

Transport Assessment
January 2021

The logo for EAS, consisting of a dark blue square with the letters 'EAS' in white, bold, sans-serif font.

EAS

Brockley Hill, Stanmore - New Banqueting Facility

LB Harrow

Sairam (Holdings) Ltd

Document History

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Executive Summary

This Transport Assessment, prepared by EAS Transport Planning Ltd, accompanies a planning application for the proposed demolition of existing golf club buildings (Use Class D2) and construction of a new banqueting facility (Use Class D2), widening of existing vehicular access from Brockley Hill, car and cycle parking, waste/refuse storage, landscape enhancements and associated works at the former Stanmore & Edgware Golf Centre.

The proposed site is located on Brockley Hill, Stanmore, LB Harrow HA4 4LR and is proposed to rehouse the current Premier Banqueting London Ltd venue that is located in Harrow Wealdstone. This is due to, among other factors, the upcoming closure and redevelopment of the existing Peel Road multi-storey car park that the venue currently utilises in agreement with LB Harrow, who manage the car park.

EAS Transport Planning Ltd were commissioned to advise on transport and highways matters through pre-application, design and application, culminating in the preparation of this Transport Assessment and supporting transport and highways reports.

A guest travel survey was prepared that was completed by guests attending two events – a small event of around 65 guests and a large event of around 500 guests – at the current banqueting venue in January 2020. The survey found that coaches transported a majority of guests to and from the venue for the 500-guest event, with the remainder largely travelling by private car and taxi – both with high vehicle occupancy rates of 3.41 and 4.42, respectively. The smaller 65-guest event did not incorporate coaches, though saw similarly high vehicle occupancy for cars and taxis of 3.25 and 4.0 guests, respectively.

Guests rarely travelled to the current venue by public transport, despite it having a PTAL of 6a, bordering 6b. Thus, at times there are significant traffic volumes travelling into the centre of Wealdstone in association with events at the current banqueting venue which would be minimised should the site be relocated to the proposed site thus providing a benefit to overall highway conditions further southwards into the more urban areas of Harrow.

Whilst the development site is located within LB Harrow, the border with LB Barnet is drawn along Brockley Hill, from where the site is accessed, with this road being under the Highways jurisdiction of LB Barnet. Thus, highways pre-application meetings were held with LB Harrow and LB Barnet, in January and February 2020, respectively, with discussions continuing through the design phase. There were also planning pre-application meetings and discussions held between the design team and LB Harrow and with the GLA.

This application presents an interesting scenario of needing to satisfy Highways officers from 3 different authorities, each with slightly differing perspectives. The GLA, supported by TfL, prefer to see as little parking as possible and support schemes that involve investment to facilitate use of active and public transport. LB Barnet will have concerns about overspill parking onto their network, especially Brockley Hill, and so would prefer greater parking provision to avoid this eventuality. LB Harrow are perhaps somewhere in the middle of these 2 perspectives, with a pragmatic approach seeking to promote sustainable alternatives while ensuring safe amenity for private vehicle use.

Transport and highways discussions were largely positive, particularly with regard to traffic impact (e.g. expected net reduction in trip generation at the site; expected modal shares;

modelling results). Questions were raised, however, by LB Barnet and LB Harrow, on the following issues relating to transport and highways:

- Highway safety, notably regarding right turns into the site from Brockley Hill;
- Access width/design, ensuring simultaneous access and egress; and
- Trip generation when combining development traffic with committed developments and trips to Wembley Stadium. (The Wembley matter was raised by LB Harrow planning officers not highway officers).

An assessment of highway safety that found 3 'slight' traffic collisions occurred at the site access in the 10 years 2010-2019, all of which are understood to have involved right-hand turns into the site. A robust accident analysis was also carried out for all roads and junctions within a radius of 1.5km from the site. This found no notable cluster of accidents.

The existing access has been redesigned with an island to prevent right turns into the site (from the north), supported by signage and 'soft measures' i.e. the Travel Plan and the Delivery and Servicing Plan. All movements can still take place when exiting the site. The access is also designed to accommodate simultaneous ingress and egress by coaches, and access for refuse vehicles, ensuring that vehicles are not held up on Brockley Hill by vehicle movements at the site. The proposed parking area was arranged as to allow circulation and forward ingress and egress by large vehicles, improving highways safety on the site. A Stage 1 Road Safety Audit has been carried out, which proposed 2 amendments that will be addressed post planning. The proposed access amendment will be subject to a Section 278 agreement with LB Barnet.

An analysis of trip generation and traffic associated with events at Wembley Stadium and the proposed site was carried out by comparing the timings and calendar of events at both venues throughout 2019. It was deemed that given the typical start and finish times of events at the site and at Wembley, plus the circa 45-minutes to 1:15-hours to travel between Stanmore and Wembley and progress through the crowds and queues, there would be little interaction between traffic associated with the two venues. Moreover, it is reasoned that this amalgamation of traffic would also occur at present with the current venue in Wealdstone, as well as with traffic associated with the former golf centre site which is understood to have involved a higher peak and higher total number of vehicle trips than the proposed site.

More recently, in July 2020, a planning pre-application meeting with the GLA was held, which included a transport and highways element. This opportunity was used to outline the transport and highways work carried out to present. The principal concern of the GLA is that of limited scope for travel by sustainable modes to the site.

Addressing this, an ATZ Healthy Streets assessment was carried out which identified potential improvements to the active travel environment. A policy-compliant level of cycle parking will be provided – despite likely seldom occurrences of guests cycling to the proposed banqueting venue – along with shower, locker and changing facilities. These proposed 'hard' measures will be supported by the 'soft' measures of the Travel Plan, maximising awareness and utilisation of sustainable travel planning concepts.

The design team have sought to address all concerns relating to transport and highways, through redesigning the access and parking area, identifying potential improvements through the ATZ assessment, and carrying out extensive accident and trip generation analysis. With these elements of the proposals all being deemed policy-compliant and



suitable, and given the fact that the proposals will remove vehicle trips from Wealdstone town centre, yet it is expected that there will be a net reduction in vehicle trips at the site, the proposals should be supported on transport and highways grounds.

1 Introduction

- 1.1 EAS Transport Planning Ltd has been commissioned by Sairam (Holdings) Ltd to provide advice on transport and highways matters regarding a planning application for the demolition of existing golf club buildings (Use Class D2) and construction of a new banqueting facility (Use Class D2), widening of existing vehicular access from Brockley Hill, car and cycle parking, waste/refuse storage, landscape enhancements and associated works at the former Stanmore & Edgware Golf Centre, Brockley Hill, Stanmore, LB Harrow, HA4 4LR.
- 1.2 The proposed site is the former Stanmore & Edgware Golf Centre, located on Brockley Hill, Stanmore, LB Harrow HA4 4LR. This will rehouse the current Premier Banqueting London Ltd venue that is located in Harrow Wealdstone which is also owned and operated by the applicant, hosting functions such as weddings for multi-cultural audiences.
- 1.3 This planning application is due to, among other factors, the upcoming closure and redevelopment of the existing Peel Road multi-storey car park that the existing banqueting venue currently utilises in agreement with LB Harrow who manage the car park.
- 1.4 A location plan is included at **Appendix A** and the development proposals are contained at **Appendix B**.
- 1.5 The proposals have evolved through pre-application discussions with LB Harrow, LB Barnet as the Local Highways Authority responsible for Brockley Hill, and the GLA/TfL.
- 1.6 This Transport Assessment summarises the expected traffic and transport impacts of this proposed relocation and proposes appropriate mitigation. This Transport Assessment has been prepared with regard to the Department for Communities and Local Government guidance on Travel Plans, Transport Assessment and Statements in Decision Taking (March 2014).
- 1.7 This document includes:
 - Chapter 2** – outlines relevant transport policy;
 - Chapter 3** – describes the location and transport links;
 - Chapter 4** – sets out the development proposals, including access, parking and servicing;
 - Chapter 5** – identifies the likely transport impact;
 - Chapter 6** – discusses potential Travel Planning measures; and
 - Chapter 7** – provides a summary and conclusion.

2 Policy Background

Introduction

- 2.1 This chapter identifies the current planning policy documents at national, regional and local levels that are relevant to the development.
- 2.2 The policy documents reviewed include:
- National Planning Policy Framework (NPPF) (2019)
 - The London Plan (2016)
 - The Publication Version of The London Plan (December 2020)
 - Harrow Local Plan – Core Strategy (2012)
 - Harrow Local Plan – Development Management Policies (2013)

National Planning Policy Framework (2019)

- 2.3 The revised National Planning Policy Framework (NPPF) was published in February 2019 and sets out the government’s planning policies for England and how these are expected to be applied. The revised Framework replaces the previous NPPF published in March 2012.
- 2.4 Paragraph 10 of the NPPF states:

*“So that sustainable development is pursued in a positive way, at the heart of the Framework is a **presumption in favour of sustainable development.**”*

- 2.5 Section 9 ‘Promoting sustainable transport’ states, in paragraphs 102 and 103:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;*
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.*

The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air

quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.”

2.6 Paragraph 105, in relation to parking standards, states that the following should be taken into account:

- *the accessibility of the development;*
- *the type, mix and use of development;*
- *the availability of and opportunities for public transport;*
- *local car ownership levels; and*
- *the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.*

2.7 Paragraph 106 adds that:

Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport. In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists.

2.8 Paragraphs 108 and 109 state that in assessing 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 highways safety, can be cost effectively mitigated to an acceptable degree.*

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

2.9 Within that context, paragraphs 110 and 111 state that applications for development should:

- *give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*

- *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;*
- *allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.*

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.”

The London Plan (2016)

2.10 The London Plan encourages developments with greater public transport accessibility, lower parking provision and higher housing density.

2.11 Policy 6.1 of the London Plan states:

The Mayor will work with all relevant partners to encourage the closer integration of transport and development... by:

a. encouraging patterns and nodes of development that reduce the need to travel, especially by car – boroughs should use the standards set out in Table 6.2... to set maximum car parking standards in DPDs

b. seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand – boroughs should use the standards set out in Table 6.3...to set minimum cycle parking standards in DPDs

c. supporting development that generates high levels of trips at locations with high public transport accessibility and/or capacity, either currently or via committed, funded improvements...

g. supporting measures that encourage shifts to more sustainable modes and appropriate demand management

h. promoting greater use of low carbon technology so that carbon dioxide and other contributors to global warming are reduced

i. promoting walking by ensuring an improved urban realm.

2.12 Policy 6.9 relates to cycling and states 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.*

2.13 Policy 6.10 relates to walking as a means of transport and states that developments should:

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

2.14 Policy 6.13 relates to parking provision. It explains that the maximum standards set out in Table 6.2 in the Parking Addendum should be the basis for considering planning applications. In addition, developments in all parts of London must:

- a. ensure that 1 in 5 spaces (both active and passive) provide an electrical charging point to encourage the uptake of electric vehicles*
- b. provide parking for disabled people in line with Table 6.2*
- c. meet the minimum cycle parking standards set out in Table 6.3*
- d. provide for the needs of businesses for delivery and servicing.*

2.15 Table 6.2 states that for shopping, recreation and leisure facilities there should be one disabled blue badge parking space (2.4m x 4.8m with 1.2m transfer zones at side and rear) for each employee who is a disabled motorist, plus 6% of the total parking capacity for visitors. There should also be a further 4% of total capacity as enlarged spaces (3.6m x 6m) to accommodate future provision.

2.16 Table 6.2 does not provide specific maximum car parking standards for 'hotel and leisure uses', although it is explained in Paragraphs 6A.8 and 6A.9 that sites with a PTAL of 1-3 should have provision:

"...consistent with objectives to reduce congestion and traffic levels and to avoid undermining walking, cycling or public transport. ... Leisure, stadia and major exhibition venues should provide appropriate levels of coach parking to suit their individual demand to help reduce congestion and improve visitor safety.

2.17 Table 6.3 provides minimum cycle parking standards for D2 'other' (i.e. non-sport related) developments, which should provide:

- 1 long-term cycle parking space per eight staff
- 1 short-term cycle parking spaces per 100 sqm

Publication London Plan (December 2020)

2.18 This is the most up to date version of the new London Plan, following the Examination in Public (EiP) and review by the Planning Inspectorate, whose Report on the Examination in Public of the London Plan 2019 was published in October 2019. Following this the Intend to

Publish version was published in December 2019 and the Publication London Plan in December 2020.

- 2.19 Chapter 10 of this London Plan relates to transport.
- 2.20 Policy T1 'Strategic approach to transport' states that development proposals should facilitate the delivery of the Mayor's strategic target of 80% of all trips in London to be made by foot, cycle or public transport by 2041. All development should make the most effective use of land, reflecting its connectivity and accessibility by existing and future public transport, walking and cycling routes, and ensure that any impacts on London's transport networks and supporting infrastructure are mitigated.
- 2.21 Policy T2 accordingly states that development proposals should deliver patterns of land use that facilitate residents making shorter, regular trips by walking or cycling. Development proposals should:
- demonstrate how they will deliver improvements that support the ten Healthy Streets Indicators in line with Transport for London guidance;
 - reduce the dominance of vehicles on London's streets whether stationary or moving; and
 - be permeable by foot and cycle and connect to local walking and cycling networks as well as public transport.
- 2.22 Paragraph 10.2.3 outlines the Healthy Streets Approach as an evidence-based approach to improve health and reduce health inequalities, which will help Londoners to use cars less and walk, cycle and use public transport more. It promotes active travel and requires better management of freight so that the impact of moving goods and delivering services on London's streets is lessened.
- 2.23 Policy T4 states that:
- Development proposals should reflect and be integrated with current and planned transport access, capacity and connectivity.
 - When required in accordance with national or local guidance, transport assessments/statements should be submitted with development proposals to ensure that impacts on the capacity of the transport network (including impacts on pedestrian and the cycle network), at the local, network-wide and strategic level, are fully assessed. Transport assessments should focus on embedding the Healthy Streets Approach within, and in the vicinity of, new development. Travel Plans, parking Design and Management Plans, Construction Logistics Plans and Delivery and Servicing Plans will be required having regard to Transport for London guidance.
 - Where appropriate, mitigation, either through direct provision of public transport, walking and cycling facilities and highways improvements or through financial contributions, will be required to address any adverse transport impacts that are identified.
 - Where the ability to absorb increased travel demand through active travel modes has been exhausted, existing public transport capacity is insufficient to allow for the travel generated by proposed developments, and no firm plans and funding exist for an increase in capacity to cater for the increased demand, planning permission may be contingent on the provision of necessary public transport and active travel infrastructure.

- The cumulative impacts of development on public transport and the road network capacity including walking and cycling, as well as associated effects on public health, should be taken into account and mitigated.
 - Development proposals should not increase road danger.
- 2.24 Policy T5 states that developments should help remove barriers to cycling and create a healthy environment in which people choose to cycle. This will be achieved by securing appropriate levels of suitably designed cycle parking in accordance with minimum standards set out in Table 10.2 and Figure 10.2. Cycle parking should be designed and laid out in accordance with the guidance contained in the London Cycling Design Standards.
- 2.25 Minimum cycle parking standards for D2 'other' (i.e. non-sport related) uses are:
- 1 long-term cycle parking space per eight FTE staff;
 - 1 short-term cycle parking space per 30 seats.
- 2.26 It should be noted that the site is not in an area where higher minimum cycle parking standards apply.
- 2.27 As per the *London Cycling Design Standards* 5% of spaces should be designed for larger or specialist cycles, with respect to the dimension standards given in Figure 8.1 of the guidance.
- 2.28 Policy T6 states:
- A. *Car parking should be restricted in line with levels of existing and future public transport accessibility and connectivity.*
 - B. *Car-free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport, with developments elsewhere designed to provide the minimum necessary parking ('car-lite'). Car-free development has no general parking but should still provide disabled persons parking in line with Part E of this policy.*
 - C. *An absence of local on-street parking controls should not be a barrier to new development, and borough should look to implement these controls wherever necessary to allow existing residents to maintain safe and efficient use of their streets.*
 - D. *The maximum car parking standards set out in Policy T6.1 Residential Parking to Policy T6.5 Non-residential disabled persons parking should be applied to development and used to set local standards within development plans.*
 - E. *Appropriate disabled persons parking for Blue Badge holders should be provided as set out in Policy T6.1 Residential parking to Policy T6.5 Non-residential disabled persons parking.*
 - F. *Where provided, each motorcycle parking space should count towards the maximum for car parking spaces at all use classes.*
 - G. *Where car parking is provided in new developments, provision should be made for infrastructure for electric or other Ultra-Low Emission vehicles in line with Policy T6.1 Residential parking, Policy T6.2 Office parking, Policy T6.3 Retail parking, and Policy T6.4 Hotel and leisure uses parking. All operational parking should make this provision,*

including offering rapid charging. New or re-provided petrol filling stations should provide rapid charging hubs and/or hydrogen refuelling facilities.

- H. Where electric vehicle charging points are provided on-street, physical infrastructure should not negatively affect pedestrian amenity and should ideally be located off the footway. Where charging points are located on the footway, it must remain accessible to all those using it including disabled people.
 - I. Adequate provision should be made for efficient deliveries and servicing and emergency access.
 - J. A Parking Design and Management Plan should be submitted alongside all applications which include car parking provision, indicating how the car parking will be designed and managed with reference to Transport for London guidance on parking management and parking design.
 - K. Boroughs that have adopted or wish to adopt more restrictive general or operational parking policies are supported, including borough-wide or other area-based car-free policies. Outer London boroughs wishing to adopt minimum residential parking standards through a Development Plan Document (within the maximum standards set out in [Policy T6.1 Residential parking](#)) must only do so for parts of London that are PTAL 0-1 Inner London boroughs should not adopt minimum standards. Minimum standards are not appropriate for non-residential use classes in any part of London.
 - L. Where sites are redeveloped, parking provision should reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy. Some flexibility may be applied where retail sites are redeveloped outside of town centres in areas which are not well served by public transport, particularly in outer London.
- 2.29 Policy T6.4 describes parking standards for hotel and leisure uses. It states that in locations of PTAL 0-3 schemes should be assessed on a case-by-case basis and provision should be consistent with the Healthy Streets Approach, mode share and active travel targets, and the aim to improve public transport reliability and reduce congestion and traffic levels.
- 2.30 It goes to state that all operational parking must provide infrastructure for electric or other Ultra-Low Emission vehicles, including active charging points for all taxi spaces. Disabled persons parking should be provided as set out in [Policy T6.5 Non-residential disabled persons parking](#).
- 2.31 Policy T6.5 states that:
- A. *Disabled persons parking should be provided in accordance with the levels set out in Table 10.6, ensuring that all non-residential elements should provide access to at least one on or off-street disabled persons parking bay.*
 - B. *Disabled persons parking bays should be located on firm and level ground, as close as possible to the building entrance or facility they are associated with.*
 - C. *Designated bays should be marked up as disabled persons parking bays from the outset.*
 - D. *Enlarged bays should be large enough to become disabled persons parking bays quickly and easily via the marking up of appropriate hatchings and symbols and the provision of signage, if required i.e. if it can be demonstrated that the existing level of*

disabled persons parking is not adequate. The process for converting enlarged bays should be set out in a Parking Design and Management Plan and secured at the planning stage.

E. Designated disabled persons parking bays and enlarged bays should be designed in accordance with the design guidance provided in BS8300: Vol 1.

2.32 As per Table 10.6, 6% of total parking provision should be designated disabled persons bays and a further 4% as enlarged bays.

Harrow Local Plan – Core Strategy (2012)

2.33 This document, adopted in 2012, is the primary document in the Harrow Local Development Framework (LDF), replacing the Harrow Unitary Development Plan. The Core Strategy sets the long-term vision for developing Harrow until 2026, with strategies to achieve this vision.

2.34 Some aspects of Core Policy CS1 are relevant to this Transport Statement.

Q) The Council will work with Transport for London and other appropriate authorities to secure enhancements to the capacity, accessibility and environmental quality of the transport network in accordance with the Local Investment Plan and to improve orbital connectivity between neighbouring boroughs. Highway investment will focus on junctions with identified existing or future capacity constraints where these support economic development or are need to improve the reliability and general operating conditions of buses

R) Parking for new development will be managed to contribute to the delivery of a modal shift from the private car to more sustainable modes. The Development Management Policies DPD will give local interpretation of London Plan parking standards and detail requirements for sustainable Travel Plans.

S) Over-development of sites with a low public transport accessibility rating will be resisted. Higher densities will be considered appropriate where the proposal involves the redevelopment of a previously-developed site of strategic significance and can secure improvements to local transport sufficient to enhance the public transport accessibility level of the site.

Harrow Local Plan – Development Management Policies (2013)

2.35 This document provides policies which give effect to the spatial strategy and overarching objectives of the Core Strategy. The policies support proposals that contribute to sustainable development, in accordance with the Core Strategy, and ensuring that there is a clear policy framework for resisting development that would be at odds with the Core Strategy and its objectives.

2.36 Chapter 9 relates to transport and waste. Policy CS1 of the Core Strategy sets out Harrow's strategic approach to car parking provision and development of sites in areas of low public transport accessibility. The Development Management policies in this chapter guide the implementation of these.

