019		Friday 14-06-2019		Saturday 15-06-2019		Sunday 16-06-2019	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
0000-0100	2	1	3	4	0	0	0	0	1	1	0	0	4	3
0100-0200	1	0	1	1	1	1	1	1	0	0	0	0	4	4
0200-0300	2	2	0	0	0	0	2	1	1	1	0	0	4	3
0300-0400	5	1	1	1	0	0	3	1	1	1	0	0	4	5
0400-0500	5	6	0	1	2	1	1	2	1	0	0	0	2	2
0500-0600	2	3	0	0	0	0	0	0	1	2	0	0	0	0
0600-0700	1	1	0	3	4	7	1	4	1	2	0	0	2	3
0700-0800	1	5	3	5	1	4	3	7	2	5	0	0	0	0
0800-0900	6	11	3	8	3	8	2	3	4	8	1	2	4	6
0900-1000	7	4	7	6	8	4	7	6	3	3	5	6	5	5
1000-1100	1	6	4	5	2	3	4	3	1	3	5	6	4	3
1100-1200	6	9	5	5	8	8	12	10	6	4	6	10	5	6
1200-1300	10	5	9	7	10	5	9	7	8	4	8	6	5	8
1300-1400	3	5	4	6	8	13	7	9	5	6	4	5	5	6
1400-1500	5	7	7	7	11	9	6	8	7	2	6	7	4	5
1500-1600	9	3	6	9	6	6	8	9	7	12	4	5	5	8
1600-1700	2	5	3	2	5	4	7	6	7	8	1	1	7	6
1700-1800	9	5	8	2	8	9	12	9	7	5	10	6	2	3
1800-1900	14	10	9	9	7	7	6	7	8	5	8	7	10	7
1900-2000	8	8	4	9	7	8	3	6	4	6	8	8	2	3
2000-2100	4	9	9	6	7	5	9	5	8	4	7	7	3	3
2100-2200	8	4	6	6	8	6	3	8	6	4	10	10	9	5
2200-2300	6	10	6	4	3	4	5	2	5	6	8	5	9	9
2300-2400	3	3	3	3	2	2	5	4	0	0	3	5	7	6
Total	120	101	111	109	111	114	116	118	94	92	94	96	106	109
Total 2-Way	221		220		225		234		186		190		215	

Notes:

Values illustrate total vehicle flows

Source: DCA Monisyst

Time	Femhill Court Weekday Average Flow		
	Eastbound	Westbound	Total
0000-0100	1	1	2
0100-0200	1	1	1
0200-0300	1	1	2
0300-0400	2	1	3
0400-0500	2	2	4
0500-0600	1	1	2
0600-0700	1	3	5
0700-0800	2	5	7
0800-0900	4	8	11
0900-1000	6	5	11
1000-1100	2	4	6
1100-1200	7	7	15
1200-1300	9	6	15
1300-1400	5	8	13
1400-1500	7	7	14
1500-1600	7	8	15
1600-1700	5	5	10
1700-1800	9	6	15
1800-1900	9	8	16
1900-2000	5	7	13
2000-2100	7	6	13
2100-2200	6	6	12
2200-2300	5	5	10
2300-2400	3	2	5
Total	108	111	220

Source: DCA Monisyst

P2147: Hylands Road ATC Survey Data

Total Vehicle Flows on Forest Road east of Hillcrest Road - Monday 29th April to Sunday 5th May 2019