2.37 Policy DM42 'Parking Standards' states:

A. Proposals that make on-site provision for parking will be supported where:

- a. *the number of vehicle parking spaces (including those with electric vehicle charging points) would have regard to the maximum London Plan standards;*
 - b. *there would be 1 motorcycle/scooter parking space (2 x 0.8 metres) per 20 car parking spaces subject to all developments with more than 10 car parking spaces having a minimum of 1 space; and*
 - c. *the number of cycle parking spaces would meet or exceed the minimum London Plan standards.*
- B. *Proposals involving parking provision that would not be consistent with the London Plan will be assessed having regard to any exceptional operational requirements, any special safety considerations and the desirability of achieving modal shifts away from private car use.*
- C. *Proposals for car-free development within town centres will be supported where it can be demonstrated within town centres will be supported where it can be demonstrated that:*
- a. *there is sufficient public transport capacity to serve the trip demand generated by the development;*
 - b. *there would be adequate safeguards against parking on the surrounding highway network and in public car parks; and*
 - c. *the needs of blue badge holders would be met.*
- D. *Proposals that secure the delivery of car club schemes in lieu of parking provision for private vehicles will be encouraged.*
- E. *The design and layout of parking areas (including those for scooters, motorcycles and bicycles) should be safe, secure and fit for purpose. Access to and from the public highway should maintain and, where necessary, improve safety and give priority to the convenience of pedestrians and cyclists,*
- F. *Proposals that would result in appropriate on-site parking provision, having regard to the criteria in this policy, and those which would create significant on-street parking problems, prejudice highway safety or diminish the convenience of pedestrians and cyclists, will be resisted.*
- 2.38 It is recognised in the supporting text to this policy that while the strategic target it to support modal shifts away from car use, provision of on-site parking prevents negative impacts upon congestion and traffic flow. It also acknowledges that the interpretation of London Plan parking standards for areas in outer London may also be determined by other policy objectives for outer London, such as providing employment and facilities.
- 2.39 Policy DM43 'Transport Assessment and Travel Plans' states:
- A) *Proposals for major development will be required to submit a Transport Assessment for objective review by the Council. The Transport Assessment should quantify the impacts of the proposal upon public transport, the highway network, the cycle network and upon conditions for pedestrians (See Policy DM2: Achieving Lifetime Neighbourhoods). Where multiple major developments are proposed in the area, the Council will encourage developers to co-operate to assess the cumulative impacts of the proposals upon transport.*

- B) *Proposals for major development will be required to satisfactorily mitigate the impacts identified in the Transport Assessment and any others required from the Council's assessment of it. Mitigation measures will be required to contribute to the desirability of achieving modal shift away from private car use and should include the preparation and implementation of Travel Plans*
- C) *Proposals that fail to satisfactorily mitigate the transport impacts of development will be resisted.*
- D) *Where necessary, construction logistic plans and delivery and servicing plans should be submitted with an application.*
- 2.40 The supporting text explains that Assessments should be proportionate to the scale of the proposal, addressing impacts on all relevant forms of transport. Travel Plans seek to ensure management measures identified in the Assessment are implemented and monitored, with the ultimate aim of achieving a modal shift away from car use.
- 2.41 Policy DM44 'Servicing' states:
- A) *Non-residential proposals will be required to make arrangement for servicing that maintain or improve the safety and flow of traffic on the public highway, and which protect the amenity of neighbouring occupiers. Proposals will be assessed having regard to:*
- a) *the relationship of the proposal with the surrounding highway network;*
 - b) *the availability of existing service roads; and*
 - c) *any existing safety concerns*
- B) *Proposals for major development should make satisfactory arrangement for access to and servicing within the site during construction.*
- C) *Proposals that would be detrimental to safety, traffic flow or the amenity of neighbouring occupiers will be resisted.*
- 2.42 Non-residential proposals should ensure that commercial activities can be carried on in a manner that is both efficient to business and to highway and amenity interests.

3 Existing Site Assessment

Current Site and Operation

- 3.1 The existing Premier Banqueting London Ltd venue is located in Wealdstone, LB Harrow HA3 7TS. Due to the scheduled demolition of council-operated parking provision which the existing Premier Banqueting site currently utilises, the venue is proposed to be relocated.
- 3.2 The existing venue had capacity to cater for an absolute maximum of 850 people.
- 3.3 An agreement with Harrow Council allows the use of the adjacent multi storey car park, (subject to demolition), on an ad-hoc basis. Generally, it has been found from a review of all events taking place in 2019 that Premiere Banqueting had access to the multi-story car park for around two thirds of the events, typically when the number of guests at any event exceeded 250.
- 3.4 The existing multi-story car park, subject to demolition, is understood to contain circa 280 car parking spaces. This car park is reported to be under-utilised even when the banqueting centre use it for events. The applicants who are the operators of the existing banqueting venue have confirmed that they take over the whole of the car park on each occasion that it is booked as this is simpler from a management perspective for both the venue and LB Harrow.
- 3.5 In 2019 the banqueting operators confirmed that the maximum use of the car park was qualitatively considered to be around 80 to 100 spaces and it is confirmed that the maximum sized event was 550 people. However, in the past when there have been events to full capacity (circa 850 people) and it is believed that nearly all of the car parking spaces were used in these instances.
- 3.6 As a point of clarification, and as will be seen later, the proposed venue will cater for a maximum of circa 500 people.

Site Location and Function

- 3.7 The proposed site is the former Stanmore & Edgware Golf Centre, located on Brockley Hill, Stanmore, LB Harrow, HA7 4LR. Though, the border between LB Harrow and LB Barnet is drawn along the centre of Brockley Hill. It is also of note that Brockley Hill is under the jurisdiction of LB Barnet.
- 3.8 The site is located around 1.3 km north-east of Stanmore district centre and around 850m north-east (straight line) of Stanmore underground station. A location plan is included at **Appendix A**.
- 3.9 The Golf Centre, which closed in Autumn 2019, housed a 49-bay driving range, and a 9-hole par-3 golf course which also offered footgolf. There is an on-site parking area for circa 95 cars.
- 3.10 The site is proposed to rehouse Premier Banqueting London Ltd which is owned by the applicant. The current Premier Banqueting venue is located at 1 Canning Road, LB Harrow HA3 7TS in the centre of Wealdstone, LB Harrow, around 4.3 km south-west of the application site. The Premier Banqueting venue provides for functions such as weddings and conferences. The Council-owned car park used by the existing site is scheduled to be

demolished, hence the applicant's desire to secure new premises, within LB Harrow to retain its clientele.

Pre-Applications Discussions

- 3.11 Highways pre-application meetings were held with LB Harrow and LB Barnet in January and February 2020, respectively, with discussions continuing through the evolution of the proposals. Summaries of the highways pre-application meetings, agreed by the respective Highways Offices, are included at **Appendix C**.
- 3.12 The discussions were largely positive, particularly with regard to traffic impact (i.e. through expected net trip generation and expected modal shares, limiting vehicle movements).
- 3.13 Questions were raised, however, on the following issues relating to transport and highways:
- Highway safety, notably regarding right-hand turns into the site from Brockley Hill;
 - Access width/design, ensuring simultaneous access and egress; and
 - Trip generation when combining development traffic with committed developments and trips to Wembley Stadium. (the matter of Wembley Stadium was raised by planning officers not highway officers)
- 3.14 These matters are addressed accordingly throughout Chapters 3 to 5.

Site Access

- 3.15 The site is accessed from Brockley Hill (A5), roughly midway between its junction with Wood Lane to the north and the A410 (London Road/Spur Road) to the south. The access road is around 5m in width, widening with radii at the junction of Brockley Hill. The existing access will be amended as part of the development proposals to suit its proposed function.
- 3.16 It should be noted that Brockley Hill (A5) was previously a trunk road serving local, regional and national traffic movements between London and Holyhead in north Wales. Prior to network re-arrangements this section of the A5 would most likely have been subject to significantly higher traffic levels than at present.

Traffic Levels

- 3.17 An ATC was laid on Brockley Hill between Thursday 30th January and Wednesday 5th February 2020, around 50m north of the site access. The ATC was placed north of the access to capture the impact of the gradient sloping down towards the access from the north, which was anticipated to result in high vehicle speeds from this direction.
- 3.18 The 5-day 4-hour (10:00-12:00 and 14:00-16:00) average 85th percentile speeds were 40.6mph for northbound traffic and 46.4mph for southbound traffic; as expected, with the gradient sloping down towards the access from the north, southbound speeds were greater.
- 3.19 Using DMRB guidance for calculating visibility splays, required stopping sight distances are 2.4m x 103.6m to the south for northbound traffic and 2.4m x 129.3m to the north for southbound traffic. Visibility splays exceeding these lengths can be achieved at the existing access, and indeed the proposed access, as illustrated on the drawing contained at **Appendix D**.

- 3.20 The ATC also recorded traffic volumes on Brockley Hill passing the site. Weekday peak period traffic flows are summarised in Table 3.1 below. The full ATC data are included at Appendix E.

Table 3.1 – Traffic counts on Brockley Hill (A5) passing the site

Direction	AM						PM					
	08:00-09:00			07:00-10:00			17:00-18:00			16:00-19:00		
	Car	LGV / HGV	Total *	Car	LGV / HGV	Total *	Car	LGV / HGV	Total *	Car	LGV / HGV	Total *
Northbound	442	34	481	1,172	98	1,286	371	15	390	1,108	52	1,173
Southbound	385	27	415	1,196	102	1,316	484	31	522	1,278	89	1,382
Total	827	61	896	2,368	200	2,568	855	46	912	2,386	141	2,555

* Total values include motorcycles and pedal cycles

Road Safety

- 3.21 The CrashMap website was used to ascertain the history of road traffic incidents near to the site. In the ten-year period 2010 to 2019 inclusive, three incidents rated as 'slight' occurred at or near the site access.
- 3.22 Based on the available descriptions, it is understood that all three collisions involved vehicles turning at the site access. One involved a vehicle waiting to turn right (into the site) being impacted from behind. One involved a car turning right impacting a passing motorcycle. The details of the third incident are unclear, though it is inferred that a car was held up by a vehicle in front performing a right-hand turn and was then impacted from behind by another car.
- 3.23 A 'severe' incident involving two vehicles occurred around 150m north of the site access; a 'slight' incident involving a cyclist impacting the kerb occurred some 80m south of the site access.
- 3.24 As requested during pre-application discussions with LB Barnet, the highway safety review has been extended to roads 1.5km around the site over the past five-year period. Table 3.2 below summarises the findings of the accident review.

Table 3.2 – Accident review – Classified by Year and Severity

	2015	2016	2017	2018	2019	Total
A5 Brockley Hill / Site Access						
Slight	1	1	0	0	0	2
Serious	0	0	0	0	0	0
Fatal	0	0	0	0	0	0
Total	1	1	0	0	0	2
A5 Brockley Hill / Wood Lane / Institute of Orthopaedic & Musculoskeletal Science						
Slight	3	2	0	0	1	6
Serious	0	0	1	0	0	1
Fatal	0	0	0	0	0	0

Total	3	2	1	0	1	7
A5 Brockley Hill / A410 London Road / Spur Road / A5 Stonegrove						
Slight	5	6	4	2	1	18
Serious	2	1	0	0	0	3
Fatal	0	0	0	0	0	0
Total	7	7	4	2	1	21
A5 Stonegrove / Lacey Drive / Pangbourne Drive						
Slight	0	1	2	1	0	4
Serious	1	0	1	0	0	2
Fatal	0	0	0	0	0	0
Total	1	1	3	1	0	6
A41 Edgware Way / Spur Road						
Slight	5	1	1	1	1	9
Serious	0	1	0	0	0	1
Fatal	0	0	0	0	0	0
Total	5	2	1	1	1	10
A5 Brockley Hill / A41 Edgware Way / Elstree Hill South / A41 North Western Avenue						
Slight	1	1	2	0	1	5
Serious	1	2	1	1	0	5
Fatal	0	0	0	0	0	0
Total	2	3	3	1	1	10

- 3.25 It is also pertinent to note that the number of serious injury collisions at the only high-speed road, namely the A41 Edgware Way, which becomes A41 North Western Avenue to the north, is higher than at other junctions, due to the higher speeds involved in these incidents. The number of accidents at these junctions was not noted to be abnormally high.
- 3.26 A total of seven collisions were recorded at the A5 Brockley Hill / Wood Lane / Institute of Orthopaedic & Musculoskeletal Science. At this location, two side roads to the east of the A5 are located within close proximity, within an area of limited forward visibility. These collisions involved six slight injuries and one serious injury accidents. It is noted that for the majority of the collisions only cars were involved, which is very typical of simple priority junctions on roads restricted to 40mph.
- 3.27 The junction with the largest number of recorded collisions was the A5 Brockley Hill / A410 London Road / Spur Road / A5 Stonegrove roundabout, which is the main access between Stanmore and the surrounding areas to the east of the M1 and the A41 into the arterial road network, where a total of 21 collisions were recorded over five years, three of which resulted in serious injury, and an average of six collisions a year.
- 3.28 Whilst this roundabout is designed to DMRB standards, it is noted that the limited inscribed circle diameter requires wide crossing points, which are not ideal within an urban setting. A review of the incidents at this location noted that only one slight injury incident involved a cyclist, and none involved children. It is noted that two serious injury and two slight injury collisions involved pedestrians one at the roundabout, and one at the western approach (30m before the give way line). It is also noted that a signalised crossing across London Road is available within 100m of the latter location, as well as at other locations within close proximity of this roundabout.

- 3.29 Considering that this roundabout is located almost 800m away from the site access, and the banqueting/wedding venue land use, it is considered highly unlikely that a visitor will attend on foot. It is highly unlikely that any change of use of the site would generate any increased risks. It is also worth pointing out that any pedestrians walking from Stanmore will not need to cross the road to get to the venue, since it is on the same side of the road, or can do so safely at the existing signalised crossings on London Road.
- 3.30 It is therefore concluded that the highway around the site is safe, and no accident clusters have been noted within 1.5km of the site. Whilst there may be benefits in reducing the speed limit to 30mph on A5 Brockley Hill, it is not considered essential for the safe operation of the site with the proposed development.
- 3.31 Further, as will be seen later, an off-set of traffic movement will result in potentially less traffic than at present in the vicinity.

Healthy Streets Assessment

- 3.32 In line with the Mayor’s healthy streets approach, an ATZ (active travel zone) healthy streets assessment was carried out. This involved walking from the site to a number of services and facilities, rating the walked route against the healthy streets indicators, illustrated by photographs, with suggestions made on how the site’s active travel zone could be improved.
- 3.33 Figure 3.1 below is taken from the TfL WebCAT time-mapping feature, illustrating how far one can get from the site in given time using active and public transport.

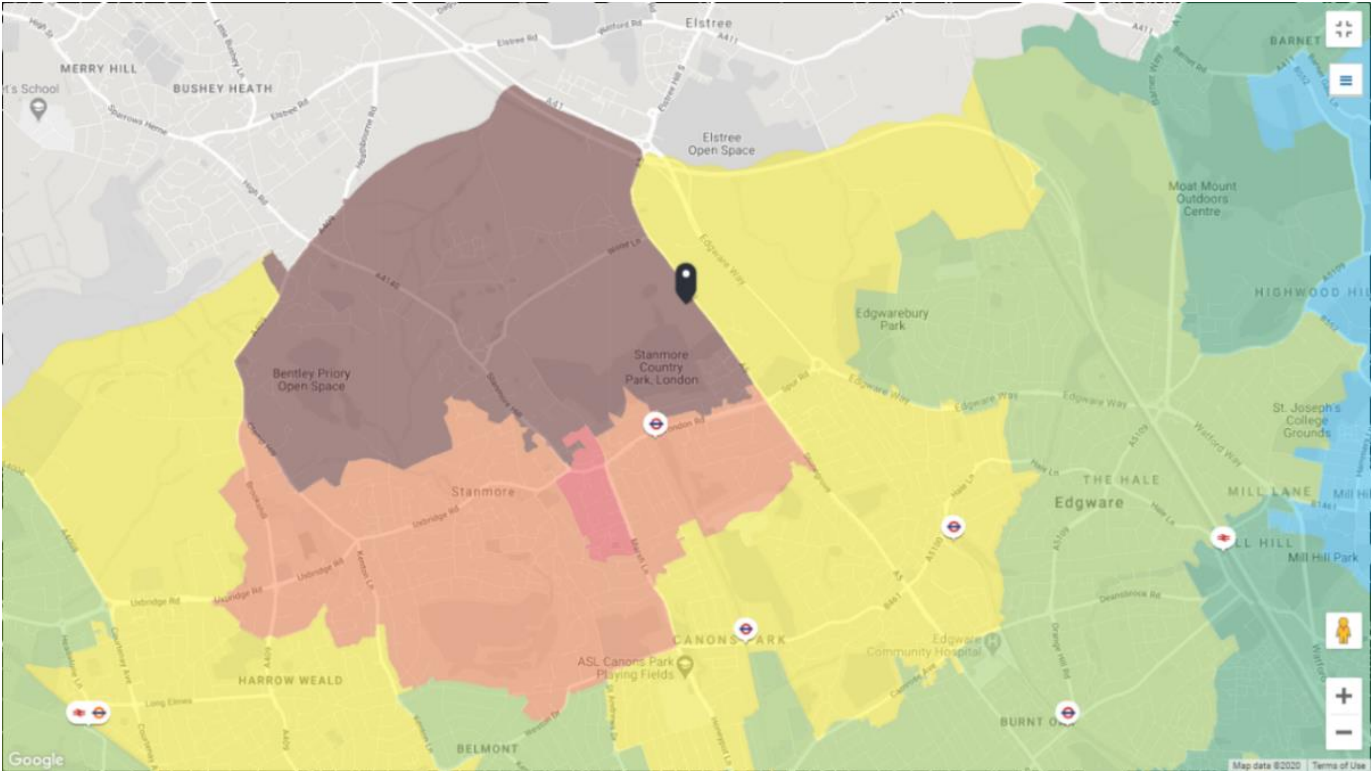


Figure 3.1 – TfL WebCAT time-mapping

10 - 15 mins	15 - 20 mins
20 - 25 mins	25 - 30 mins
30 - 35 mins	35 - 40 mins

3.34 The full ATZ report is submitted alongside this Transport Assessment.

Walking and Cycling

- 3.35 The site is a 1.5 km 19-minute walk, or 5-minute cycle from the Stanmore underground station. The Stanmore neighbourhood parade, a minor town centre area, is reached in a 2.1 km 26-minute walk, or 7-minute cycle from the site.
- 3.36 Regardless, walking and cycling is unlikely to be a serious means of access for guests, particularly for events like weddings. Although, walking and cycling could be viable transport modes for staff.
- 3.37 There is a footway along the western side of Brockley Hill; though with a lack of maintenance the adjacent verge has overgrown onto it, reducing its width. The footway continues north from the site towards the Royal National Orthopaedic Hospital and Elstree.
- 3.38 It also extends south from the site to the A5/A410 roundabout; after circa 330m south from the site a roundabout with Pipers Green Lane is reached, after which a footway commences on the eastern side of Brockley Hill, while the western footway widens through increased maintenance.
- 3.39 At the A5/A410 junction, around 750m walk from the site access, there are uncontrolled pedestrian crossing points that provide access in all three directions, with facilities and services available to the west and south. Heading west on London Road, a short shopping parade is immediately passed, followed by Stanmore underground station after around 650m and then Stanmore neighbourhood parade local centre a further 400m on. A wide range of services are available here.
- 3.40 However, there is limited cycle infrastructure in the area, particularly between the site and nearby services. Brockley Hill is relatively narrow, around 6m in width, without any cycle lanes, which may deter less confident cyclists. Although, once onto London Road, the main carriageways are flanked by separate residential access through-roads for around 650m, before painted cycle lanes emerge on the highway shortly before Stanmore underground station. These continue to the Stanmore local centre area, within which there are advanced cycle stop lines at junctions, some degree of physical separation between vehicle traffic and cyclists, plus cycle parking stands.
- 3.41 The site borders Stanmore Country Park to the west and north, and Cleopatra Close Park to the south.

Bus Services

- 3.42 The Pipers Green Lane bus stops are located around a 300m 4-minute walk south of the site on Brockley Hill, just past its roundabout junction with Pipers Green Lane. These bus stops serve the 107 route, which serves between New Barnet and Edgware, via Borehamwood and Elstree in Hertfordshire. In general, throughout the course of the day, there are 4 buses travelling in each direction every hour passing the site frontage, or 8 in total every hour.

- 3.43 In an 11-minute 900m walk south from the site, the 142 bus route can be accessed at the Canons Corner bus stops (Stops K and M). This route serves between Watford and Brent Cross, via Bushey, Stanmore and Edgware.
- 3.44 At Stanmore Station (Stop A), a 19-minute 1.6km walk from the site, the 324, H12 and N98 bus routes can also be accessed; these three bus routes commence and terminate at Stanmore station. The 324 route serves to Brent Cross; the H12 bus route serves to South Harrow.
- 3.45 Tables 3.3a to 3.3d summarise the 107, 142, 324 and H12 bus routes.