Time	Monday 10-06-2019		Tuesday 11-06-2019		Wednesday 12-06-2019		Thursday 13-06-2019		Friday 14-06-2019		Saturday 15-06-2019		Sunday 16-06-2019	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
0000-0100	137	135	102	106	110	107	124	121	138	128	173	171	223	245
0100-0200	72	88	59	62	80	57	76	71	94	88	141	142	129	174
0200-0300	49	33	46	34	38	44	51	50	55	41	90	75	99	103
0300-0400	50	51	47	34	53	38	39	45	32	41	76	72	77	95
0400-0500	64	54	52	59	57	84	67	60	68	61	93	70	75	81
0500-0600	98	200	100	194	111	188	119	185	114	175	68	103	85	88
0600-0700	201	437	193	488	197	504	173	507	177	447	111	173	92	103
0700-0800	339	734	330	758	361	668	352	750	349	638	203	248	99	127
0800-0900	389	747	407	766	390	741	421	753	414	805	274	443	166	194
0900-1000	358	580	430	555	360	607	404	660	382	609	361	501	249	375
1000-1100	319	488	316	511	306	476	330	519	354	469	383	490	338	495
1100-1200	355	441	321	502	339	541	366	473	381	490	435	604	386	518
1200-1300	352	448	398	497	397	502	413	467	377	513	474	573	427	566
1300-1400	367	426	409	441	469	513	395	417	477	507	451	563	514	634
1400-1500	413	436	459	468	499	506	456	480	517	508	474	594	466	693
1500-1600	438	498	559	475	558	575	585	502	677	479	466	564	420	533
1600-1700	685	530	717	542	632	556	687	529	714	553	463	614	412	595
1700-1800	728	548	700	572	637	579	662	622	689	588	445	594	437	605
1800-1900	514	498	593	598	517	600	514	657	582	536	455	566	435	554
1900-2000	391	440	386	550	414	546	400	617	461	623	426	563	408	519
2000-2100	240	317	366	394	343	418	304	388	379	457	420	455	375	432
2100-2200	224	286	275	288	269	291	254	310	299	383	321	386	305	386
2200-2300	200	183	264	229	220	244	257	256	275	332	301	333	259	292
2300-2400	140	136	196	160	185	173	213	180	231	280	281	293	185	231
Total	7123	7725	7542	9283	7542	9558	7662	9619	8236	9751	7385	9190	6661	8638
Total 2-Way	14848		16825		17100		17281		17987		16575		15299	

Notes:

Values illustrate total vehicle flows

Source: DCA Monisyst

Time	Forest Road Weekday Average Flow		
	Eastbound	Westbound	Total
0000-0100	122	119	242
0100-0200	76	73	149
0200-0300	48	40	88
0300-0400	44	42	86
0400-0500	62	64	125
0500-0600	108	188	297
0600-0700	188	477	665
0700-0800	346	710	1056
0800-0900	404	762	1167
0900-1000	387	602	989
1000-1100	325	493	818
1100-1200	352	489	842
1200-1300	387	485	873
1300-1400	423	461	884
1400-1500	469	480	948
1500-1600	563	506	1069
1600-1700	687	542	1229
1700-1800	683	582	1265
1800-1900	544	578	1122
1900-2000	410	555	966
2000-2100	326	395	721
2100-2200	264	312	576
2200-2300	243	249	492
2300-2400	193	186	379
Total	7658	9389	17047

Source: DCA Monisyst

APPENDIX H TRICS Assessment

Calculation Reference: AUDIT-711001-190711-0746

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
 MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
BT	BRENT	1 days
HA	HARROW	1 days
HG	HARINGEY	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
 Actual Range: 88 to 160 (units:)
 Range Selected by User: 15 to 339 (units:)

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 27/06/16

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

Selected survey days:

Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Neighbourhood Centre (PPS6 Local Centre)	1

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

Selected Location Sub Categories:

Residential Zone	3
------------------	---

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

Secondary Filtering selection:

Use Class:
 C3 3 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	1 days
50,001 to 100,000	2 days

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

Population within 5 miles:

500,001 or More	3 days
-----------------	--------

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

Car ownership within 5 miles:

0.6 to 1.0	3 days
------------	--------

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

Travel Plan:

Yes	2 days
No	1 days

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

PTAL Rating:

2 Poor	1 days
3 Moderate	1 days
4 Good	1 days

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

LIST OF SITES relevant to selection parameters

1	BT-03-D-01	BLOCKS OF FLATS FLOWERS CLOSE DOLLIS HILL	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: <i>Survey date: THURSDAY</i>	160 26/06/14	BRENT
2	HA-03-D-01	BLOCKS OF FLATS THE MALL KINGSBURY KINGSBURY CIRCLE	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of dwellings: <i>Survey date: THURSDAY</i>	88 17/07/14	<i>Survey Type: MANUAL</i> HARROW
3	HG-03-D-03	BLOCKS OF FLATS COMMERCE ROAD WOOD GREEN WOODSIDE PARK	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: <i>Survey date: FRIDAY</i>	90 26/09/14	<i>Survey Type: MANUAL</i> HARINGEY

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
IS-03-D-02	PTAL 5
IS-03-D-03	PTAL 6a
IS-03-D-04	PTAL 5

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.044	3	113	0.077	3	113	0.121
08:00 - 09:00	3	113	0.071	3	113	0.207	3	113	0.278
09:00 - 10:00	3	113	0.071	3	113	0.086	3	113	0.157
10:00 - 11:00	3	113	0.080	3	113	0.098	3	113	0.178
11:00 - 12:00	3	113	0.077	3	113	0.074	3	113	0.151
12:00 - 13:00	3	113	0.074	3	113	0.092	3	113	0.166
13:00 - 14:00	3	113	0.044	3	113	0.050	3	113	0.094
14:00 - 15:00	3	113	0.059	3	113	0.065	3	113	0.124
15:00 - 16:00	3	113	0.121	3	113	0.107	3	113	0.228
16:00 - 17:00	3	113	0.089	3	113	0.080	3	113	0.169
17:00 - 18:00	3	113	0.077	3	113	0.053	3	113	0.130
18:00 - 19:00	3	113	0.080	3	113	0.065	3	113	0.145
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.887				1.054			1.941

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

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

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Parameter summary

Trip rate parameter range selected:	88 - 160 (units:)
Survey date date range:	01/01/11 - 27/06/16
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	3