Table 3.3a – Summary of 107 bus route (Pipers Green Lane bus stops)

107 (Pipers Green Lane)	Buses per hour		Eastbound to New Barnet		Southbound to Edgware	
	Daytime	Evening	First bus	Last bus	First bus	Last bus
M – F	4	2 – 4	05:01	00:11	05:38	00:53
Sat	4	2 – 3	05:01	00:11	05:38	00:53
Sun	3	2	06:06	00:11	06:48	00:53

Table 3.3b – Summary of 142 bus route (Canons Corner bus stops)

142 (Canon Corner)	Buses per hour		Northbound to Watford		Southbound to Brent Cross	
	Daytime	Evening	First bus	Last bus	First bus	Last bus
M – F	4 – 6	2 – 4	05:08	01:28	05:06	01:24
Sat	4 – 5	2 – 4	05:08	01:28	05:06	01:24
Sun	4	2 – 4	06:23	01:28	06:22	01:24

Table 3.3c – Summary of 324 bus route (Stanmore Station bus stop)

324 (Stanmore Station)	Buses per hour		Southbound Brent Cross		Northbound terminus	
	Daytime	Evening	First bus	Last bus	First bus	Last bus
M – F	3	2 – 3	05:20	00:15	-	-
Sat	3	2 – 3	05:20	00:15	-	-
Sun	3	2 – 3	05:20	00:15	-	-

Table 3.3d – Summary of H12 bus route (Stanmore Station bus stop)

B12 (Stanmore Station)	Buses per hour		Southbound South Harrow		Northbound terminus	
	Daytime	Evening	First bus	Last bus	First bus	Last bus
M – F	3	2 – 3	05:20	00:15	-	-
Sat	3	2 – 3	05:20	00:15	-	-
Sun	3	2 – 3	05:20	00:15	-	-

- 3.46 The N98 bus route is a night-bus that serves to central London with 2 services per hour between 23:50 and 04:55 every day.
- 3.47 Several bus routes can also be accessed at Edgware underground station – In an 8-minute cycle or 10- to 20-minute bus journey – Including the N5 and N16 night-buses which provide 2 additional routes into central London, each with 2 services per hour between around midnight and 05:00.

Rail Services

- 3.48 Stanmore underground station is located a 1.5 km 19-minute walk or 5-minute cycle walk from the site. The station is the northern terminus of the Jubilee line. Stanmore station can also be reached in a 12- to 16-minute journey via the 142 bus.
- 3.49 Edgware underground station, a northern terminus of the Northern line, can be reached in a 2.7 km 8-minute cycle, or 10- to 20-minute journey via the 107 or 142 bus.
- 3.50 On weekdays, services depart from and arrive at Stanmore and Edgware stations between roughly 05:30 and 00:00. In the peak hours, around 18 services arrive to and depart from each station.
- 3.51 However, the 3 night-bus services available at Stanmore and Edgware stations extend public transport services after underground services have stopped running for the night.
- 3.52 The closest direct interchange station is Wembley Park on the Jubilee line, which is also served by the Metropolitan Line. Wembley Park is a 12-minute tube journey from Stanmore. From Wembley Park, the Metropolitan Line northbound passes key stations in LB Harrow, including its busiest station, Harrow-on-the-Hill.

Summary

- 3.53 The existing Premier Banqueting London Ltd venue hosts functions such as weddings and conferences for multi-cultural audiences. It is currently located in Wealdstone, LB Harrow post code HA3 7TS. Due to the scheduled demolition of council-operated parking provision which the existing Premier Banqueting site currently utilises, the venue is proposed to be relocated.
- 3.54 The existing venue has capacity to cater for an absolute maximum of 850 people and makes use of the adjacent Harrow owned car park. This car park is used for around two thirds of events where the number of guests generally exceeded 250.
- 3.55 In 2019 the banqueting operators confirmed that the maximum use of the car park was qualitatively considered to be around 80 to 100 spaces and it is confirmed that the maximum sized event was 550 people. However, in the past when there have been events to full capacity (circa 850 people) and it is believed that nearly all of the car parking spaces were used in these instances.
- 3.56 The proposed site is the former Stanmore & Edgware Golf Centre, located on Brockley Hill, Stanmore, LB Harrow HA7 4LR. Brockley Hill is under the jurisdiction of LB Barnet. The site is located around 1.3 km north-east of Stanmore district centre and 850m north-east (straight line) of Stanmore underground station. A location plan is included at **Appendix A**.
- 3.57 The site previously comprised of a 49-bay driving range and a 9-hole par-3 golf (and footgolf) course, which closed in autumn 2019. The site is accessed from Brockley Hill and there is currently an on-site parking area for around 95 cars.
- 3.58 Highways pre-application meetings were held with LB Harrow and LB Barnet (as Brockley Hill is under the jurisdiction of LB Barnet) in early 2020, with dialogue continuing through the design period. Discussions were largely positive, such as with regard to trip generation and modal shares, though questions were raised regarding highway safety. Summaries of the highways pre-application meetings held with LB Harrow and LB Barnet are contained at **Appendix C**.

- 3.59 These are addressed accordingly, through the proposed redesign of the site access, supported by other measures; the carrying out of a robust accident analysis (which found no noticeable cluster of accidents); and agreement of support by the applicant for a reduction in the speed limit on Brockley Hill from 40mph to 30mph, as proposed by Council Highways officers (who confirmed that this would be beyond the scope of this application). Further details on these matters is provided in Chapter 4.
- 3.60 An ATC laid near to the site access on Brockley Hill in January/February 2020 recorded 5-day average 85th percentile speeds of 40.6 mph and 46.4 mph for northbound and southbound traffic, respectively. Based on DMRB guidance these equate to stopping sight distances of 2.4m x 103.6m to the south and 2.4m x 129.3m to the north. Visibility in both directions is achieved in excess of these distances, as illustrated in the drawing contained at **Appendix D**.
- 3.61 A Healthy Streets Active Travel Zone (ATZ) assessment was carried out which identified a number of potential improvements to benefit active travel. The full ATZ assessment is submitted alongside this Transport Assessment.
- 3.62 A footway runs along the full length of the western side of Brockley Hill (the same side as the site). The 107 and 142 bus routes can be accessed in a 4- and 11-minute walk from the site, respectively. The 325 and H12 bus routes, as well as the N98 night bus all commence at Stanmore underground station (Jubilee line), in a 19-minute walk from the site. Several bus routes including two other night bus routes can be accessed at Edgware underground station (Northern line) which is an 8-minute cycle or 10- to 20-minute journey from the site via bus.
- 3.63 The proposed site is undeniably less accessible to public transport than the current venue, although with 8 buses passing the site access every hour it cannot be considered to have poor accessibility and as a matter of contrast, should this site have been located outside of Greater London in a similar setting it would have been considered to have very good public transport accessibility. Despite this, as is discussed in Chapter 4, public transport comprises of very few guest trips to the current venue, with a mixture of cars, taxis and coaches providing the vast majority of guest transport but with a high and sustainable ride share.

4 The Proposed Development

Development Context

- 4.1 The site is part of the former Stanmore & Edgware Golf Centre located on Brockley Hill, Stanmore, LB Harrow HA7 4LR. The site is located around 1.3 km north-east of Stanmore town centre area. **Appendix A** contains a location plan which illustrates the application site boundary. The border between LB Harrow and LB Barnet is drawn along Brockley Hill, with LB Barnet as the incumbent highway authority for the road.
- 4.2 The site is proposed to rehouse the existing Premier Banqueting London Ltd' venue that is currently located in Wealdstone, LB Harrow. Due to the scheduled demolition of council-operated parking provision (to facilitate the council's new civic centre) which the existing Premier Banqueting site currently utilises, the venue is proposed to be relocated to the former Stanmore & Edgware Golf Centre, which the applicant has recently acquired.

Development Proposals

- 4.3 The existing building will be demolished with a new building proposed to be constructed in its place. This will house a banqueting space for up to circa 500 guests with associated front and back of house areas. It is worthy of note that the existing banqueting venue in Wealdstone can accommodate up to 850 people.
- 4.4 The existing site access will be amended to allow simultaneous access and egress by coaches, as well as access by refuse vehicles. The access will also contain an island to prevent right turns into the site (from the north), supported by information regarding access to the site provided on the commercial webpage, signage, the Delivery and Servicing Plan and the Travel Plan. This information will advise that all drivers approach from the south which, owing to the local road network, will be the main direction of travel. The design of the proposed access, including details of signage, is illustrated on the drawing contained at **Appendix F**.
- 4.5 It is proposed that the speed limit on Brockley Hill will be reduced to 30mph and this is supported by Barnet who maintain this road.
- 4.6 The site's parking area has also been redesigned to reduce it from 95 to 68 spaces; with an additional 16 (for a total of 84 spaces) that can be made accessible through the temporary removal of a large planter. Further rationale behind the proposed level of parking is provided later in this chapter.
- 4.7 Policy-compliant covered cycle parking, as well as shower, locker and changing facilities, will be provided. A new footpath into the site from Brockley Hill, south of the vehicle access, will be constructed. This will separate pedestrian from vehicle movements and provide a more pleasant entry to the site and proposed venue.
- 4.8 The proposals have evolved significantly through planning and highways pre-application discussions with LB Harrow (also with LB Barnet for highways); and later with pre-application discussions with the GLA. The development proposals are included at **Appendix B**.

Road Safety Audit

- 4.9 A Stage 1 Road Safety Audit has been carried out for the proposed access, which identified two recommendations as follows:
- It recommended that the Design Team provide information regarding the potential U-turn routes expected to be taken by drivers approaching the site from the north. It is recommended that Auto Tracking is provided detailing whether these are suitable for all expected vehicle manoeuvres.
 - It is recommended that the Design Team introduce clear pedestrian crossing facility within the proposed traffic island.
- 4.10 With respect to the first item raised, as previously described, all information associated with travel to the site will advise drivers to arrive from the south. Of course, signage could also be implemented so that any that do arrive from the north are advised to avoid U turning at the mini roundabout serving Pipers Green Lane and route further to the A410 roundabout.
- 4.11 With respect to the second item raised, a clear pedestrian crossing facility will be incorporated at the S278 detailed design stage. Details of the Road Safety Audit are included at **Appendix G**.

Banqueting Events Schedule and Timings

- 4.12 The existing site's 2019 events schedule was used to ascertain and summarise event frequency, attendance, and start and finish times. The 2019 events schedule is contained at **Appendix H**. It should be noted that EAS were appointed to the project in December 2019 and were in a position to undertake surveys in January 2020 for pre application discussion purposes with an intent to undertake further surveys as the project progressed, unfortunately the CV19 pandemic has led to the current closure of the existing facility and no further events were able to be surveyed.
- 4.13 In 2019, 185 events were held at the existing Premier Banqueting site, equating to around 1 every 2 days. On circa 20 days over the year there were two events held on a single day; a lunchtime and an evening event. Events were held on around 80% of Saturdays, 55% of Sundays and on average on 1.8 weekdays per week.
- 4.14 A similar frequency and distribution of events are expected for the proposed site.
- 4.15 In 2019, circa 85% of weekday events started at around 18:00, finishing between 00:00 and 01:00. The remainder generally ran from 09:00 or 10:00 to around 16:00. Weekend events followed similar start and finish times, though with a higher proportion of lunchtime events. On Saturdays in 2019, around 60% of events were evening events between circa 18:00 and 00:00 or 01:00, with around 40% as lunchtime events running from around 10:00 to 16:00. On Sundays, around half of the events were lunchtime and half evening events.
- 4.16 Generally, higher capacity events follow these approximate times, while smaller events are more likely to be those occurring with different start and finish times. Similar event timings are expected for the proposed site.

Banqueting Attendance and Staffing

4.17 The events schedule of a typical fortnight is summarised in Table 4.1 below.

Table 4.1 – Premier Banqueting London Ltd typical fortnight events schedule

Day	Event start time	Event finish time	Attendance
Monday	-	-	-
Tuesday	-	-	-
Wednesday	-	-	-
Thursday	18:00	00:00	300
Friday	18:00	01:00	200
Saturday	10:00	16:00	450
Sunday	18:00	01:00	400
Monday	-	-	-
Tuesday	18:00	00:00	250
Wednesday	-	-	-
Thursday	-	-	-
Friday	18:00	01:00	400
Saturday	18:00	00:00	350
Sunday	11:00	16:00	400

- 4.18 Higher capacity events tend to occur at the weekend; in 2019, the mean attendance of weekend events was 370, while weekday events were attended by an average of 260 guests. Overall, average attendance in 2019 was 316 guests.
- 4.19 The existing site in Wealdstone has a capacity of 850 guests, though this is seldom reached. However, the proposed site has a capacity of circa 500 guests. Based on attendance in 2019, a 500-guest event would be expected to occur around once per month.
- 4.20 The venue operates a casual staffing system, as shifts are not regular or full-time. For a given event, the staff present will comprise 1 or 2 managers, 3 to 5 chefs, plus 1 waiter per 20 guests. The venue also provide 'dry hire' bookings, where only the front of house areas are used with patrons bringing their own food, with accordingly fewer staff attending.
- 4.21 For a full circa 500-guest event – expected to occur around once per month – there would be around 30 staff at the site. For an average-sized event of 316 guests there would be around 21 staff at the site. These would not all arrive and depart simultaneously, instead doing so staggered over 1 to 2 hours in setting up before and clearing after an event.

Banqueting Guest Travel

- 4.22 To ascertain the travel characteristics of guests, a travel survey was produced that was completed by guests attending two events, on Thursday 16th and Friday 17th January 2020. These respectively represented a small and a large event, attended by circa 65 and 500 guests, all of whom were surveyed at each event. The survey obtained data on modal splits, vehicle occupancy, attendance, plus arrival and departure times. A copy of the questionnaire used is contained at **Appendix I** and the results are included at **Appendix J**.
- 4.23 The data were used to estimate the level of vehicle trip generation associated with guest travel to events at the proposed site. It was found that there was frequent use of coaches to transport guests to the site, with the remainder largely travelling in cars and taxis, with high car share rates.

- 4.24 Coaches tend to be used for larger events, which consequently reduces the number of vehicle trips and demand for guest parking. As occurs at the existing site, patrons will continue to self-organise coaches to transport guests to the site, particularly for larger events. The majority of guest respondents travelled to the site from north and west London, with clusters in Watford, Luton, as well as further afield such as from Bolton. In these instances, coaches were often used.
- 4.25 A map included at **Appendix K** illustrates the home locations of guests who completed the travel survey.
- 4.26 Having dropped guests off at the site, the coaches would wait at a suitable coach parking facility before returning to pick-up the same guests at the end of the event. Daytime coach parking spaces are available at London Sovereign Edgware Depot between 09:00 and 17:30, located a 7-minute drive from the site. There is also 24-hour coach parking available at Wembley Stadium, located a 20-minute drive from the site.
- 4.27 However, it is also proposed that for events that involve a relatively high proportion of guest-trips by coach and thus relatively few by car (and taxi), coaches would be able to park in (perpendicular to) the car parking bays; 10 car parking spaces would be sufficient room for a coach to smoothly manoeuvre into and out of the spaces.
- 4.28 Other eventualities may also arise and the possibility of coaches parking on site would of course depend on the numbers of cars also attending. A further option available is for coaches to wait off site as is the situation at the existing venue. In this circumstance the applicant also owns a Hotel in Elstree where coaches would be able to wait over. The Hotel is a 5 to 8 minute drive from the site depending on the route chosen.
- 4.29 Further details on trip generation are given in Chapter 5.

Banqueting Staff Travel

- 4.30 For the current banqueting venue there are a bank of staff who are therefore locally based and will tend to travel to site using public or active transport. Although, managers will generally travel to site by car. Staff will generally arrive and leave before and after guests.
- 4.31 The 107 and 142 bus routes can be accessed in a 4- and 11-minute walk from the site respectively, with 16 to 20 bi-directional services between them per hour throughout the day. Alternatively, Stanmore underground station (Jubilee line) can be reached in a 19-minute walk or 6-minute cycle from the site, while Edgware underground station (Northern line) can be reached in a circa 15- to 22-minute journey via either the respective 107 or 142 bus routes.
- 4.32 Evidently, travel to the site using sustainable modes is viable. Although, for events finishing at later than around 00:00, staff may be unable to travel by bus to a nearby rail station or other destination. In such instances, lifts by taxi and/or minibus would be arranged by the management to transport staff as necessary. Further details of this are given in the Travel Plan that accompanies this Transport Assessment.
- 4.33 Assuming that staff will travel to site using a total of 5 cars, with car sharing and use of alternate modes for the remaining staff, there would therefore be 10 two-way vehicle trips by staff for a typical event, in addition to the number of two-way trips by guests, as given previously in this chapter.

Wembley Stadium Events

- 4.34 During the planning pre-application with LB Harrow, Planning Officers requested that considerations were made to the impact of events at Wembley Stadium on traffic levels and junction modelling with respect to trip generation from the proposed site. However, this was not made apparent until the impacts of Covid-19 on traffic and events (and accordingly to the validity of any traffic surveys) were in effect, preventing the comparison of junction modelling between event and non-event days.
- 4.35 In absence of comparable survey data, the schedule of events at both Wembley Stadium and Wembley Arena were studied. It was noted that when there are lots of events scheduled at either Wembley Stadium or Wembley Arena, there were very few or rather no events occurring at the other venue. With this in mind, the capacity of Wembley Arena is just 12,500, while events at Wembley Stadium have a capacity of 85,000 to 90,000 for sports events, and up to 115,000 for music events. Thus, assessing the impact of Wembley events was limited to that of events at Wembley Stadium.
- 4.36 The events schedule for Wembley Stadium from June 2019 to August 2020 was available on the stadium's website, meanwhile, the events schedule for the current Premier Banqueting venue was available for the 2019 calendar year. Thus, to allow comparison of a full year, the events at Wembley Stadium between January and May 2019 were established using the events scheduled for January to May 2020 and searching for details of the equivalent event in 2019, as the annual schedule is broadly similar. Although, the schedule for summer 2020 included hosting of the UEFA Euro 2020 tournament, but such events occur very infrequently; the last such events were the 2012 Olympic Games and UEFA Euro 1996 before that.
- 4.37 For music events, doors generally open at 17:00, with the event starting between 18:30 and 20:00, and finishing by 22:30. For sports events, doors generally open between 13:00 and 15:30, starting between 15:00 and 17:30 (although some start at 19:45 or 20:00) with the majority finishing between 17:00 and 19:00 (though some finish between 20:00 and 22:00). In comparison, events at Premier Banqueting generally commence at 18:00 and finish at 00:00 or 01:00. Saturday, Sunday, Friday and Thursday are the days on which events are most frequently held at both Wembley Stadium and at Premier Banqueting.
- 4.38 Including the time to get through the crowds and queues and into and out of Wembley Stadium, it would likely be in the order of between a circa 45-minute and 1:15-hour journey between the Stanmore area and Wembley Stadium.
- 4.39 Taking this into account to typical event times, it is expected that there would rarely be a clear interaction between traffic associated with the proposed site and with Wembley Stadium.
- 4.40 Table 4.2 below takes the typical Premier Banqueting event schedule from Table 4.1 and compares this to a busy period of events (June 2019).

Table 4.2 – Comparison of event timings of Premier Banqueting and Wembley Stadium

Day	Premier Banqueting event times	Premier Banqueting attendance	Wembley Stadium event times
Monday	-	-	-
Tuesday	-	-	-
Wednesday	-	-	-
Thursday	18:00 – 00:00	200	17:00 – 22:30

Friday	18:00 – 01:00	250	17:00 – 22:30
Saturday	10:00 – 16:00	450	17:00 – 22:30
Sunday	18:00 – 01:00	350	17:00 – 22:30
Monday	-	-	-
Tuesday	18:00 – 00:00	150	17:00 – 22:30
Wednesday	-	-	-
Thursday	-	-	-
Friday	18:00 – 01:00	400	17:00 – 22:30
Saturday	18:00 – 01:00	300	18:00 – 22:30
Sunday	11:00 – 16:00	400	17:00 – 22:30

- 4.41 Accordingly, there would likely be some overlap in trips to both Premier Banqueting and to Wembley Stadium at the roundabout at around 15:00 to 16:00, with banqueting guests departing from an afternoon event while Wembley attendees travel to an event in the late afternoon/early evening. Equally, there could be some overlap at around 19:00 with people returning from an afternoon event at Wembley while guests arrive for an evening banqueting event.
- 4.42 Further, any such interactions would equally be occurring in Wealdstone town centre associated the current venue, as well as already occurring in the vicinity of the site with trips associated with the current use of the site.
- 4.43 After being raised as a potential issue by LB Harrow Planning officers, this above reasoning was communicated to the LB Harrow Highways officer as a previous draft excerpt of this Transport Assessment on 19th June 2020, with the officer responding on 6th July without comment of this analysis; suggesting this had been addressed sufficiently. Emails illustrating this are included at **Appendix L**.

Vehicle Access

- 4.44 Vehicle access will continue to be made from Brockley Hill. The existing access will be amended to facilitate access by coaches, which are expected to regularly provide transport for banqueting guests.
- 4.45 The proposed access has junction radii of 10m and an internal access road width of around 5m, widening where it meets Brockley Hill (including the island to prevent right-hand turns in). This will allow simultaneous access and egress by two coaches. Widening of the access will occur to the south due to the siting of a tree to the north of the access and substation on the northern side of the access road within the site.
- 4.46 During highways pre-application discussions with LB Barnet the Officer raised concerns regarding potential accidents in association with the site primarily rear shunt accidents occurring with vehicles waiting to turn right into the site from Brockley Hill. Three such incidents have been identified from the CrashMap website as having occurred in the ten years from 2010 through 2019.

- 4.47 Accordingly, an island will be installed within the access that will prevent right-hand turns into the site from Brockley Hill (i.e. from the north). No right turn for vehicle traffic signs (Figure 4-8; Diagram 612 (S3-2-7)) will be installed on both sides of Brockley Hill to the north of the site, facing southbound traffic. These are illustrated on the drawing of the proposed access which is contained at **Appendix F**.
- 4.48 A Stage 1 Road Safety Audit was carried by Beth Newiss & Associates, details of which are contained at **Appendix G**.
- 4.49 To support the banning of right-hand turns, applied through the Travel Plan, for every event it will be communicated via the patron to all guests (and hired coach drivers) that there is no access to the site from the north, i.e. right turns in are banned.
- 4.50 The LB Barnet Highways officer also requested a collision analysis covering a radius of 1.5km from the site. The results of this are summarised in Table 3.2 and the succeeding text. No accident clusters were identified.
- 4.51 The layout of the proposed access is contained at **Appendix F**, while swept path analysis contained at **Appendix M** illustrates two coaches accessing to and egressing from the site simultaneously; and access by a refuse vehicle contained at **Appendix N**.
- 4.52 The existing footway along the western side of Brockley Hill which meets either side of the access will be retained, with appropriate tactile paving installed to provide an uncontrolled pedestrian crossing point across the site access, connecting the footways north and south of the site access.

Access Visibility

- 4.53 As described in Chapter 3, an ATC laid in January/February 2020 recorded 5-day 4-hour 85th percentile speeds of 46.4mph for southbound traffic and 40.6mph for northbound traffic. Using DMRB standards, these speeds equate to required visibility splays of 2.4m x 129.3m to the north and 2.4m x 103.6m to the south.
- 4.54 Visibility splays in excess of these distances, and indeed in excess of requirements for a 50mph speed limit, can be achieved to the nearside kerb line in both directions. Visibility splays at the new access are illustrated in the drawing contained at **Appendix D**.

Parking

- 4.55 There are no specific quantified car parking standards for D2 banqueting land uses in either the current London Plan (2016), Publication London Plan (December 2020) or LB Harrow Local Plan documents, as these are treated on a case-by-case basis.
- 4.56 The current London Plan states that provision should be consistent with wider transport objectives to reduce congestion and not undermine sustainable transport modes. The new London Plan explains that for developments of D2 land use class with a PTAL of 0-3, provision should be assessed on a case-by-case basis and be consistent with the Healthy Streets Approach. The LB Harrow DMP document explains that London Plan standards should be followed.
- 4.57 However, LB Harrow, LB Barnet and the GLA/TfL all have a degree of influence and responsibility of the transport and highways elements of the proposed development. They

also all have differing approaches and perspectives to transport and highways, all of which must be considered.

- 4.58 The GLA, supported by TfL, prefer to see as little parking as possible and support schemes that involve investment to facilitate use of active and public transport. LB Barnet will have concerns about overspill parking onto their network, especially Brockley Hill, and so would prefer greater parking provision to avoid this eventuality being particularly conscious of the potential for traffic collision. To this end, preventing overspill parking on Brockley Hill is a concern sufficient as for LB Barnet to seek maximum parking at the site. LB Harrow are perhaps somewhere in the middle of these 2 perspectives, with a pragmatic approach seeking to promote sustainable alternatives while ensuring amenity for private vehicles is not constrained unnecessarily.
- 4.59 Considering these varying perspectives, a degree of flexibility is included with the proposed parking arrangement in order to find a solution deemed acceptable by the 3 highways authorities.
- 4.60 The site has an existing hardstanding parking area containing circa 95 parking spaces. There will be a reduction in the number of spaces, to both facilitate circulation by coaches (and refuse vehicles), as well as to promote sustainable travel.
- 4.61 As per the guest travel surveys carried out, details of which are given in chapter 5, a maximum-capacity circa 500-guest even (that would be expected to occur around once a month) would involve 40 cars, 13 taxis and 11 coaches.
- 4.62 However, further evidence, based on the hire of the Harrow controlled car park in Wealdstone adjacent to the existing venue (its demolition being the catalyst of the venue relocation) suggests that on some occasions in 2019 somewhere of the order of 80 to 100 car parking spaces were utilised.
- 4.63 TfL have made it clear that they want the parking availability as low as possible. It is however an existing car park and therefore any amendment or reduction would require significant works that could be detrimental especially should more than the minimum number of spaces actually be required on some occasions.
- 4.64 To ameliorate TfL's concern, the car park will have 68 fully-operating car parking spaces, with 62 for guests and 6 in a separate staff car park. However, an additional 16 spaces, located on the aisle furthest from the access, (giving a total of 84 spaces; 78 guest spaces), will be available if needed. These 16 spaces will for the most part be blocked with a large planter.
- 4.65 These extra 16 spaces will act as emergency overflow parking provision: this will ensure that any overspill parking does not occur on Brockley Hill. Yet, the presumption will be of an availability of 62 guest parking spaces (plus 6 staff spaces) which would be communicated to patrons as part of the general event travel planning process.
- 4.66 Additionally, it is proposed that where coaches are used in larger numbers, as per the survey results for the large event, available parking spaces at the site can be used to park these coaches, or alternatively as set out earlier, they could wait off site at an appropriate location as is the current situation (such as a hotel belonging to the applicant some 5 to 8 minutes drive away) should it be deemed necessary. Swept path analysis illustrating coaches manoeuvring to park within unused parking spaces at the site is included at Appendix O.

- 4.67 Following consultation on the planning application and the proposals set out above, LB Barnet still have some concerns regarding the potential for overspill car parking from the site onto the surrounding road network
- 4.68 The applicant maintains the position that for larger events guests will be encouraged to travel by coach as opposed to by private car as historically has taken place.
- 4.69 Cognisant of these factors, dialogue regarding travel planning will occur between the site management and the patron during the booking process. This will allow management to communicate the aims of travel planning and the related characteristics of the site, while allowing the patron to convey likely vehicle attendance (i.e. how many cars, taxis and coaches) in order for the management to respond accordingly.
- 4.70 Notwithstanding the fact that management will be able to control the level of car parking on-site in advance of events through Travel Planning measures, to overcome the concerns of LB Barnet, the applicant proposes to secure the provision of off-site parking that can be activated if this is required for less frequent larger events. The applicant has sought legal advice on how this off-site car parking could be secured and how it could be enforced by the Council.
- 4.71 The applicant is willing to enter into a planning obligation via a S106 agreement to provide an Overflow Parking Scheme prior to the occupation of the proposed development. The development would then have to be operated in accordance with this scheme. It would set out the trigger point where the Overflow Parking Scheme would be activated, provide details of the location of overflow parking provision and how the scheme would operate including arrangements for shuttle buses and its management. The applicant is exploring a number of alternative locations that could accommodate overflow car parking, one of which could include the hotel owned and operated by the applicant, The Manor in Elstree.
- 4.72 The size of events and therefore the number of parking spaces required will be recorded by the banqueting facilities management team at the point of booking and planned for by Management in association with guests prior to an event.
- 4.73 Of the 6 proposed staff parking spaces, 3 will be equipped with active electric vehicle charging provision and 3 with passive provision; with 1 of the spaces being a blue badge holder disabled space.
- 4.74 Of the 62 guest spaces, 14 spaces will each have active and passive electric vehicle charging provision. Additionally, 4 spaces each will be for disabled blue badge holders and as enlarged spaces capable of being turned into formal blue badge holder spaces in the future.
- 4.75 Thus, of the 68 spaces there will be a total of 17 with active and passive electric vehicle charging provision; and 5 blue badge holder disabled spaces and 4 enlarged spaces.
- 4.76 There will also be an area allocated for motorcycle parking.
- 4.77 Meanwhile, the layout of the car park has been designed as to allow coaches and refuse vehicles to circulate within the site, avoiding the need for manoeuvring yet allowing forward ingress and egress.

Deliveries and Servicing

- 4.78 The current Premier Banqueting site receives around 3 or 4 delivery and servicing trips per week. This is not expected to change at the proposed site. It will be ensured that delivery and servicing activities do not coincide with events, to maximise highway safety on site. Accordingly, delivery vehicles would be able to park close to the entrance to perform the delivery.
- 4.79 Swept path analysis contained at **Appendix N** illustrates a refuse vehicle is able to ingress to and egress from the site in a forward direction, having parked adjacent to the site's bin store. It is understood that refuse collection will be carried out by a private waste collection contractor.
- 4.80 Further details of delivery and servicing are included in the Delivery and Servicing Plan submitted alongside this Transport Assessment and planning application.

Cycle Parking

- 4.81 LB Harrow policy regarding cycle parking states that the London Plan should be followed. Minimum cycle parking standards for 'other' (i.e. non-sport related) D2 uses are the same for both the current London Plan (2016) and Publication London Plan 2020, as 1 long-stay cycle parking space per eight FTE staff; and 1 short-stay cycle parking space per 30 seats.
- 4.82 With regard to FTE staff, a maximum capacity event would comprise around 30 staff – the most that would be on site concurrently. This equates to a requirement of 4 long-stay spaces to meet the London Plan standards. These will be provided in a secure, internal bicycle store.
- 4.83 For short-stay parking, based on the maximum capacity of circa 500 guests, 17 short-stay cycle parking spaces are required. Yet, realistically guests attending a banqueting venue in their finery will seldom, if ever cycle to the site.
- 4.84 Nevertheless, secure, covered storage for 21 cycles will be provided, comprising of the required 4 long-stay and 17 short-stay spaces. In line with the London Cycling Design Standards, 1 of these spaces will be designed to accommodate adapted or specialist cycles.

Summary

- 4.85 The former Stanmore & Edgware Golf Centre on Brockley Hill, Stanmore, LB Harrow HA7 4LR, is proposed to rehouse the current Premier Banqueting London Ltd facility located in Harrow Wealdstone. The former Golf Centre is proposed to be demolished and replaced by a purpose-built banqueting venue.
- 4.86 The current banqueting venue's 2019 events calendar was used to ascertain the frequency and attendance of events, which revealed there were on average 1 event every 2 days, regularly on Saturdays and often on Sundays, with a high proportion of events running from circa 10:00-16:00 or circa 18:00-00:00/01:00. Average weekend attendance was 370 guests; average weekday attendance was 260 guests; overall mean attendance was 316 guests. A full capacity circa 500-guest event would be expected to occur around once per month. The 2019 events schedule that was used in the analysis is contained at **Appendix H**.
- 4.87 A guest travel survey, an example of which is contained at **Appendix I** and the results at **Appendix J**, found use of coaches for larger events, as well as high rates of car and taxi sharing for both small and large events of roughly 3.3 guest per car and 4.2 guests per taxi.

Very few guests travelled to the current site using public transport, despite it receiving a PTAL of 6a. Use of coaches and high vehicle sharing rates have occurred organically at the current venue without any input from management. However, at the proposed site, through the Travel Plan it will be ensured that guests make maximum use of more sustainable travel modes, i.e. maximising coach use and vehicle share rates.

- 4.88 Staffing comprises of 30 staff for a maximum capacity circa 500-guest event. For an average-sized event of 316 guests, there would be around 21 staff on site. Staff are primarily drawn from a bank of casual, local staff who thus will largely continue travelling to site using public and active transport.
- 4.89 As raised by LB Harrow Planning officers, the possible impact of trip generation associated with events at Wembley Stadium with regard to junction capacity was investigated. Event timings suggest there will rarely be a significant interaction of traffic associated with the proposed site and Wembley Stadium. Further, it was concluded that such traffic interactions would equally be currently occurring in Wealdstone in association with the current venue; as well as having occurred in the vicinity of the proposed site, probably to a greater extent than under the proposals, given the expected net reductions in trip generation that are expected, as detailed in Chapter 5.
- 4.90 The existing access has been redesigned as to allow simultaneous ingress and egress by coaches, access by refuse vehicle, and including an island to prevent right-hand turns into the site (from the north), as requested by LB Barnet Highways. Visibility splays are achieved at the access beyond the required 2.4m x 129.3m (north) and 2.4m x 193.6m (south), corresponding to recorded 5-day 4-hour 85th percentile speeds of 40.6mph (northbound) and 46.4mph (southbound). These are illustrated on the drawing contained at **Appendix D**.
- 4.91 There are no defined LB Harrow or London Plan parking standards for D2 use, with appropriate provision to be decided on a case-by-case basis; this is convoluted further with the differing perspectives on transport and highways of LB Harrow, LB Barnet and the GLA/TfL.
- 4.92 The site's existing 95-space car park has been redesigned with 68 parking spaces, 6 of these being in a separate staff car park. Though, an additional 16 spaces (giving a total of 84; 78 guest spaces) will be installed that will as default be blocked off with a large planter. The extra 16 spaces will act as emergency overflow parking, as to prevent overspill parking off-site; but the presumption will be for an availability of 68 spaces at the site. To provide comfort to LB Barnet that the scheme will not result in the overspill of cars onto the public highway, the applicant is proposing to secure an Overflow Parking Scheme via a S106 agreement as described above.
- 4.93 Additionally, where future events rely on coaches (as per those surveyed) it is proposed that coaches could park in the surplus parking spaces, or alternatively they could overlay off site at a further location owned by the applicant as necessary. This could be The Manor in Elstree, around a 5 to 8 minute drive away, depending on the route chosen. Swept path analysis showing coaches accessing the site are contained at **Appendix M**; and accessing the parking spaces at **Appendix O**.
- 4.94 6 of the 68 spaces will be in a separate staff car park, of which 3 each will have active and passive electric vehicle charging provision. 1 staff space will also be a disabled parking space.

- 4.95 Of the 62 guest spaces, 14 each will have active and passive electric vehicle charging provision, while 4 spaces will be designed as disabled spaces for blue badge holders, with another 4 as enlarged spaces capable of being turned into formal blue badge spaces in the future.
- 4.96 Thus, in line with relevant policy, the site's 68 parking spaces will comprise of 5 disabled parking spaces, 4 enlarged (i.e. future disabled) parking spaces, 17 with active electric vehicle charging provision and 17 with passive provision.
- 4.97 Policy-compliant, secure, covered cycle parking for 21 cycles will be provided, in line with the London Plan. One of these spaces will be designed for adapted cycle, in line with the London Cycling Design Standards.
- 4.98 There are currently around 3 or 4 delivery and servicing trips per week to the current venue. This would not be expected to change at the proposed site. Delivery and servicing trips would not occur during an event, meaning delivery operatives can park close to the building to perform their delivery, while refuse collectors will be able to park adjacent to the site's bin store in order to collect refuse. Further details are given in the Delivery and Servicing Plan submitted alongside this Transport Assessment and planning application. **Appendix N** contains swept path analysis of a refuse vehicle accessing and egressing from the site in a forward gear.

5 Trip Generation

Existing Trip Generation – Golf Use

- 5.1 To estimate trip generation associated with the existing use of the site as a golf centre, the TRICS database was interrogated. Surveys of driving ranges and par-3 golf courses were obtained for both weekdays and weekends. A limited number of surveys precluded multi-modal assessment and necessitated the use of relatively old surveys. Clearly, due to carrying generally heavy golf equipment, golf use tends to have a high car trip rate.
- 5.2 However, golf centres are typically in out-of-town locations, as demonstrated by the ‘free-standing’, ‘out of town’ or ‘edge of town’ locations of the survey sites available. Thus, modal share in trip generation for golf centres has likely been more consistent over time compared to other land uses that tend to be sited in more accessible locations and have benefited from improvements to active and public transport infrastructure.
- 5.3 For driving ranges, three weekday and two weekend surveys were used. For par-3 golf courses, two weekday and three weekend surveys were used. The full TRICS outputs are included at **Appendix P**.

Existing Golf Use Trip Generation – During Network Peak Periods

- 5.4 Based on the ATC data for Brockley Hill, it can be seen that the periods with the most traffic passing the site occur between 07:00 – 09:00 and 17:00 – 19:00 on weekdays; and 13:00 – 16:00 on weekends.
- 5.5 Tables 5.1a to 5.1c below summarise estimated trip generation associated with the existing use of the site, using TRICS data, during the periods of highest traffic flow on Brockley Hill (weekday AM peak; weekday PM peak; weekend peak).

Table 5.1a – Existing golf use weekday trip generation (from TRICS) during AM network peak (as per ATC)

Trips	07:00 – 08:00			08:00 – 09:00		
	In	Out	Total	In	Out	Total
Trip rates per driving range	0.133	0	0.133	0.033	0.067	0.100
Trip numbers for 49 driving ranges	7	0	7	2	3	5
Trip rates per par-3 course hole	0.407	0.037	0.444	1.259	0.185	1.444
Trip numbers for 9-hole par-3 course	4	0	4	11	2	13
Total trip numbers	11	0	11	13	5	18

Table 5.1b – Existing golf use weekday trip generation (from TRICS) during PM network peak (as per ATC)

Trips	17:00 – 18:00			18:00 – 19:00		
	In	Out	Total	In	Out	Total
Trip rates per driving range	0.329	0.343	0.672	0.329	0.200	0.529
Trip numbers for 49 driving ranges	16	17	33	16	10	26
Trip rates per par-3 course hole	0.148	0.963	1.111	0	0.111	0.111
Trip numbers for 9-hole par-3 course	1	9	10	0	1	1
Total trip numbers	17	26	43	16	11	27

- 5.6 It can be seen in Tables 5.1a and 5.1b that trip generation associated with the existing (golf) use of the site is quite low during the weekday network peaks, particularly during the

AM peak. Maximum estimated trip generation during the network peaks is 43 two-way trips from 17:00 – 18:00.

Table 5.1c – Existing golf use weekend trip generation (from TRICS) during afternoon Brockley Hill traffic peak (as per ATC)

Trips	13:00 – 14:00			14:00 - 15:00			15:00 - 16:00		
	In	Out	Total	In	Out	Total	In	Out	Total
Trip rates per driving range	0.918	0.936	1.854	1.255	0.927	2.182	1.000	1.064	2.064
Trip numbers for 49 driving ranges	45	46	91	62	45	107	49	52	101
Trip rates per par-3 course hole	0.778	0.778	1.556	0.926	1.037	1.963	0.815	0.815	1.630
Trip numbers for 9-hole par-3 course	7	7	14	8	9	18	7	7	15
Total trip numbers	52	53	115	70	54	125	56	59	116

- 5.7 Table 5.1c shows that there is considerably greater trip generation associated with the existing (golf) use of the site during the weekend network peak period compared to the weekday network peaks. Two-way trip generation ranges from 115 to 125 between 13:00 and 16:00, with 14:00 – 15:00 being the busiest hour.

Existing Golf Use Trip Generation – During Existing Golf Use Peak Periods

- 5.8 From studying the temporal distribution of trip rates associated with golf uses, it is evident that weekends are busier than weekdays, particularly between 12:00 – 16:00. The busiest weekday periods are 11:00 – 12:00, 14:00 – 16:00, 17:00 – 18:00 and 19:00 – 20:00; although these see peak trip generation of less than half of that which occurs at the weekend. Moreover, at weekends, aside from the early morning (before 09:00) and late evening (after 21:00), trip generation roughly meets or exceeds peak weekday trip generation.
- 5.9 Table 5.2 summarises trip generation associated with the existing use of the site, drawn from TRICS, during the periods of its expected peak trip generation.

Table 5.2 – Existing golf use trip generation (from TRICS) during peak trip generation of existing golf use (as per TRICS)

Times	Weekday			Times	Weekend		
	In	Out	Total		In	Out	Total
11:00 – 12:00	21	27	48	12:00 – 13:00	50	55	105
14:00 – 15:00	18	20	40	13:00 – 14:00	52	53	105
15:00 – 16:00	24	22	45	14:00 – 15:00	70	54	125
17:00 – 18:00	17	26	43	15:00 – 16:00	56	59	116

- 5.10 From Table 5.2 it can be seen that during the periods of peak trip generation associated with the existing (golf) use of the site, two-way trip generation ranges from 40 to 48 movements on weekdays, with 105 to 125 two-way movements during weekend peak trip generation.
- 5.11 Clearly, peak weekend traffic on Brockley Hill coincides somewhat with peak trip generation associated with the existing (golf) use of the site.

Existing Golf Use Trip Generation – During Proposed Banqueting Use Peak Periods

- 5.12 To establish the rate and periods of trip generation associated with the existing Premier Banqueting site – the proposed use of the golf centre site – travel surveys were completed by guests, and the 2019 events calendar was examined. Based on these data sources, it was concluded that the periods of peak trip generation associated with the current Premier Banqueting site, which would not be expected to change with the proposed relocation to the golf centre site, are 18:00 – 21:00 on weekdays and 16:00 – 20:00 on weekends.
- 5.13 Table 5.3 below summarises estimated trip generation associated with the existing golf use of the site that occurs during the periods of peak trip generation associated with Premier Banqueting, as ascertained from the guest travel surveys and 2019 events calendar.

Table 5.3 – Existing golf use trip generation (from TRICS) during peak trip generation of proposed banqueting use (as per travel surveys/2019 events calendar)

Times	Weekday			Times	Weekend		
	In	Out	Total		In	Out	Total
18:00 – 19:00	16	11	27	16:00 – 17:00	39	58	97
19:00 – 20:00	25	20	45	17:00 – 18:00	32	52	84
20:00 – 21:00	8	20	28	18:00 – 19:00	24	34	58
-	-	-	-	19:00 – 20:00	25	30	45

- 5.14 It can be seen in Table 5.3 that trip generation associated with the existing (golf) use of the site, that occurs during the periods of peak trip generation associated with the proposed (banqueting) use of the site, peaks at 45 two-way trips on weekdays and 97 two-way trips on weekends.