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.003	3	113	0.003	3	113	0.006
08:00 - 09:00	3	113	0.006	3	113	0.009	3	113	0.015
09:00 - 10:00	3	113	0.000	3	113	0.000	3	113	0.000
10:00 - 11:00	3	113	0.003	3	113	0.003	3	113	0.006
11:00 - 12:00	3	113	0.000	3	113	0.000	3	113	0.000
12:00 - 13:00	3	113	0.003	3	113	0.003	3	113	0.006
13:00 - 14:00	3	113	0.000	3	113	0.000	3	113	0.000
14:00 - 15:00	3	113	0.000	3	113	0.000	3	113	0.000
15:00 - 16:00	3	113	0.009	3	113	0.009	3	113	0.018
16:00 - 17:00	3	113	0.003	3	113	0.003	3	113	0.006
17:00 - 18:00	3	113	0.003	3	113	0.000	3	113	0.003
18:00 - 19:00	3	113	0.006	3	113	0.009	3	113	0.015
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.036			0.039			0.075	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.000	3	113	0.000	3	113	0.000
08:00 - 09:00	3	113	0.000	3	113	0.000	3	113	0.000
09:00 - 10:00	3	113	0.003	3	113	0.003	3	113	0.006
10:00 - 11:00	3	113	0.006	3	113	0.003	3	113	0.009
11:00 - 12:00	3	113	0.000	3	113	0.003	3	113	0.003
12:00 - 13:00	3	113	0.003	3	113	0.003	3	113	0.006
13:00 - 14:00	3	113	0.003	3	113	0.003	3	113	0.006
14:00 - 15:00	3	113	0.000	3	113	0.000	3	113	0.000
15:00 - 16:00	3	113	0.003	3	113	0.003	3	113	0.006
16:00 - 17:00	3	113	0.000	3	113	0.000	3	113	0.000
17:00 - 18:00	3	113	0.000	3	113	0.000	3	113	0.000
18:00 - 19:00	3	113	0.000	3	113	0.000	3	113	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.018			0.018			0.036	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.003	3	113	0.000	3	113	0.003
08:00 - 09:00	3	113	0.003	3	113	0.006	3	113	0.009
09:00 - 10:00	3	113	0.000	3	113	0.000	3	113	0.000
10:00 - 11:00	3	113	0.000	3	113	0.000	3	113	0.000
11:00 - 12:00	3	113	0.000	3	113	0.000	3	113	0.000
12:00 - 13:00	3	113	0.000	3	113	0.000	3	113	0.000
13:00 - 14:00	3	113	0.000	3	113	0.000	3	113	0.000
14:00 - 15:00	3	113	0.000	3	113	0.000	3	113	0.000
15:00 - 16:00	3	113	0.003	3	113	0.000	3	113	0.003
16:00 - 17:00	3	113	0.000	3	113	0.003	3	113	0.003
17:00 - 18:00	3	113	0.000	3	113	0.000	3	113	0.000
18:00 - 19:00	3	113	0.000	3	113	0.000	3	113	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.009			0.009			0.018	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.000	3	113	0.006	3	113	0.006
08:00 - 09:00	3	113	0.000	3	113	0.006	3	113	0.006
09:00 - 10:00	3	113	0.000	3	113	0.006	3	113	0.006
10:00 - 11:00	3	113	0.003	3	113	0.006	3	113	0.009
11:00 - 12:00	3	113	0.003	3	113	0.003	3	113	0.006
12:00 - 13:00	3	113	0.000	3	113	0.006	3	113	0.006
13:00 - 14:00	3	113	0.003	3	113	0.000	3	113	0.003
14:00 - 15:00	3	113	0.009	3	113	0.009	3	113	0.018
15:00 - 16:00	3	113	0.006	3	113	0.009	3	113	0.015
16:00 - 17:00	3	113	0.009	3	113	0.015	3	113	0.024
17:00 - 18:00	3	113	0.009	3	113	0.009	3	113	0.018
18:00 - 19:00	3	113	0.012	3	113	0.000	3	113	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.054			0.075			0.129	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.044	3	113	0.086	3	113	0.130
08:00 - 09:00	3	113	0.077	3	113	0.462	3	113	0.539
09:00 - 10:00	3	113	0.086	3	113	0.124	3	113	0.210
10:00 - 11:00	3	113	0.077	3	113	0.109	3	113	0.186
11:00 - 12:00	3	113	0.086	3	113	0.098	3	113	0.184
12:00 - 13:00	3	113	0.098	3	113	0.109	3	113	0.207
13:00 - 14:00	3	113	0.071	3	113	0.065	3	113	0.136
14:00 - 15:00	3	113	0.068	3	113	0.083	3	113	0.151
15:00 - 16:00	3	113	0.216	3	113	0.121	3	113	0.337
16:00 - 17:00	3	113	0.189	3	113	0.109	3	113	0.298
17:00 - 18:00	3	113	0.130	3	113	0.080	3	113	0.210
18:00 - 19:00	3	113	0.130	3	113	0.095	3	113	0.225
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.272			1.541			2.813	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.024	3	113	0.047	3	113	0.071
08:00 - 09:00	3	113	0.021	3	113	0.204	3	113	0.225
09:00 - 10:00	3	113	0.065	3	113	0.053	3	113	0.118
10:00 - 11:00	3	113	0.065	3	113	0.050	3	113	0.115
11:00 - 12:00	3	113	0.059	3	113	0.047	3	113	0.106
12:00 - 13:00	3	113	0.077	3	113	0.098	3	113	0.175
13:00 - 14:00	3	113	0.083	3	113	0.059	3	113	0.142
14:00 - 15:00	3	113	0.041	3	113	0.107	3	113	0.148
15:00 - 16:00	3	113	0.115	3	113	0.080	3	113	0.195
16:00 - 17:00	3	113	0.243	3	113	0.080	3	113	0.323
17:00 - 18:00	3	113	0.127	3	113	0.080	3	113	0.207
18:00 - 19:00	3	113	0.115	3	113	0.056	3	113	0.171
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.035			0.961			1.996	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.006	3	113	0.195	3	113	0.201
08:00 - 09:00	3	113	0.021	3	113	0.249	3	113	0.270
09:00 - 10:00	3	113	0.036	3	113	0.006	3	113	0.042
10:00 - 11:00	3	113	0.027	3	113	0.027	3	113	0.054
11:00 - 12:00	3	113	0.030	3	113	0.041	3	113	0.071
12:00 - 13:00	3	113	0.018	3	113	0.047	3	113	0.065
13:00 - 14:00	3	113	0.024	3	113	0.030	3	113	0.054
14:00 - 15:00	3	113	0.038	3	113	0.077	3	113	0.115
15:00 - 16:00	3	113	0.115	3	113	0.038	3	113	0.153
16:00 - 17:00	3	113	0.175	3	113	0.021	3	113	0.196
17:00 - 18:00	3	113	0.095	3	113	0.047	3	113	0.142
18:00 - 19:00	3	113	0.083	3	113	0.021	3	113	0.104
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.668			0.799				1.467