Proposed Trip Generation – Guests

- 5.15 There are no appropriate TRICS surveys that can be used to estimate trip generation for the Premier Banqueting venue. Instead, data were drawn the 2019 events schedule at the existing venue and from travel surveys carried out at the existing banqueting venue.
- 5.16 It was found that there were 185 events at the current venue in 2019, with an event on 80% of Saturdays, 55% of Sundays, and with 1.8 events in the average week Monday to Friday. A similar frequency and distribution of events are expected for the proposed site.
- 5.17 Events can generally be grouped as lunchtime or evening events. The former typically run from around 10:00 to around 16:00; the latter generally start at around 18:00 and finish at 00:00 or 01:00. It should be noted that these are the times when the venue is booked from, it is not the actual start of the event i.e the time that doors open to all those partaking. Evening events comprised around 85% of weekday events, 60% of Saturday events and 50% of Sunday events. There was both a lunchtime and an evening event on the same day on around 20 days over the year.
- 5.18 Thus, weekday lunchtime events will start after the AM peak hour and end before the PM peak hour. Weekday evening events will start after the PM peak hour. Weekend lunchtime events will start before the weekend peak period, though some could end during this period. Weekend evening events will start after the weekend peak period.
- 5.19 Using responses to the guest travel survey and corroborating the results with the 2019 event schedule, the spread of arrival times for a typical weekday and weekend event have

been estimated. These are given in Table 5.4 below. Interestingly this shows that in the weekday evenings 91% of guests arrive after 7pm which is to be expected taking into account most people's day to day commitments.

Table 5.4 – Spread of guest arrival times for weekday and weekend events

Weekday event		Weekend event	
Time period	% of guests arriving	Time period	% of guests arriving
17:00-18:00	4.5	17:00-18:00	10
18:00-19:00	4.5	18:00-19:00	70
19:00-20:00	41	19:00-20:00	20
20:00-21:00	47	-	-
21:00-22:00	3	-	-

- 5.20 With regard to departure times, the weekday lunchtime events occur between the AM and PM network peaks, while evening events finish well after the PM network peak. At weekends the departure time is more likely to coincide with the network peak, but this is a much lower peak (than the weekday peaks) in any event.
- 5.21 Expected modal shares, vehicle occupancy, plus guest arrival and departure times were determined through completion of a guest travel survey by attendees of two events at the current Premier Banqueting venue.
- 5.22 A survey was completed by guests attending two events, on Thursday 16th and Friday 17th January 2020. These respectively represented a small and a large event, attended by circa 65 and 500 guests, all of whom were surveyed at each event. The survey obtained data on modal splits, vehicle occupancy, attendance, plus arrival and departure times. A copy of the questionnaire used is contained at **Appendix I** and the results are included at **Appendix J**.
- 5.23 It was found that the circa 65 guests attending the small (65-guest) event travelled to the current venue using:
- 12 cars transporting 39 guests (3.25 guests/car);
 - 5 taxis transporting 20 guests (4 guests/taxi);
 - Circa 6 guests also travelled to site by bus (and walking).
- 5.24 The 500 guests that attended the large (500-guest) event travelled to the venue using:
- 39 cars transporting 133 guests (3.41 guests/car);
 - 12 taxis transporting 53 guests (4.42 guests/taxi);
 - 11 coaches transporting 304 guests (27.64 guests/coach);
 - Circa 10 guests also travelled to site by bus or train (and walking).
- 5.25 The above figures illustrate how events with more attendees encompass use of coaches, as well as slightly higher rates of car and taxi occupancy, mitigating the impact of a greater number of person-trips. Further, the bulk of arrivals for each event occurred over a circa 2-hour period. Times were not collected for departures although it is understood that these typically occur over an extended period of around 1 to 2 hours.

- 5.26 Removing the circa 10 person-trips by public transport from the 500-guest event survey results for robustness, a maximum-capacity circa 500-guest event at the proposed site would be expected to involve circa:
- 40 cars transporting 136 guests (3.4 guests/car);
 - 13 taxis transporting 58 guests (4.46 guests/taxi);
 - 11 coaches transporting 306 guests (27.82 guests/coach)
- 5.27 In terms of traffic movements, there would be 40 inbound car trips at the start of the event. 13 inbound and 13 outbound taxi trips and 11 inbound and 11 outbound coach trips; or 88 vehicle movements in total. The opposite would occur at departure. Such an event would be expected to occur circa once per month and generally on weekends.
- 5.28 The mean guest attendance of an event in 2019 was 316. Taking the same ratios as set out earlier and applying these to estimate transport for a 316-guest event, there would be:
- 26 cars transporting 88 guests (3.39 guests/car);
 - 8 taxis transporting 36 guests (4.5 guests/taxi);
 - 7 coaches transporting 192 guests (27.43 guests/coach).
- 5.29 This would equate to 56 vehicle movement (based on the same principle as above) for both arrivals and departures; thus 112 vehicle movements for an event of mean attendance.
- 5.30 These predicted traffic numbers represent a significant decrease in peak trip generation of the proposed use compared to the existing use, while the proposed number of parking spaces is sufficient.

Proposed Trip Generation – Staff and Other Trips

- 5.31 In addition to guest travel, trips will also be made to and from the site by staff and for delivery and servicing purposes.
- 5.32 Assuming staff for an average event travel to site in 5 cars, with car sharing and use of alternate modes, there would be 5 inbound and 5 outbound vehicle movements or 10 vehicle movements in total by staff per event.
- 5.33 The current Premier Banqueting site receives around 3 or 4 delivery and servicing trips per week. It could be assumed that there would be a similar level of deliveries at the proposed venue.

Net Trip Generation

- 5.34 Having ascertained estimated trip generation associated with the existing and proposed uses of the site, these can be compared to obtain net trip generation.
- 5.35 Tables 5.5a to 5.5c below compare estimated trip generation associated with the existing golf use of the site (from TRICS), with trip generation associated with the proposed banqueting use of the site (from travel survey). Existing use trip generation is compared to proposed use trip generation for an averages-sized 316-guest event and a circa 500-guest event, that would be expected to occur around once a month.

5.36 Table 5.5a compares the existing and proposed trip generation that are expected during the network peak period, as determined by the ATC on Brockley Hill.

Table 5.5a – Existing (from TRICS) vs proposed (from travel surveys) use trip generation during highway network peaks (as per ATC)

Times	Existing use (TRICS)			Proposed use (500 guests)			Proposed use (316 guests)		
	In	Out	Total	In	Out	Total	In	Out	Total
Weekday 07:00 – 08:00	11	0	11	0	0	0	0	0	0
Weekday 08:00 – 09:00	13	5	18	0	0	0	0	0	0
Weekday 17:00 – 18:00	17	26	43	3	1	4	2	1	3
Weekday 18:00 – 19:00	16	11	27	3	1	4	2	1	3
Weekend 13:00 – 14:00	52	53	115	0	0	0	0	0	0
Weekend 14:00 – 15:00	70	54	125	0	0	0	0	0	0
Weekend 15:00 – 16:00	56	59	116	0	0	0	0	0	0

5.37 It is clear that typical trip generation during all network peak periods, on both weekdays and weekends, is far higher for the existing use. Moreover, this trip generation will occur every day under the existing use, while the proposed use trip generation, that is significantly lower, would only occur on days that there are events scheduled.

5.38 Table 5.5b compares existing and proposed use trip generation that would be expected to occur during the periods of highest trip generation under the existing use. Table 5.5c compares these for during the periods of highest trip generation under the proposed use.

Table 5.5b – Existing (from TRICS) vs proposed (from travel surveys) use trip generation during existing use peak trip generation (as per TRICS)

Times	Existing use (TRICS)			Proposed use (500 guests)			Proposed use (316 guests)		
	In	Out	Total	In	Out	Total	In	Out	Total
Weekday 11:00 – 12:00	21	27	48	0	0	0	0	0	0
Weekday 14:00 – 15:00	18	20	40	0	0	0	0	0	0
Weekday 15:00 – 16:00	24	22	45	0	0	0	0	0	0
Weekday 17:00 – 18:00	17	26	43	3	1	4	2	1	3
Weekend 12:00 – 13:00	50	55	105	0	0	0	0	0	0
Weekend 13:00 – 14:00	52	53	105	0	0	0	0	0	0
Weekend 14:00 – 15:00	70	54	125	0	0	0	0	0	0
Weekend 15:00 – 16:00	56	59	116	0	0	0	0	0	0

5.39 From Table 5.5b it can be seen during the busiest periods of trip generation associated with the previous golf use of the site, there would be expected to be minimal trip generation associated with the proposed site.

Table 5.5c – Existing (from TRICS) vs proposed (from travel surveys) use trip generation during proposed use peak trip generation (as per travel surveys and 2019 events calendar)

Times	Existing use (TRICS)			Proposed use (500 guests)			Proposed use (316 guests)		
	In	Out	Total	In	Out	Total	In	Out	Total
Weekday 18:00 – 19:00	16	11	27	3	1	4	2	1	2
Weekday 19:00 – 20:00	25	20	45	26	10	36	16	6	22
Weekday 20:00 – 21:00	8	20	28	30	11	41	18	7	25
Weekend 16:00 – 17:00	39	58	97	0	0	0	0	0	0
Weekend 17:00 – 18:00	32	52	84	6	2	9	4	2	5
Weekend 18:00 – 19:00	24	34	58	45	17	62	27	11	38
Weekend 19:00 – 20:00	25	30	45	13	5	18	8	3	11

- 5.40 From Table 5.5c it can be seen that during periods of peak expected proposed (banqueting) use trip generation, trip generation associated with the former (golf) and proposed (banqueting) use of the site are comparable.
- 5.41 The above data confirm that during peak highway network hours (Table 5.5a) and during peak hours of trip generation associated with the existing (golf) use (Table 5.5b), the proposed (banqueting) use would generate fewer traffic movements than the existing (golf) use, even for a maximum capacity (circa 500-guest) event, which would only likely occur on average around once per month anyway.
- 5.42 Moreover, during the peak hours of trip generation associated with the proposed use of the site (Table 5.5c), trip generation associated with a maximum capacity (circa 500-guest) event would only surpass existing use trip generation for one hour on both a weekday (20:00-21:00) and a weekend (18:00-19:00). These periods are outside of the highway network peak periods, and the proposed redevelopment on the site is expected to move its peak hour to later in the day, further from the network peaks.
- 5.43 Furthermore, the highest hourly trip generation of 88 traffic movements for the proposed use of the site, which would occur around once per month, is significantly lower than the peak trip generation of 125 traffic movements that would be expected to be generated by the existing (golf) use which may occur several times per week. The existing use peak trip generation also occurs during busier periods on the highway network, while peak trip generation associated with the proposed use of the site would generally occur outside of the peak network periods.
- 5.44 It is noted that a previous planning application for the same site relied on a traffic survey of the existing golf use and that the figures counted then were lower than those predicted from the TRICS database described above. However, the TRICS database is real data based on a range of sites. Using TRICS is standard practice and the database is used by all transport planning consultants and organisations.
- 5.45 It is noteworthy that if a golf use was a fresh application containing the same site content as already there (at this site), then the TRICS data herein would provide the traffic predictions used in a transport assessment.
- 5.46 Finally, it should be noted that in any modelling completed herein, no account has been taken of the previous use i.e no predicted golf traffic has been removed from the network modelling exercise.

- 5.47 With regard to the impact on traffic (and junction capacity) with the interaction of trip generation associated with the site and with events at Wembley Stadium, it is reasoned that any impact caused by trip generation associated with the proposed site would be less than that of trips associated with the previous use of the site, with the development traffic peak hours now being outside of the network peak hours.
- 5.48 Further assessment is not possible due to the ongoing impacts of COVID-19 on traffic, events and trip generation; however, it has been demonstrated that overall trip generation associated with the previous use of the site could be greater than that of the proposed use of the site, meaning on the whole that in a comparable situation there would likely be a betterment to operation of the junction in question as there would be a lower quantum of trips associated with the proposed use, irrespective of the impacts of trips to Wembley Stadium.

Summary

- 5.49 Trip generation associated with the existing use of the site was estimated using the TRICS database. The TRICS outputs are contained at **Appendix P**. Trip generation associated with the proposed use was estimated using the results of the guest travel survey, a copy of which is contained at **Appendix I** and the results are included at **Appendix J**.
- 5.50 As these uses do not generate a bulk of their trips in the typical network peak periods (i.e. 08:00-09:00 and 17:00-18:00), trip generation were compared during periods of peak traffic on Brockley Hill (as per the ATC data), during existing use peak trip generation and during proposed use peak trip generation. It should be noted that on weekday evenings 91% of arrivals are expected after 7pm and there is generally no activity in the weekday morning peak hour.
- 5.51 It was found that the local network peak periods were 07:00-09:00 and 17:00-19:00 on weekdays and 13:00-16:00 on weekends. During these periods, existing use trip generation would be expected to be consistently higher than proposed use trip generation.
- 5.52 During periods of peak proposed use trip generation, proposed use trip generation is only expected to exceed existing use trip generation for a full capacity (circa 500-guest) event for 20:00-21:00 on weekdays and 18:00-19:00 on weekends, which is later than the traffic peak hours associated with the existing use of the site.
- 5.53 Both of these expected hourly exceedances of the existing use trip generation would occur outside of both the typical (17:00-18:00) and local network peak (from ATC data of Brockley Hill), and moreover would only occur during a maximum capacity event, which is expected to occur around once per month. Conversely, the figures for the existing use are daily averages.
- 5.54 Thus, the proposed use is expected to engender a benefit to local traffic flow in comparison to the existing use of the site.
- 5.55 Furthermore, with very few trips being made by active or public transport to the current banqueting venue, despite its high accessibility (PTAL 6a), the proposed use traffic volumes would be moved out of Wealdstone town centre area, yet will still likely engender a reduction in traffic occurring in the vicinity of the site.

6 Junction Modelling

- 6.1 Traffic flow and queue data were recorded at the roundabout junction of the A5 and A410, around 750m south-east of the site from 14:00-17:00 on Saturday 8th and 17:00-20:00 on Tuesday 11th February 2020. This data forms **Appendix Q**.
- 6.2 From assessing both trip generation associated with the proposed site and peak traffic periods on the local highway network, it was deemed that the likely busiest or potentially most sensitive periods with regard to capacity of the A5 / A410 roundabout would be 18:30 to 20:00 on a weekday and 14:30 to 16:00 on a weekend.
- 6.3 The former was chosen to encompass a period in which peak trip generation is expected to occur (for guests departing after a Saturday afternoon event) during a relatively busy period on the highway network (towards the end of the weekend peak); a later period on a Saturday could have been chosen to represent arrivals for an evening event but it was inferred that traffic volumes would be lower at this time. Similarly, the latter was chosen to represent peak weekday trip generation (for guests arriving to a weekday evening event) interacting with the PM peak on the highway network.
- 6.4 The roundabout was modelled using the ARCADY software within the Junctions9 program for the baseline weekday and weekend flows, as well baseline + development trips for the weekday and weekend.
- 6.5 For robustness, the model was run for the 60-minute period in the middle of these 90-minute periods (i.e. 18:45 to 19:45 weekday and 14:45 to 15:45 weekend).
- 6.6 Development trips were taken as the expected trip generation for a maximum capacity event, as identified in paragraph 5.24, which was based on guest travel surveys carried out at the existing Premier Banqueting venue. This comprised trips to site by car, and trips to and from site by taxi and coach modelled over a 1-hour period. The periods modelled were 18:45 to 19:45 (weekday) and 14:45 to 15:45 (weekend), representing the middle 60-minute period within the potentially busiest or most sensitive periods identified in paragraph 6.2.
- 6.7 It should be noted that in reality these development trips would likely occur over a period longer than 1-hour, as inferred from the guest travel surveys.
- 6.8 Tables 6.1 and 6.2 below summarise the highest values encountered across all time segments of the modelling of baseline weekend and weekday traffic at the A5 / A410 roundabout. The full modelling outputs are included at **Appendix R** and turning count diagrams are contained at **Appendix S**.

Table 6.1 – Baseline 14:45-15:45 weekend A5 / A410 junction ARCADY output

Baseline – Weekend 14:45-15:45 – A5 / A410 roundabout			
Road	RFC	Queue (PCU)	Delay (s)
Brockley Hill (A5)	0.62	1.7	15.11
Spur Road (A410)	0.74	3.0	11.51
Stonebridge Road (A5)	0.55	1.3	5.94
London Road (A410)	0.71	2.6	10.04

Table 6.2 – Baseline 18:45-19:45 weekday A5 / A410 junction ARCADY output

Baseline Weekday 18:45-19:45 – A5 / A410 roundabout			
Road	RFC	Queue (PCU)	Delay (s)
Brockley Hill (A5)	0.44	0.9	8.55
Spur Road (A410)	0.76	3.5	12.26
Stonebridge Road (A5)	0.54	1.3	5.98
London Road (A410)	0.57	1.5	6.77

6.9 Tables 6.3 and 6.4 below summarise the highest values encountered across all time segments of the modelling of baseline weekend and weekday traffic plus trips for a maximum-capacity event as the development flow, at the A5 / A410 roundabout.

Table 6.3 – Baseline + Development 14:45-15:45 weekend A5 / A410 junction ARCADY output

Baseline + Development Weekend 14:45-15:45 – A5 / A410 roundabout			
Road	RFC	Queue (PCU)	Delay (s)
Brockley Hill (A5)	0.66	2.1	16.85
Spur Road (A410)	0.76	3.3	12.50
Stonebridge Road (A5)	0.59	1.6	6.53
London Road (A410)	0.74	3.1	11.78

Table 6.4 – Baseline + Development 18:45-19:45 Weekday A5 / A410 junction ARCADY output

Baseline + Development Weekday 18:45-19:45 – A5 / A410 roundabout			
Road	RFC	Queue (PCU)	Delay (s)
Brockley Hill (A5)	0.47	1.0	9.08
Spur Road (A410)	0.78	3.8	13.38
Stonebridge Road (A5)	0.58	1.5	6.57
London Road (A410)	0.60	1.7	7.51

6.10 It can be seen in the above tables that queue and delay lengths and RFC values are slightly higher for baseline plus development trips. However, the highest modelled RFC value for baseline traffic was 0.76 on the weekday and 0.74 on the weekend, both on Spur Road (A410). When adding development trips, these figures rose to 0.78 and 0.76, respectively: less than a value of 0.85 that represents a junction operating at capacity.

6.11 The modelling was validated using the queue lengths that were recorded during the roundabout surveys. Queue lengths were recorded in 5 minute intervals with the maximum occurring in that period being noted. In the weekday period 18:45 to 19:45 the queues recorded were between 0 and 7 on Brockley Hill (7 occurring during one five minute period only) 0 on the A410 east, between 0 and 4 on the A5 south; and between 0 and 3 on the A410 west. Queue data and turning data at this roundabout junction was recorded independently by K&M surveys and the full raw data is enclosed here at **Appendix Q**. Fortunately these surveys were completed before the CV19 epidemic and so is valid data.

6.12 It should be noted that no traffic data obtained between April 2020 and the current time, Jan 2021 (and likely to extend for at least the first quarter of 2021), is regarded as valid for any transport assessment purposes, as the CV19 situation has changed the way that people travel in numerous ways.

- 6.13 However, it must be explained that once a queue length reaches and surpasses a couple of dozen, say 20-25 vehicles, counting and recording a specific number of vehicles becomes logistically problematic. Further, there is no definitive point at which a vehicle approaching the roundabout has joined a queue, which is in constant flux. Thus, the modelling was corroborated as practicable with conventional analogue junction surveying. But in the weekday evening period modelled, the observed queuing was limited matching the model outputs. This can therefore be deemed a valid modelling exercise and result.
- 6.14 With regard to committed developments, information on this was requested from both LB Harrow and LB Barnet during their respective highways pre-application meetings. Neither Council identified any committed developments to include in the modelling.
- 6.15 Nevertheless, data has been reviewed from the Royal National Orthopaedic Hospital (RNOH) development located to the north west of the site. This was granted outline planning permission in March 2013 for the following:

Outline Element: To include:

Up to 56,871sqm (Gross Internal Floor Area) of new hospital development, including rehabilitation unit and parent accommodation (Use Class C2);

Up to 21,000 sqm (Gross Internal Floor Area) multi storey car park providing up to 805 car parking spaces;

Up to 88 surface car parking spaces and up to 50 undercroft car parking spaces for operational hospital use;

Up to 40,260 sqm (Gross Internal Floor Area) of residential development (Use Class C3) (including ancillary floorspace i.e. garages and undercroft parking) providing up to 356 residential units of which up to 45 units will be for staff accommodation (36 proposed and 9 existing);

Partial change of use of Eastgate House from office to private residential (Use Class C3);

Up to approximately 19.2 hectares of public open space;

Associated landscaping and ancillary works;

Closure of existing access at north-eastern end of Wood Lane.