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.003	3	113	0.080	3	113	0.083
08:00 - 09:00	3	113	0.000	3	113	0.127	3	113	0.127
09:00 - 10:00	3	113	0.000	3	113	0.018	3	113	0.018
10:00 - 11:00	3	113	0.000	3	113	0.021	3	113	0.021
11:00 - 12:00	3	113	0.003	3	113	0.012	3	113	0.015
12:00 - 13:00	3	113	0.000	3	113	0.018	3	113	0.018
13:00 - 14:00	3	113	0.006	3	113	0.006	3	113	0.012
14:00 - 15:00	3	113	0.009	3	113	0.009	3	113	0.018
15:00 - 16:00	3	113	0.015	3	113	0.012	3	113	0.027
16:00 - 17:00	3	113	0.018	3	113	0.009	3	113	0.027
17:00 - 18:00	3	113	0.033	3	113	0.009	3	113	0.042
18:00 - 19:00	3	113	0.053	3	113	0.009	3	113	0.062
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.140			0.330			0.470	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.009	3	113	0.275	3	113	0.284
08:00 - 09:00	3	113	0.021	3	113	0.376	3	113	0.397
09:00 - 10:00	3	113	0.036	3	113	0.024	3	113	0.060
10:00 - 11:00	3	113	0.027	3	113	0.047	3	113	0.074
11:00 - 12:00	3	113	0.033	3	113	0.053	3	113	0.086
12:00 - 13:00	3	113	0.018	3	113	0.065	3	113	0.083
13:00 - 14:00	3	113	0.030	3	113	0.036	3	113	0.066
14:00 - 15:00	3	113	0.047	3	113	0.086	3	113	0.133
15:00 - 16:00	3	113	0.130	3	113	0.050	3	113	0.180
16:00 - 17:00	3	113	0.192	3	113	0.030	3	113	0.222
17:00 - 18:00	3	113	0.127	3	113	0.056	3	113	0.183
18:00 - 19:00	3	113	0.136	3	113	0.030	3	113	0.166
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.806			1.128			1.934	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.077	3	113	0.414	3	113	0.491
08:00 - 09:00	3	113	0.118	3	113	1.047	3	113	1.165
09:00 - 10:00	3	113	0.186	3	113	0.207	3	113	0.393
10:00 - 11:00	3	113	0.172	3	113	0.213	3	113	0.385
11:00 - 12:00	3	113	0.180	3	113	0.201	3	113	0.381
12:00 - 13:00	3	113	0.192	3	113	0.278	3	113	0.470
13:00 - 14:00	3	113	0.186	3	113	0.160	3	113	0.346
14:00 - 15:00	3	113	0.166	3	113	0.284	3	113	0.450
15:00 - 16:00	3	113	0.467	3	113	0.260	3	113	0.727
16:00 - 17:00	3	113	0.633	3	113	0.234	3	113	0.867
17:00 - 18:00	3	113	0.393	3	113	0.225	3	113	0.618
18:00 - 19:00	3	113	0.393	3	113	0.180	3	113	0.573
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		3.163			3.703			6.866	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.027	3	113	0.068	3	113	0.095
08:00 - 09:00	3	113	0.044	3	113	0.175	3	113	0.219
09:00 - 10:00	3	113	0.053	3	113	0.059	3	113	0.112
10:00 - 11:00	3	113	0.047	3	113	0.062	3	113	0.109
11:00 - 12:00	3	113	0.050	3	113	0.050	3	113	0.100
12:00 - 13:00	3	113	0.053	3	113	0.071	3	113	0.124
13:00 - 14:00	3	113	0.036	3	113	0.038	3	113	0.074
14:00 - 15:00	3	113	0.056	3	113	0.059	3	113	0.115
15:00 - 16:00	3	113	0.089	3	113	0.086	3	113	0.175
16:00 - 17:00	3	113	0.080	3	113	0.059	3	113	0.139
17:00 - 18:00	3	113	0.068	3	113	0.041	3	113	0.109
18:00 - 19:00	3	113	0.059	3	113	0.053	3	113	0.112
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.662			0.821			1.483	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