- 6.16 The RNOH Transport Assessment (TA) was reviewed and appropriate data considered. Tables 27 to 30 of the RNOH TA show all base traffic forecast to the year 2025 and base traffic plus RNOH development traffic in the year 2025 for the AM and PM weekday peak periods. No other traffic periods were assessed in the TA. Within these tables the additional traffic on Brockley Hill can be determined by subtracting one from the other. The AM weekday peak hour traffic is not really relevant to this exercise as the banqueting site will

not operate in this time period, however for clear understanding this would be 5 vehicles northbound and 31 vehicles southbound between 07:30 and 08:30.

- 6.17 The PM peak hour considered in the RNOH TA was 17:00 to 18:00. In this period there are an additional 14 northbound and 11 southbound vehicle trips predicted to pass the site. It should be noted that very little traffic will be generated by the banqueting venue in this period as most evening participants arrive after 7pm (91%).
- 6.18 It is understood that a significant level of the RNOH approved development is now built and any associated traffic would then already be using Brockley Hill and so this has been picked up by default in the Brockley Hill traffic flow data already recorded. Therefore, only part of this traffic flow is still to be added to the network. If we assumed a robust levels is still to come forward, say a further 80%, then we could add say 11 northbound and 8 southbound vehicle trips to the network in the PM peak hour. Or about 1 additional vehicle movement circa every 3 minutes.
- 6.19 In modelling terms this is a very low level of additional traffic and probably well within day to day fluctuation of general traffic. It would also be more than off-set by any previous golf use which has not been removed from the modelling exercise; and it does not conflict with the evening traffic predicted to arrive at the site mainly after 7pm.
- 6.20 Considering the low level of additional traffic that the RNOH will generate over and above that already accounted for by default on Brockley Hill, the fact that no offset from the existing development has taken place and the fact that neither highway authority raised this as a committed development that needed consideration, the modelling has not been complicated by its inclusion. Overall, of course it is not in the same time period that the modelling for the banqueting suite needs to consider. If it were to be included based on all of the above rationale we could confidently say that the difference would be marginal at most but most likely not even detected in the modelling outputs.
- 6.21 The base year 2025 and base year 2025 plus RNOH development traffic figures numbered 27 to 30 and copied from the RNOH TA via the planning portal are contained here at **Appendix T**.

7 Summary and Conclusions

Summary

- 7.1 The existing Premier Banqueting London Ltd venue hosts functions such as weddings and conferences for multi-cultural audiences. It is currently located in Wealdstone, LB Harrow post code HA3 7TS. Due to the scheduled demolition of council-operated parking provision, the venue is proposed to be relocated.
- 7.2 The existing venue has capacity to cater for an absolute maximum of 850 people and makes use of the adjacent Harrow owned car park. This car park is used for around 2/3rds of events where participants generally exceed 250 people.
- 7.3 In 2019 the banqueting operators confirmed that the maximum use of the car park was qualitatively considered to be around 80 to 100 spaces and it is confirmed that the maximum sized event was 550 people. However, in the past when there have been events to full capacity (circa 850 people) and it is believed that nearly all of the car parking spaces were used in these instances.
- 7.4 This planning application regards the demolition of existing golf club buildings (Use Class D2) and construction of a new banqueting facility (Use Class D2), widening of existing vehicular access from Brockley Hill, car and cycle parking, waste/refuse storage, landscape enhancements and associated works at the former Stanmore & Edgware Golf Centre.
- 7.5 The site is located on Brockley Hill, Stanmore, LB Harrow HA4 4LR and currently comprises of a 49-bay driving range, a 9-hole par-3 golf (and footgolf) course and an existing 95 space parking area accessed from Brockley Hill. The site is proposed to rehouse the current Premier Banqueting London Ltd venue.
- 7.6 EAS Transport Planning Ltd were commissioned to advise on transport and highways matters through the pre-application, design and application process, culminating in the preparation of this Transport Assessment and supporting transport and highways reports.
- 7.7 A location plan is included at **Appendix A** and the development proposals are contained at **Appendix B**.
- 7.8 The current banqueting venue's 2019 events calendar, contained at **Appendix H**, was used to ascertain the frequency and attendance of events, which revealed that there was on average 1 event every 2 days; regularly on Saturdays and often on Sundays. A high proportion of events ran between circa 10:00-16:00 or circa 18:00-00:00, with guests tending to arrive and depart over a period of circa 1 to 2 hours. Average weekend attendance was 370 guests; average weekday attendance was 260 guests. Overall mean attendance was of 316 guests. A circa 500-guest event would be expected to occur around once per month.
- 7.9 A guest travel survey, a copy of which is included at **Appendix I** and the results at **Appendix J**, found use of coaches for larger events, as well as high rates of car and taxi sharing for both small and large events of roughly 3.3 guest per car and 4.2 guests per taxi. Very few guests travelled to the current venue using public transport, despite it having a PTAL of 6a. Use of coaches and high vehicle sharing rates have occurred organically at the current venue without any input from management. However, at the proposed site, through the Travel Plan it will be ensured that guests make maximal use of more sustainable travel modes, i.e. maximising coach use and vehicle share rates.

- 7.10 Staffing comprises of around 30 staff for a maximum capacity circa 500-guest event. For an average-sized 316-guest event there would be around 21 staff on site. Staff are primarily drawn from a bank of casual, local staff who thus will largely continue travelling to site using public and active transport.
- 7.11 Highways pre-application meetings were held with LB Harrow and LB Barnet (as Brockley Hill is under the jurisdiction of LB Barnet) in early 2020; summarises of which are contained at **Appendix C**. Dialogue continued through the design phase. There were also multiple planning pre-application meetings and discussions held between the design team and LB Harrow, as well as with the GLA (in which transport and highways elements were discussed).
- 7.12 This application therefore presents an interesting scenario of needing to satisfy Highways officers from 3 different authorities, each with slightly differing perspectives. The GLA, supported by TfL, prefer to see as little parking as possible and support schemes that involve investment to facilitate use of active and public transport. LB Barnet will have concerns about overspill parking onto their network, especially Brockley Hill, and so would prefer greater parking provision to avoid this eventuality. LB Harrow are perhaps somewhere in the middle of these 2 perspectives, with a pragmatic approach seeking to promote sustainable alternatives while ensuring safe amenity for private vehicle use.
- 7.13 The 3 authorities accordingly had different responses to and opinions of the proposed development. Discussions with both LB Harrow and LB Barnet were largely positive, such as with regard to trip generation and modal shares; it was felt that they could appreciate that banqueting guests would seldom travel by active and public transport regardless of transport provision. On the other hand, the GLA were concerned that a high proportion of guest-trips would be made using vehicles even though the ride share is very high, but verbally agreed a compromise could be reached.
- 7.14 Clearly, the current venue in Wealdstone with a PTAL of 6a is more accessible by public transport than the proposed site with a PTAL of 1a. However, despite its high accessibility, a negligible number of guests travel to the current venue using public and active transport, with cars, coaches and taxis providing the vast majority of guest-trips to the current venue. Thus, through the proposed relocating of the venue, a high number of vehicle trips that are currently occurring in Wealdstone town centre will effectively be moved to the less congested locale. Yet, the proposed redevelopment encompasses an expected net reduction in vehicle trips associated with the site. This means that overall it is likely that vehicle trips will be removed from Wealdstone town centre area while there will also be a reduction in peak and total vehicle trips associated with the proposed site considering its previous use.
- 7.15 Nevertheless, the site is accessible by active and public transport which will support accessibility by staff. A footway runs along the full length the western side of Brockley Hill (the same side as the site) connecting the site to Stanmore. The 107 and 142 bus routes can be accessed in a 4 and 11-minute walk from the site, respectively. The 325 and H12 bus routes, as well as the N98 night bus all commence at Stanmore underground station (Jubilee line), in a 19-minute walk from the site. Several bus routes including two other night bus routes can be accessed at Edgware underground station (Northern line) which is an 8-minute cycle or 10 to 20-minute journey from the site via bus.
- 7.16 A policy-compliant level of cycle parking, comprising of secure, covered storage for 21 cycles, including 1 designed for adapted cycles, in line with the London Cycling Design

Standards. Shower, locker and changing facilities are also proposed. A Healthy Streets Active Travel Zone (ATZ) assessment was carried out which identified a number of potential improvements to benefit active travel.

- 7.17 The site's existing 95-space car park has been redesigned with 84 parking spaces, but only 68 of these will be permanent use. The remaining 16 spaces will be blocked off with a large planter. These are set aside as an emergency overflow parking facility, to prevent overspill parking off-site. The overall presumption is that there will be parking availability provided by 68 spaces at the site.
- 7.18 It should be noted that in 2019 the banqueting operators confirmed that the maximum use of the car park at Wealdstone serving the existing venue was qualitatively considered to be around 80 to 100 spaces and it is confirmed that the maximum sized event was 550 people. It is important to be mindful that there may be occasional instances where parking does exceed the surveyed results, but that this can be accommodated by management of the car park as described herein. Note that the proposed event space will cater for a maximum of circa 500 people.
- 7.19 In addition, in order to overcome any concern, it is proposed to secure the provision of off-site parking for events over a certain threshold of guests. The applicant is willing to enter into a planning obligation via a S106 agreement to provide an Overflow Parking Scheme prior to the occupation of the proposed development. The applicant is exploring a number of alternative locations that could accommodate overflow car parking, one of which could include the hotel owned and operated by the applicant, The Manor in Elstree.
- 7.20 Of the parking spaces on site, 68 spaces, 6 will be in a staff car park. In line with the London Plan, 17 spaces will each have active and passive electric vehicle charging provision; and 5 will be blue badge holder disabled parking spaces, with another 4 as enlarged spaces capable of becoming formal disabled parking spaces in the future.
- 7.21 Both LB Harrow and LB Barnet, particularly LB Barnet, were concerned with highway safety. To address these concerns, a robust accident analysis covering all roads and junctions within a 1.5km radius of the site access was carried out. This found no notable cluster of accidents. Though, three 'slight' incidents understood to have involved right-hand turns into the site are identified as having occurred at the site access in the ten years 2010 to 2019 inclusive.
- 7.22 The site access has been redesigned to include an island to prevent right turns into the site (from the north), to be supported by signage and the accompanying Travel Plan that will provide procedures to ensure attendees are aware of this. The proposed access has also been designed as to allow simultaneous ingress and egress by coaches, as well as access by refuse vehicles. A Stage 1 Road Safety Audit of the proposed access has been carried out, details of which are included at **Appendix G**.
- 7.23 The parking area was also redesigned to allow circulation for coaches and refuse vehicles, removing the need for them to reverse, while still being able to ingress and egress in a forward direction. The proposed access will also be subject to a Section 278 agreement with LB Barnet.
- 7.24 The current Premier Banqueting site receives around 3 or 4 delivery and servicing trips per week. This is not expected to change at the proposed site. It will be ensured that delivery and servicing activities do not coincide with events, to maximise highway safety on site. Accordingly, delivery vehicles would be able to park close to the entrance to perform the

delivery. Swept path analysis contained at **Appendices M** and **N** show access to the site by coaches and a refuse vehicle, respectively. Further details are given in the Delivery and Servicing Plan submitted alongside this Transport Assessment.

- 7.25 Also relating to highway safety, but beyond the scope of this application, LB Harrow and LB Barnet Highways officers both suggested that the current 40mph speed limit on Brockley Hill could be reduced to 30mph, via a Traffic Regulation Order. The applicant and any future site owners would support this reduction.
- 7.26 An ATC near laid near to the site access on Brockley Hill in January/February 2020 recorded 5-day average 85th percentile speeds of 40.6 mph and 46.4 mph for northbound and southbound traffic, respectively. Based on DMRB guidance these equate to stopping sight distances of 2.4m x 103.6m to the south and 2.4m x 129.3m to the north. Visibility in both directions is achieved beyond these distances. These are illustrated at **Appendix D**.
- 7.27 Trip generation associated with the existing use of the site was estimated using the TRICS database (the outputs are contained at **Appendix P**); trip generation associated with the proposed use was estimated using the results of the guest travel survey (a copy of which is included at **Appendix I** and the results at **Appendix J**). It was found that during peak periods on the local highway network, the existing use is expected to generate significantly more vehicle trips. During the periods of expected peak trip generation associated with the existing use, there would be very few trips associated with the proposed use of the site.
- 7.28 Yet, during periods of peak trip generation expected in association with the proposed use of the site, existing use trips were broadly comparable. Moreover, these such trips associated with the proposed use regard a maximum capacity event that would occur around once per month, whereas the trip generation figures for the existing use would be occurring every day. Thus, the proposals are expected to see a significant reduction in peak and total trip generation. Further details on expected trip generation are given in Chapter 5 of this Transport Assessment. It should be noted that 91% of attendees were observed to arrive after 7pm, after the typical PM weekday network peak hour.
- 7.29 An analysis of trip generation and traffic associated with events at Wembley Stadium and the proposed site was carried out by comparing the timings and calendar of events throughout 2019 at both Wembley Stadium with the site. It was deemed that given the typical start and finish times of events at the site and at Wembley, plus the circa 45-minutes to 1:15-hours to travel between Stanmore and Wembley and progress through the crowds and queues, there would be little interaction between traffic associated with the two venues. Moreover, it is reasoned that this amalgamation of traffic would also occur at present with the current venue in Wealdstone, as well as with traffic associated with the former golf centre site which is understood to have involved a higher peak and higher total number of vehicle trips than the proposed site. This assessment was deemed suitable, as identified in the emails from LB Harrow Highways contained at **Appendix L**.
- 7.30 Junction modelling was carried out using turning and queue counts recorded at the A5/A410 roundabout alongside trip generation figures as ascertained from the travel survey. This found peak RFC values of 0.74 on a weekday and 0.76 on the weekend. When adding the development trips, these figures rise to 0.76 and 0.78, respectively, remaining below RFC of 0.85 which is seen to represent a junction operating at capacity. Trip generation from committed developments to be included within the modelling were requested from both LB Harrow and LB Barnet, though neither identified any such developments to include

in the modelling, The modelling outputs are contained at **Appendix R** and turning count diagrams at **Appendix S**.

- 7.31 It should be noted that the traffic data used for the modelling exercise was collected in a neutral period prior to the Covid 19 outbreak and so is valid and accurate. **Traffic data obtained between April 2020 and the current time, Jan 2021 (and likely to extend for at least the first quarter of 2021), is not regarded as valid for any transport assessment purposes by all highway authorities, as the CV19 situation has changed the way that people travel in numerous ways.**
- 7.32 Traffic arising from the development at the RNOH has been considered and it is noted that the level of additional traffic that would pass the site on Brockley Hill is negligible, as has been described herein at Chapter 6.

Conclusion

- 7.33 The development proposals have evolved significantly in transport and highways terms through pre-application discussion with LB Harrow, LB Barnet and the GLA/TfL. With these 3 authorities holding slightly varying views on how travel demand and Highways should be managed, the work and analysis carried out has sought to satisfy these varying requirements and there is a solution to manage the difference in opinion re car parking.
- 7.34 Ultimately, having carried out significant assessment and analysis, including redesign improvements of the existing access which all three authorities accept, it can be summarised that the proposals are expected to effectively transfer a number of vehicle trips from Wealdstone centre to the locale of the site, yet this quantum of trip generation is in fact expected to be lower than the volume of vehicle trips that are expected to have occurred under the existing use of the site based on a valid TRICS database assessment.
- 7.35 The proposals include a policy-compliant level of car and cycle parking, provision for deliveries and servicing, and with an effective sustainable travel plan are reasoned to engender a benefit to the overall transport system across LB Harrow and beyond. The proposal also includes a legally binding option to require an offsite parking over-spill facility in the infrequent event that management are of the view that not all vehicles for an event could be safely accommodated on-site. Thus, in the main, the redevelopment will be beneficial and therefore the proposals should be supported on transport and highways grounds.

Appendices

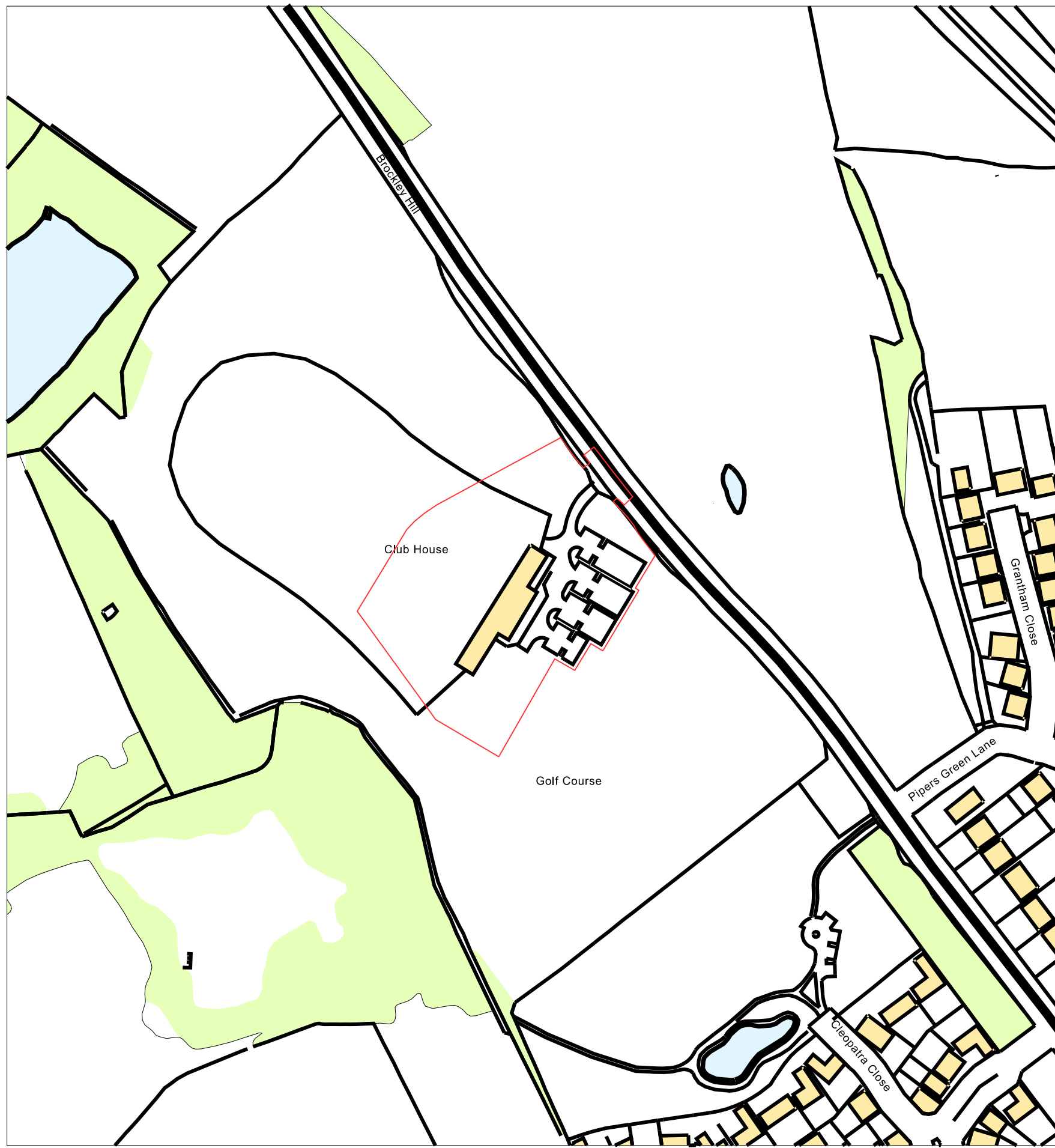
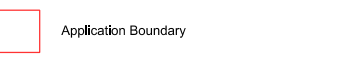
Appendix A – Location Plan
Appendix B – Site Masterplan
Appendix C – Highways Pre-application Meeting Summaries
Appendix D – Access Visibility Splays
Appendix E – ATC Data
Appendix F – Proposed Access Design
Appendix G – Stage 1 Road Safety Audit
Appendix H – 2019 Events Schedule at Current Banqueting Venue
Appendix I – Copy of Guest Travel Survey
Appendix J – Guest Travel Survey Results
Appendix K – Map of Guest Home Locations
Appendix L – Emails Regarding Wembley Stadium Trip Generation
Appendix M – Swept Path Analysis - Coach Access
Appendix N – Swept Path Analysis - Refuse Vehicle Access
Appendix O – Swept Path Analysis - Coach Parking
Appendix P – Existing Use TRICS Output
Appendix Q – Traffic and Queue Data A5/A410
Appendix R – Junction Modelling Output
Appendix S – Junction Modelling Turning Counts
Appendix T – RNOH Traffic Data Flow Diagrams



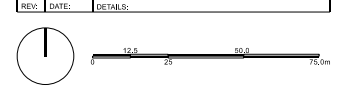
Appendix A – Location Plan

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 CONTRACTOR - It is confirmed that the proposed works are within the scope of a completed Contract and as such no pre-contract checks have been identified, save to confirm that the Contract Documents have been reviewed.