MULTI-MODAL LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.012	3	113	0.006	3	113	0.018
08:00 - 09:00	3	113	0.018	3	113	0.015	3	113	0.033
09:00 - 10:00	3	113	0.012	3	113	0.021	3	113	0.033
10:00 - 11:00	3	113	0.021	3	113	0.021	3	113	0.042
11:00 - 12:00	3	113	0.027	3	113	0.021	3	113	0.048
12:00 - 13:00	3	113	0.015	3	113	0.015	3	113	0.030
13:00 - 14:00	3	113	0.006	3	113	0.009	3	113	0.015
14:00 - 15:00	3	113	0.003	3	113	0.006	3	113	0.009
15:00 - 16:00	3	113	0.018	3	113	0.009	3	113	0.027
16:00 - 17:00	3	113	0.006	3	113	0.015	3	113	0.021
17:00 - 18:00	3	113	0.006	3	113	0.012	3	113	0.018
18:00 - 19:00	3	113	0.012	3	113	0.003	3	113	0.015
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.156			0.153			0.309	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL MOTOR CYCLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.000	3	113	0.000	3	113	0.000
08:00 - 09:00	3	113	0.000	3	113	0.003	3	113	0.003
09:00 - 10:00	3	113	0.003	3	113	0.003	3	113	0.006
10:00 - 11:00	3	113	0.003	3	113	0.009	3	113	0.012
11:00 - 12:00	3	113	0.000	3	113	0.000	3	113	0.000
12:00 - 13:00	3	113	0.000	3	113	0.000	3	113	0.000
13:00 - 14:00	3	113	0.000	3	113	0.000	3	113	0.000
14:00 - 15:00	3	113	0.000	3	113	0.000	3	113	0.000
15:00 - 16:00	3	113	0.000	3	113	0.000	3	113	0.000
16:00 - 17:00	3	113	0.000	3	113	0.000	3	113	0.000
17:00 - 18:00	3	113	0.003	3	113	0.000	3	113	0.003
18:00 - 19:00	3	113	0.003	3	113	0.000	3	113	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.012			0.015			0.027	

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MULTI-MODAL Servicing Vehicles
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	113	0.000	3	113	0.000	3	113	0.000
08:00 - 09:00	3	113	0.003	3	113	0.000	3	113	0.003
09:00 - 10:00	3	113	0.015	3	113	0.003	3	113	0.018
10:00 - 11:00	3	113	0.021	3	113	0.027	3	113	0.048
11:00 - 12:00	3	113	0.012	3	113	0.009	3	113	0.021
12:00 - 13:00	3	113	0.012	3	113	0.012	3	113	0.024
13:00 - 14:00	3	113	0.000	3	113	0.000	3	113	0.000
14:00 - 15:00	3	113	0.003	3	113	0.006	3	113	0.009
15:00 - 16:00	3	113	0.006	3	113	0.003	3	113	0.009
16:00 - 17:00	3	113	0.000	3	113	0.006	3	113	0.006
17:00 - 18:00	3	113	0.003	3	113	0.006	3	113	0.009
18:00 - 19:00	3	113	0.000	3	113	0.003	3	113	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.075			0.075			0.150	

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

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