KEY PLAN:



REV.	DATE	DETAILS
07	19/01/21	Issued for Planning
06	25/08/20	Issued for Planning (Drawing scale amended)
05	22/08/20	Issued for information
04	21/08/20	Issued for information
03	29/06/20	Issued for information
02	29/05/20	Issued for information
01	22/05/20	Issued for information
00	30/04/20	Issued for information



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PROJECT:
Brockley Hill, Stanmore - New Banqueting Facility

TITLE:
Existing Site Location Plan

SCALE: 1:1250 @ A1 ORIGIN DATE: 30/04/20 DRAWN: CB CHECKED: AT

STATUS:
Stage 2 - Planning

PROJECT: 05851 DRAWING NO: MP_00_0003 REV: 07











Appendix B – Site Masterplan

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 All dimensions and levels should be taken from the most recent version of the drawing.
 CONTRACTOR - It is acknowledged that the proposed works are within the scope of a competent Contractor and an audit or assessment has been undertaken, save to relevant time schedule. Designer's Note Assessment.

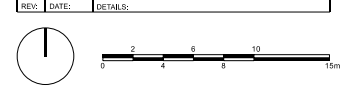
KEY PLAN:
 Notes
 For landscape information refer the Landscape Architect.
 Please note the proposed building is shown for context purposes.

Brockley Hill kerbs shown in dashed line are based on an Adopted Highways OS Map.

KEY

-  Application Boundary
-  Disabled car parking space
-  Enlarged car parking space
-  Car parking space with electric vehicle charging station
-  Car parking space adaptable to be fitted with electric vehicle charging station
-  Covered bicycle parking
-  Large bicycle parking
-  Proposed tree

REV.	DATE	DETAILS
14	21/01/21	Issued for Planning
13	19/01/21	Issued for Planning
12	26/08/20	Issued for Planning
11	24/08/20	Issued for Information
10	22/08/20	Issued for information
09	20/08/20	Issued for information
08	20/08/20	Issued for information - revised as highlighted
07	19/08/20	Issued for information
06	05/08/20	Issued for information - revised as highlighted
05	04/08/20	Issued for information
04	22/07/20	Issued for information - WIP
03	20/06/20	Issued for information
02	20/05/20	Issued for information
01	22/05/20	Issued for information
00	22/04/20	Issued for information



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PROJECT:
Brockley Hill, Stanmore - New Banqueting Facility

TITLE:
Proposed Site Plan

SCALE: 1:250 @ A1 ORIGIN DATE: 21/04/20 DRAWN: CB CHECKED: AT

STATUS:
Stage 2 - Planning

PROJECT: 05851 DRAWING NO: MP_00_2200 REV: 14





Appendix C – Highways Pre-application Meeting Summaries

Summary of LB Harrow Highways Pre-Application Meeting 29/01/20
With Additional Information for LB Barnet Highways Pre-Application Response
Premier Banqueting London Ltd

In attendance:

Laura McIntosh, Barry Philips – LB Harrow

Patrick Eggenton, Ben McKeown – EAS

Sandip Ruparelia, Ravi Ruparelia – Applicant (Angel Care / MNS Care PLC)

Background on the existing Premier Banqueting site

- Cater to Asian and Jewish weddings and other functions. Two similar banqueting venues have recently closed in LB Harrow; no other facilities in the borough.
- Site is moving due to loss of existing car park (Peel Road multi-storey) which is scheduled as the site for new LB Harrow offices
- Clients acquired the recently closed Stanmore & Edgware Golf Centre, which had a 49-bay driving range and a 9-hole golf/footgolf course

Times of operation, arrivals and departures

- 185 events in 2019. Sometimes can be two events on one day (circa 20 days per year, generally weekends)
- Event(s) on around 80% of Saturdays; 55% of Sundays; avg. 1.8 weekday events per week
- Weekend events typically from around 19:00 to 00:00/01:00; and 10:00 to 16:00 – outside of network peak
- Weekday events typically from around 19:00 to 00:00/01:00 – outside of network peak
- Generally a staggered arrival and departure period across roughly 30 to 60 minutes
- Golf centre operated 09:00 to 22:00 weekdays; 08:00 to 21:00 weekends

Numbers attending

- Current site maximum capacity of 850, normally maximum 500 per event
- Generally smaller events during the week of 80-150 guests; weekend events 200-400
- New site will have maximum capacity of 500

- TRICS: Weekday 18:00-19:00: Driving range est. 26 two-way trips
Golf course est. 1 two-way trips
Total 27 peak hour two-way trips
Weekend: 15:00-16:00: Driving range est. 129 two-way trips
Golf course est. 15 two-way trips
Total 144 peak hour two-way trips

Guest locations and travel methods

- Questionnaire responses from a sample of circa 550 guests from 2 events:
 - 51 cars, average 3.4 people per car
 - 16 taxis/Ubers, average 4.3 people per vehicle
 - 11 coaches, average 27.6 people per vehicle
- Guests primarily from Harrow and wider NW London area. Also, clusters from Watford and Luton in particular

Staff numbers, home locations and travel methods

- Generally 1 waiter per 20 guests; 25 waiters for 500 guests. Plus ~3-7 managers and chefs
- Bank of casual staff predominantly located in LB Harrow or surrounding area
- While managers typically drive, the majority of staff will use public or active transport

Access and visibility

- Access will need to be widened to accommodate simultaneous coach and car movements in and out of the site. Would likely be widened to the south to avoid the (possibly TPO'd tree) immediately north of the access mouth. Possibly via S106 with just Harrow as consultee, or S278 with Barnet and Harrow
- No visibility issues, aforementioned tree is circa 3.7m back from kerb line.
- Splays can be achieved to at least 50mph requirements (40mph highway) – awaiting ATC results to confirm 85th percentile speeds and required visibility
- Officers explain roundabouts are optimal with opposing traffic flows of similar amounts, i.e. not at the site access. Access will likely remain in same style as at present

Route taken through the highway network

- Majority of traffic will come from the south. Traffic from the M1 exit onto the A41 southbound, turn right at first roundabout onto the A410 and right again at second roundabout (possibly to be modelled) onto the A5, and north to the site
- As part of travel / events planning the clients would advise patrons coming from the A41 or A5183 to come via the route described above, rather than from the A5 southbound. This will minimise right hand turns into the site

Accident review

- Officer cited 1 accident at site access

Existing nature of Brockley Hill

- 40mph speed limit. Gradient downhill to access from the north
- Officers identified that they would support a reduction to 30mph; but that the proposed development is not reliant on this

Offsite junctions

- Officers recommend modelling the A5/A410 roundabout south of the site. Can be a simple as queue lengths

Boundary with Barnet

- Borough boundary runs along centre of A5 and across centre of A5/A410 roundabout
- Though, officers explained that Barnet get the final word on highways issues

Parking standards

- No defined standards for D2 use – ‘PTAL 0-3 sites assessed on case-by-case basis, consistent with healthy streets approach and mode share targets’
- Currently circa 100 parking spaces on site – reasoned to be sufficient based on car share rates and use of taxis and coaches by patrons
- Clients unable to increase hardstanding area for parking as in greenbelt

Planning requirements

- Officers recommend submitting a Transport Statement/Assessment; Travel Plan; Delivery & Servicing Plan; Construction Logistics Plan; Car Park Management Plan. Follow TfL guidance to make officers’ review easier. Conditioned or via S106

Summary of LB Barnet Highways Pre-Application Meeting 27/02/20

Premier Banqueting London Ltd

In attendance:

Francis Torto – LB Barnet

Patrick Eggenton, Ben McKeown – EAS

Ravi Ruparelia – Applicant (Angel Care / MNS Care PLC)

Introduction / context

- Existing banqueting venue in Wealdstone catering to Asian weddings and other functions
- Two similar banqueting venues have recently closed in LB Harrow; there are no other facilities in LB Harrow
- Venue is relocating due to loss of existing car park (Peel Road multi-storey), that is scheduled as the site for new LB Harrow offices
- Applicants acquired the recently closed Stanmore & Edgware Golf Centre, which had a 49-bay driving range and a 9-hole golf/footgolf course

Proposed use - times of operation, arrivals and departures, attendance

- 185 events in 2019. Sometimes can be two events on one day (circa 20 days per year, generally weekends)
- Event(s) on around 80% of Saturdays; 55% of Sundays; avg. 1.8 weekday events per week
- Weekend events typically from around 19:00 to 00:00/01:00; and 10:00 to 16:00 – outside of network peak
- Weekday events typically from around 19:00 to 00:00/01:00 – outside of network peak
- Generally a staggered arrival and departure period across roughly 30 to 60 minutes
- Current banqueting site maximum capacity of 800, but typically maximum of 500 guests per event
- Generally smaller events during the week of 80-150 guests; weekend events 200-400
- New site will have maximum capacity of 500. A maximum capacity event likely to occur circa 5 to 10 times per year

Proposed use – travel locations and modes

- Questionnaire responses from a sample of circa 550 guests from 2 events:
 - 51 cars, average 3.4 people per car
 - 16 taxis/Ubbers, average 4.3 people per vehicle
 - 11 coaches, average 27.6 people per vehicle
- Guests primarily from Harrow and wider NW London area. Also, clusters from Watford and Luton in particular – these often organise coaches / minibuses to get to site

Existing use

- Golf centre operated 09:00 to 22:00 weekdays; 08:00 to 21:00 weekends
- TRICS: Weekday 18:00-19:00: Driving range est. 26 two-way trips
Golf course est. 1 two-way trips
Total 27 peak two-way trips
Weekend: 15:00-16:00: Driving range est. 129 two-way trips
Golf course est. 15 two-way trips
Total 144 peak two-way trips

Staff numbers, home locations and travel methods

- Generally 1 waiter per 20 guests; 25 waiters for 500 guests. Plus ~3-7 managers and chefs
- Bank of casual staff predominantly located in LB Harrow or surrounding area
- While managers typically drive, the majority of staff will use public or active transport

Route taken through the highway network

- Majority of traffic will come from the south. Traffic from the M1 exit onto the A41 southbound, turn right at first roundabout onto the A410 and right again at second roundabout (possibly to be modelled) onto the A5, and north to the site
- As part of travel / events planning the clients would advise patrons coming from the A41 or A5183 to come via the route described above, rather than from the A5 southbound. This will further minimise right hand turns into the site

Existing nature of Brockley Hill

- 40mph speed limit. Gradient downhill to access from the north
- Officers identified that they would support a reduction to 30mph; but that the proposed development is not reliant on this

Offsite junctions

- Officer agreed with LB Harrow officers regarding only modelling A5/A410 roundabout south of the site
- Officer requested trip generation from committed developments to be included in modelling. EAS will liaise with Harrow and Barnet to obtain information on committed developments

Parking provision

- No defined standards for D2 use – ‘PTAL 0-3 sites assessed on case-by-case basis, consistent with healthy streets approach and mode share targets’
- Currently circa 100 parking spaces on site – reasoned to be sufficient based on car share rates and use of taxis and coaches by patrons

Access and visibility

- Access will need to be widened to accommodate simultaneous coach and car movements in and out of the site. Would likely be widened to the south to avoid the (possibly TPO'd tree) located immediately north of the access mouth.
- Can be done via s106 with just Harrow as consultee, via s278 with Barnet and Harrow, or via s8 with Barnet agreeing for Harrow to carry out works on their highway
- No visibility issues, aforementioned tree is circa 3.7m back from kerb line
- ATC found 85th percentile speeds of 40.6 mph northbound and 46.4 mph southbound. Regardless, splays can be achieved to at least DMRB 50 mph requirements
- Officer expressed concern over right turns into the site (traffic coming from the north), given his perception of traffic volume and speed on Brockley Hill. ATC data to be sent to the officer with regard to this
- Officer explained he would like a right-hand turn pocket to mitigate this
- EAS explained that due to the width of the highway it would be challenging to accommodate a right-hand turn pocket. Further issues on this with regard to archaeology and location of trees
- EAS also identified that a high majority of trips will arrive to the site from the south, due to guest locations typically being south of the site within London, while traffic travelling to site from the north via the M1 are required to join the A41 and then approach on Brockley Hill (A5) from the south, due to the layout of these roads.
- Further, Travel Planning measures will advise guests coming via the North Western Avenue (A41) and Elstree Hill South (A5183) to route on Edgware Way (A41) with traffic from the M1, to then reach the site from the south and further limit right-hand turns into the site.
- EAS will prepare a more detailed comparison of existing (golf) and proposed (banqueting) trip generation in relation to traffic flow on Brockley Hill (A5), to be sent to the officer
- Following the outcome of the above, if necessary, EAS will investigate the possibility and benefit of different access to enable right turns based on perceived issue

Closing comments

- The officer (Francis Torto) confirmed that he knows the LB Harrow highway officers and used to work there. He would be happy to liaise with them
- The officer accepts the principle of the development at this site and believes it is a good location for the development



Appendix D – Access Visibility Splays

2.4m x 129.3m VISIBILITY SPLAY IN ACCORDANCE WITH DMRB FOR MEASURED 85th PERCENTILE

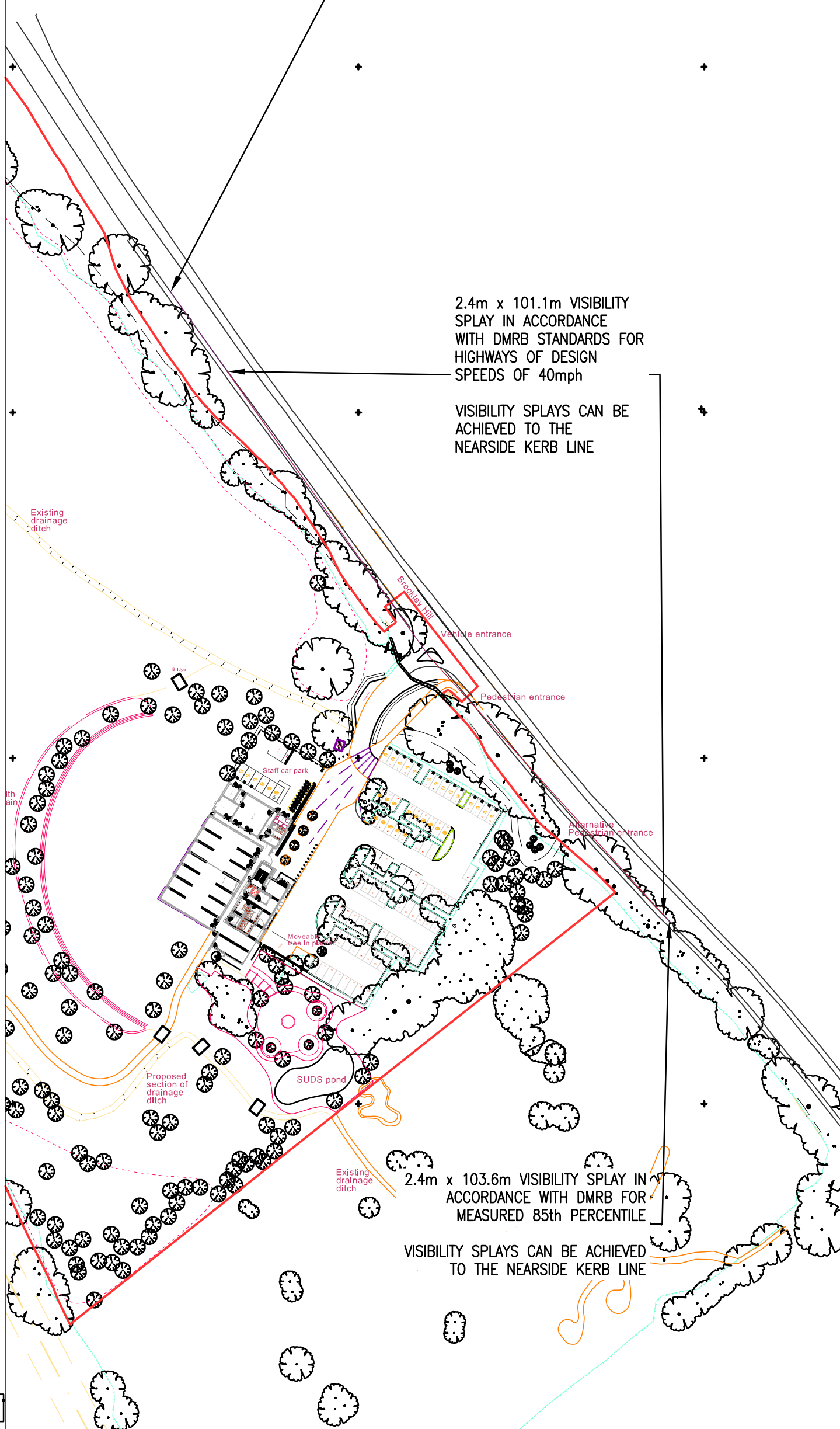
VISIBILITY SPLAYS CAN BE ACHIEVED TO THE NEARSIDE KERB LINE

2.4m x 101.1m VISIBILITY SPLAY IN ACCORDANCE WITH DMRB STANDARDS FOR HIGHWAYS OF DESIGN SPEEDS OF 40mph

VISIBILITY SPLAYS CAN BE ACHIEVED TO THE NEARSIDE KERB LINE

2.4m x 103.6m VISIBILITY SPLAY IN ACCORDANCE WITH DMRB FOR MEASURED 85th PERCENTILE

VISIBILITY SPLAYS CAN BE ACHIEVED TO THE NEARSIDE KERB LINE



REV	DATE	BY	DESCRIPTION	CHK	APD

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CLIENT: ANGEL CARE PLC

ARCHITECT:

PROJECT: STANMORE & EDGWARE GOLF CENTRE
BROCKLEY HILL, STANMORE

TITLE: ACCESS VISIBILITY SPLAYS

SCALE @ A3: 1:1250	DESIGN-DRAWN: BM	DATE: 26/08/20
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PROJECT No: 2620	DRAWING No: SK04 REV A
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Appendix E – ATC Data

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

DIRECTION: NORTHBOUND SPEED LIMIT: 40

31 January 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	39	35	0	3	0	0	0	0	0	0	0	0	0	1	0	39.2	43.7
0100	30	29	0	1	0	0	0	0	0	0	0	0	0	0	0	39.5	46.8
0200	14	12	0	0	0	0	0	0	0	0	0	0	0	2	0	37.5	46.4
0300	11	9	0	2	0	0	0	0	0	0	0	0	0	0	0	42.4	53.6
0400	23	22	0	1	0	0	0	0	0	0	0	0	0	0	0	43.5	55.2
0500	74	61	0	12	0	0	0	1	0	0	0	0	0	0	0	39.5	47.2
0600	198	172	0	26	0	0	0	0	0	0	0	0	0	0	0	38.5	44.8
0700	418	368	2	39	3	2	0	0	0	0	0	0	0	2	2	35	39.5
0800	484	439	2	37	1	0	0	0	0	1	0	0	0	2	2	34.1	39.1
0900	412	379	2	20	0	0	0	1	0	0	0	0	0	8	2	35.7	40.5
1000	300	279	1	18	1	1	0	0	0	0	0	0	0	0	0	35.4	39.7
1100	312	268	2	33	2	1	0	0	0	1	0	0	0	5	0	35.9	41
1200	390	354	2	31	0	0	0	0	0	1	0	0	0	2	0	36.1	40.8
1300	386	349	1	28	3	3	0	0	0	1	0	0	0	1	0	35.3	40.1
1400	428	396	2	26	0	0	0	0	0	0	0	0	0	4	0	35.5	40.1
1500	413	378	5	22	0	2	0	0	0	1	0	0	0	4	1	35.6	40.3
1600	342	325	1	14	0	1	0	0	0	0	0	0	0	1	0	35.9	40.9
1700	410	386	4	12	3	1	0	0	0	0	0	0	0	4	0	33.7	38.9
1800	364	343	3	12	0	1	1	0	0	0	0	0	0	4	0	35.7	40.3
1900	291	267	1	19	0	0	0	0	0	0	0	0	0	3	1	36.8	41.7
2000	210	202	0	8	0	0	0	0	0	0	0	0	0	0	0	37.4	42.8
2100	191	178	0	10	0	0	0	0	0	0	0	0	0	3	0	37.1	42.8
2200	150	143	0	4	1	0	0	0	0	0	0	0	0	2	0	38	44.5
2300	116	112	0	3	0	0	0	0	0	0	0	0	0	1	0	38.1	43.6
07-19	4659	4264	27	292	13	12	1	1	0	5	0	0	0	37	7	35.3	40.2
06-22	5549	5083	28	355	13	12	1	1	0	5	0	0	0	43	8	35.6	40.6
06-00	5815	5338	28	362	14	12	1	1	0	5	0	0	0	46	8	35.7	40.8
00-00	6006	5506	28	381	14	12	1	2	0	5	0	0	0	49	8	35.9	41

01 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	73	70	0	2	0	0	0	0	0	0	0	0	0	1	0	40.8	49.1
0100	39	39	0	0	0	0	0	0	0	0	0	0	0	0	0	38.2	41.9
0200	33	32	0	1	0	0	0	0	0	0	0	0	0	0	0	36.9	41.6
0300	32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	40	46.6
0400	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	44.7	58.2
0500	48	43	0	5	0	0	0	0	0	0	0	0	0	0	0	38.9	46.8
0600	118	107	0	10	1	0	0	0	0	0	0	0	0	0	0	40.5	48.3
0700	174	153	0	19	0	0	0	0	0	0	0	0	0	1	1	37.6	43.6
0800	237	212	0	16	1	1	0	1	0	0	0	0	0	4	2	37	43.2
0900	304	293	1	8	1	1	0	0	0	0	0	0	0	0	0	37.2	42.2
1000	349	333	3	8	0	0	0	0	0	0	0	0	0	5	0	36.9	41.6
1100	379	353	3	15	0	5	0	0	0	0	0	0	0	3	0	37.8	42.6
1200	452	432	2	13	0	1	0	0	0	0	0	0	0	4	0	36.8	41.2
1300	445	420	2	16	1	2	0	0	0	0	0	0	0	4	0	34.6	38.9
1400	343	330	0	9	1	0	0	0	0	0	0	0	0	3	0	36	42.2
1500	334	314	2	14	1	0	0	0	0	0	0	0	0	3	0	36.2	41.7
1600	329	311	3	10	2	1	0	0	0	0	0	0	0	2	0	36.3	41.2
1700	330	318	1	9	0	0	0	2	0	0	0	0	0	0	0	36.9	42.2
1800	315	297	2	8	1	1	0	1	0	0	0	0	0	4	1	36.6	43.1
1900	252	240	0	9	1	0	0	0	0	0	0	0	0	2	0	36.9	42.4
2000	192	180	1	4	2	1	0	0	0	0	0	0	0	4	0	37.4	44.3
2100	161	150	0	7	1	0	0	0	0	1	0	0	0	2	0	37.4	43.6
2200	164	158	0	2	2	0	0	0	0	0	0	0	0	2	0	37.4	43.8
2300	183	177	0	4	1	0	0	0	0	0	0	0	0	1	0	37.6	42.4
07-19	3991	3766	19	145	8	12	0	4	0	0	0	0	0	33	4	36.6	41.8
06-22	4714	4443	20	175	13	13	0	4	0	1	0	0	0	41	4	36.7	42.2
06-00	5061	4778	20	181	16	13	0	4	0	1	0	0	0	44	4	36.8	42.2
00-00	5303	5011	20	189	16	13	0	4	0	1	0	0	0	45	4	36.9	42.4

02 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85	
0000	106	104	0	2	0	0	0	0	0	0	0	0	0	0	0	37.7	42.6	
0100	46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	38.9	47.4	
0200	35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	42.1	49.7	
0300	27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	38.3	46.7	
0400	20	17	0	2	1	0	0	0	0	0	0	0	0	0	0	38.4	45.1	
0500	35	32	0	1	1	0	0	0	0	0	0	0	0	0	1	38.6	43.8	
0600	78	70	0	6	2	0	0	0	0	0	0	0	0	0	0	38.1	44.5	
0700	106	102	0	4	0	0	0	0	0	0	0	0	0	0	0	37.9	44.3	
0800	140	132	0	5	0	0	0	0	0	0	0	0	0	0	3	38.1	43.9	
0900	276	260	0	14	1	0	0	0	0	0	0	0	0	0	1	38.2	43.3	
1000	359	341	3	11	1	0	0	0	0	0	0	0	0	0	2	1	36.6	41.4
1100	357	343	1	9	1	1	0	0	0	0	0	0	0	0	1	1	36.7	42.1
1200	383	363	3	14	0	1	0	0	0	0	0	0	0	0	1	1	36.6	41.3
1300	386	372	2	8	1	0	0	0	0	0	1	0	0	0	2	0	36.3	40.8
1400	334	323	1	6	1	1	0	0	0	0	0	0	0	0	2	0	37.2	42.3
1500	373	364	0	5	0	2	0	0	0	0	0	0	0	0	2	0	35.6	41.2
1600	319	308	1	8	1	0	0	0	0	0	0	0	0	0	1	0	35.6	41.2
1700	294	287	0	6	1	0	0	0	0	0	0	0	0	0	0	0	35.4	40.7
1800	287	278	0	5	1	0	0	0	0	0	0	0	0	0	2	1	35.9	41.9
1900	264	254	0	8	0	0	0	0	0	0	0	0	0	0	2	0	37.5	43.3
2000	145	138	1	6	0	0	0	0	0	0	0	0	0	0	0	0	38	42.9
2100	158	154	0	4	0	0	0	0	0	0	0	0	0	0	0	0	38.6	45.1
2200	89	85	0	2	1	0	0	0	0	0	0	0	0	0	1	0	37.6	42.6
2300	67	66	0	1	0	0	0	0	0	0	0	0	0	0	0	0	37.6	44.2
07-19	3614	3473	11	95	8	5	0	0	0	1	0	0	0	17	4	36.5	41.7	
06-22	4259	4089	12	119	10	5	0	0	0	1	0	0	0	19	4	36.7	42.1	
06-00	4415	4240	12	122	11	5	0	0	0	1	0	0	0	20	4	36.8	42.1	
00-00	4684	4501	12	127	13	5	0	0	0	1	0	0	0	21	4	36.9	42.3	

03 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	37.9	44.1
0100	26	26	0	0	0	0	0	0	0	0	0	0	0	0	0	45.3	54.5
0200	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	45.6	65.2
0300	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	43.7	-
0400	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	45.2	55.4
0500	88	78	0	9	1	0	0	0	0	0	0	0	0	0	0	41.2	46.3
0600	183	157	1	21	4	0	0	0	0	0	0	0	0	0	0	38.4	44
0700	419	372	2	34	6	1	0	0	0	0	0	0	0	2	2	35.8	40.6
0800	481	445	1	24	7	1	0	1	0	0	0	0	0	1	1	36	40.7
0900	393	348	2	37	0	0	0	0	0	0	0	0	0	6	0	36.1	41.2
1000	310	283	1	20	0	2	0	1	0	0	0	0	0	3	0	36.1	40.5
1100	298	260	1	34	0	2	0	0	0	0	0	0	0	1	0	35.3	40.4
1200	333	303	1	26	0	0	0	0	0	0	0	0	0	3	0	35.3	40.7
1300	314	290	0	21	0	0	0	0	0	0	0	0	0	2	1	35.4	40.7
1400	350	322	1	24	1	0	0	0	0	0	0	0	0	2	0	35.6	41.2
1500	379	354	0	21	1	0	0	0	0	0	0	0	0	3	0	35.5	40.7
1600	409	382	3	19	1	1	0	0	0	0	0	0	0	3	0	35	39.9
1700	396	367	3	16	2	2	0	0	0	0	0	0	0	5	1	34	39
1800	420	399	4	12	2	0	0	0	0	0	0	0	0	2	1	35.2	40
1900	301	287	1	9	0	0	0	0	0	0	0	0	0	4	0	36.3	40.8
2000	202	185	0	13	2	0	0	0	0	0	0	0	0	1	1	37.4	43.6
2100	145	135	0	4	3	0	0	0	0	0	0	0	0	3	0	39.8	48.2
2200	101	96	0	2	2	0	0	0	0	0	0	0	0	0	1	37.1	43.4
2300	71	70	1	0	0	0	0	0	0	0	0	0	0	0	0	38.8	44.6
07-19	4502	4125	19	288	20	9	0	2	0	0	0	0	0	33	6	35.4	40.5
06-22	5333	4889	21	335	29	9	0	2	0	0	0	0	0	41	7	35.8	40.9
06-00	5505	5055	22	337	31	9	0	2	0	0	0	0	0	41	8	35.9	40.9
00-00	5684	5224	22	346	32	9	0	2	0	0	0	0	0	41	8	36	41.2

04 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	33	31	0	0	1	0	0	0	0	0	0	0	0	1	0	40.5	46.9
0100	15	14	0	0	0	0	0	0	0	0	0	0	0	1	0	37.8	45.1
0200	12	11	0	1	0	0	0	0	0	0	0	0	0	0	0	43.8	55.2
0300	11	11	0	0	0	0	0	0	0	0	0	0	0	0	0	39.7	49.4
0400	19	16	0	3	0	0	0	0	0	0	0	0	0	0	0	40.2	45.1
0500	89	81	0	6	2	0	0	0	0	0	0	0	0	0	0	40.7	47.3
0600	228	197	0	20	9	1	0	0	0	0	0	0	0	1	0	38.9	44.9
0700	389	357	0	19	10	1	1	0	0	0	0	0	0	1	0	36.3	40.4
0800	461	426	1	18	9	3	0	0	0	1	0	0	0	3	0	33.8	40.2
0900	377	331	3	29	3	2	0	1	0	0	0	0	0	8	0	36	41.4
1000	294	271	1	18	1	1	0	0	0	0	0	0	0	1	1	36.3	40.5
1100	286	257	2	23	2	0	0	0	0	0	0	0	0	2	0	35.7	40.2
1200	277	245	1	25	1	0	0	0	0	0	0	0	0	5	0	36.8	42.2
1300	326	298	0	22	1	0	0	0	0	0	0	0	0	5	0	36.1	41.3
1400	352	319	0	27	0	0	0	0	0	0	0	0	0	6	0	36	40.5
1500	417	388	4	22	2	0	0	0	0	0	0	0	0	1	0	35.9	40.9
1600	368	337	3	23	1	1	0	0	0	0	0	0	0	1	2	34.4	39.6
1700	363	345	2	9	2	0	0	0	0	0	0	0	0	5	0	35.3	40.8
1800	392	363	6	12	2	1	0	1	0	0	0	0	0	4	3	36.3	41.8
1900	328	307	2	12	2	0	0	0	0	1	0	0	0	4	0	37.4	42.6
2000	203	191	0	11	0	0	0	0	0	0	0	0	0	1	0	37.3	42.5
2100	156	143	0	5	4	2	0	0	0	0	0	0	0	2	0	38	44.1
2200	125	119	1	4	0	0	0	0	0	0	0	0	0	1	0	37.7	44.7
2300	61	58	0	1	1	1	0	0	0	0	0	0	0	0	0	40	46.2
07-19	4302	3937	23	247	34	9	1	2	0	1	0	0	0	42	6	35.7	40.7
06-22	5217	4775	25	295	49	12	1	2	0	2	0	0	0	50	6	36.1	41.3
06-00	5403	4952	26	300	50	13	1	2	0	2	0	0	0	51	6	36.1	41.4
00-00	5582	5116	26	310	53	13	1	2	0	2	0	0	0	53	6	36.3	41.6

05 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	42	42	0	0	0	0	0	0	0	0	0	0	0	0	0	39.5	48.5
0100	19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	39.4	48.3
0200	10	9	0	0	1	0	0	0	0	0	0	0	0	0	0	40.8	-
0300	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	54.8	-
0400	20	19	0	1	0	0	0	0	0	0	0	0	0	0	0	42.3	47.6
0500	79	71	0	3	4	1	0	0	0	0	0	0	0	0	0	40.8	47.2
0600	202	174	0	19	8	0	0	0	0	0	0	0	0	1	0	38.3	44
0700	405	377	3	16	7	1	0	0	0	0	0	0	0	1	0	36.7	40.9
0800	511	459	4	30	5	4	0	0	0	0	0	0	0	6	3	35.6	40.7
0900	423	386	3	24	0	0	0	1	1	1	0	0	0	5	2	34.7	40.5
1000	315	279	3	29	2	1	0	0	0	1	0	0	0	0	0	36.1	40.7
1100	284	254	2	24	3	0	0	0	0	0	0	0	0	1	0	35.1	40.5
1200	335	302	0	25	1	0	0	0	0	0	0	0	0	6	1	36.5	41.4
1300	361	321	0	29	1	0	2	1	0	0	0	0	0	7	0	35.2	40.4
1400	393	364	3	23	0	0	1	0	0	0	0	0	0	1	1	36.1	41.4
1500	394	376	1	12	1	0	1	1	0	1	0	0	0	1	0	36	41.8
1600	429	396	4	19	5	0	0	2	0	0	0	0	0	3	0	35.5	40.8
1700	395	382	0	9	1	0	0	0	0	0	0	0	0	3	0	35.9	40.8
1800	405	387	0	11	2	0	0	0	0	0	0	0	0	4	1	35.5	39.9
1900	363	346	0	8	3	1	0	0	0	0	0	0	0	4	1	36.3	41.8
2000	196	186	0	7	1	0	0	0	0	0	0	0	0	1	1	38.3	43.5
2100	182	171	0	7	1	1	0	0	0	0	0	0	0	2	0	38.2	43.3
2200	141	138	0	0	3	0	0	0	0	0	0	0	0	0	0	39.4	44.5
2300	79	75	0	0	1	1	0	0	0	0	0	0	0	2	0	38.7	43.1
07-19	4650	4283	23	251	28	6	4	5	1	3	0	0	0	38	8	35.7	40.8
06-22	5593	5160	23	292	41	8	4	5	1	3	0	0	0	46	10	36	41.2
06-00	5813	5373	23	292	45	9	4	5	1	3	0	0	0	48	10	36.2	41.3
00-00	5988	5538	23	296	50	10	4	5	1	3	0	0	0	48	10	36.3	41.5

06 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	36	35	0	1	0	0	0	0	0	0	0	0	0	0	0	38.7	46
0100	10	8	0	1	1	0	0	0	0	0	0	0	0	0	0	39.4	-
0200	15	14	0	1	0	0	0	0	0	0	0	0	0	0	0	42	47.8
0300	13	12	0	1	0	0	0	0	0	0	0	0	0	0	0	35.9	41.7
0400	18	15	0	2	1	0	0	0	0	0	0	0	0	0	0	39.9	43.5
0500	85	75	0	6	3	1	0	0	0	0	0	0	0	0	0	38.2	44.3
0600	193	168	1	14	9	1	0	0	0	0	0	0	0	0	0	37.7	42.8
0700	384	352	0	15	9	3	0	1	0	0	0	0	0	3	1	34.7	39.9
0800	469	431	3	18	11	1	0	0	0	0	0	0	0	4	1	35.1	39.6
0900	402	359	2	29	1	0	0	0	0	0	0	0	0	9	2	36.2	40.9
1000	327	299	2	17	1	2	0	0	0	0	0	0	0	5	1	36.3	42.1
1100	300	272	0	20	1	1	0	0	0	0	0	0	0	6	0	28.4	37.5
1200	320	295	0	22	0	1	0	0	0	0	0	0	0	2	0	25.3	34.3
1300	313	287	0	23	3	0	0	0	0	0	0	0	0	0	0	30.1	38.6
1400	369	344	1	18	2	2	1	0	0	0	0	0	0	1	0	36	40.7
1500	370	339	1	22	1	1	0	0	0	1	0	0	0	4	1	35.6	40.8
1600	386	357	2	18	1	0	0	1	1	0	0	0	0	5	1	35.5	41
1700	388	363	2	14	3	1	0	0	0	0	0	0	0	3	2	34.5	39.6
1800	397	370	1	13	3	2	0	0	0	0	0	0	0	6	2	35.6	40.7
1900	382	361	2	13	1	1	0	0	0	0	0	0	0	2	2	34.2	39.8
2000	208	197	0	5	1	1	0	0	0	0	0	0	0	4	0	38.1	43
2100	151	138	0	6	3	0	0	0	0	0	0	0	0	3	1	37.8	44.9
2200	120	116	0	1	3	0	0	0	0	0	0	0	0	0	0	39.4	45
2300	79	73	1	0	4	0	0	0	0	0	0	0	0	1	0	39.2	44.9
07-19	4425	4068	14	229	36	14	1	2	1	1	0	0	0	48	11	33.9	40
06-22	5359	4932	17	267	50	17	1	2	1	1	0	0	0	57	14	34.3	40.5
06-00	5558	5121	18	268	57	17	1	2	1	1	0	0	0	58	14	34.5	40.7
00-00	5735	5280	18	280	62	18	1	2	1	1	0	0	0	58	14	34.6	40.8

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

DIRECTION: NORTHBOUND SPEED LIMIT: 40

31 January 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	39	0	0	0	3	15	15	3	1	1	0	0	1	0	0	0	39.2	43.7		39.7
0100	30	0	0	1	5	6	8	7	2	0	1	0	0	0	0	0	39.5	46.8		41
0200	14	0	0	1	2	4	4	2	1	0	0	0	0	0	0	0	37.5	46.4		40.1
0300	11	0	0	0	2	0	3	4	2	0	0	0	0	0	0	0	42.4	53.6		40.3
0400	23	0	0	0	2	4	6	6	3	1	1	0	0	0	0	0	43.5	55.2		40.5
0500	74	0	0	4	6	16	29	12	5	2	0	0	0	0	0	0	39.5	47.2		40.4
0600	198	0	2	3	17	57	81	31	7	0	0	0	0	0	0	0	38.5	44.8		41.2
0700	418	2	0	3	73	216	110	11	3	0	0	0	0	0	0	0	35	39.5		40.7
0800	484	2	0	22	100	237	102	16	3	2	0	0	0	0	0	0	34.1	39.1		40.5
0900	412	2	0	11	56	201	116	17	7	1	0	1	0	0	0	0	35.7	40.5		40.2
1000	300	0	1	2	54	143	84	12	3	1	0	0	0	0	0	0	35.4	39.7		40.5
1100	312	0	0	1	51	149	91	17	2	0	1	0	0	0	0	0	35.9	41		40.9
1200	390	0	0	1	52	201	113	18	5	0	0	0	0	0	0	0	36.1	40.8		40.7
1300	386	0	2	4	72	188	95	16	8	1	0	0	0	0	0	0	35.3	40.1		40.5
1400	428	1	1	7	54	221	125	18	1	0	0	0	0	0	0	0	35.5	40.1		41.4
1500	413	0	3	4	46	223	110	25	2	0	0	0	0	0	0	0	35.6	40.3		41.8
1600	342	0	0	3	54	167	91	22	2	3	0	0	0	0	0	0	35.9	40.9		42.1
1700	410	1	1	16	130	157	89	11	2	2	0	1	0	0	0	0	33.7	38.9		37.5
1800	364	1	1	4	49	195	86	21	6	0	1	0	0	0	0	0	35.7	40.3		40.7
1900	291	1	0	1	33	138	92	15	7	2	2	0	0	0	0	0	36.8	41.7		40.8
2000	210	0	0	2	31	84	66	18	8	1	0	0	0	0	0	0	37.4	42.8		
2100	191	0	0	2	26	86	54	16	3	3	0	0	1	0	0	0	37.1	42.8		40.575
2200	150	0	1	1	15	56	48	20	5	3	1	0	0	0	0	0	38	44.5		
2300	116	0	0	1	12	36	49	13	5	0	0	0	0	0	0	0	38.1	43.6		
07-19	4659	9	9	78	791	2298	1212	204	44	10	2	2	0	0	0	0	35.3	40.2		
06-22	5549	10	11	86	898	2663	1505	284	69	16	4	2	1	0	0	0	35.6	40.6		
06-00	5815	10	12	88	925	2755	1602	317	79	19	5	2	1	0	0	0	35.7	40.8		
00-00	6006	10	12	94	945	2800	1667	351	93	23	7	2	2	0	0	0	35.9	41		

01 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	73	0	0	0	4	21	29	9	6	2	2	0	0	0	0	0	40.8	49.1		
0100	39	0	0	0	3	15	18	1	0	2	0	0	0	0	0	0	38.2	41.9		
0200	33	0	0	0	7	9	15	1	0	0	1	0	0	0	0	0	36.9	41.6		
0300	32	0	0	0	2	13	8	5	3	0	1	0	0	0	0	0	40	46.6		
0400	17	0	0	0	1	4	2	5	2	2	1	0	0	0	0	0	44.7	58.2		
0500	48	0	0	2	4	11	21	4	5	1	0	0	0	0	0	0	38.9	46.8		
0600	118	0	0	1	7	35	40	23	8	1	3	0	0	0	0	0	40.5	48.3		
0700	174	1	0	1	23	59	64	21	5	0	0	0	0	0	0	0	37.6	43.6		
0800	237	3	2	3	23	89	87	26	4	0	0	0	0	0	0	0	37	43.2		
0900	304	0	3	3	24	127	113	26	6	1	1	0	0	0	0	0	37.2	42.2		
1000	349	0	0	1	41	155	120	24	8	0	0	0	0	0	0	0	36.9	41.6		
1100	379	0	0	1	25	170	138	36	6	2	1	0	0	0	0	0	37.8	42.6		
1200	452	0	0	2	37	231	140	35	5	1	0	0	1	0	0	0	36.8	41.2		
1300	445	0	4	4	77	249	97	8	5	1	0	0	0	0	0	0	34.6	38.9		
1400	343	0	0	5	63	146	91	35	2	1	0	0	0	0	0	0	36	42.2		
1500	334	0	1	6	45	163	87	23	8	1	0	0	0	0	0	0	36.2	41.7		
1600	329	0	0	2	52	155	89	22	6	3	0	0	0	0	0	0	36.3	41.2		
1700	330	0	0	0	40	152	109	22	2	4	1	0	0	0	0	0	36.9	42.2		
1800	315	0	1	5	45	146	78	29	8	1	0	1	0	1	0	0	36.6	43.1		
1900	252	0	0	0	32	106	87	21	6	0	0	0	0	0	0	0	36.9	42.4		
2000	192	0	0	4	23	75	58	21	7	2	2	0	0	0	0	0	37.4	44.3		
2100	161	0	0	2	24	45	66	21	3	0	0	0	0	0	0	0	37.4	43.6		
2200	164	0	0	1	17	73	48	18	6	0	0	1	0	0	0	0	37.4	43.8		
2300	183	0	0	1	15	83	64	14	2	4	0	0	0	0	0	0	37.6	42.4		
07-19	3991	4	11	33	495	1842	1213	307	65	15	3	1	1	1	0	0	36.6	41.8		
06-22	4714	4	11	40	581	2103	1464	393	89	18	8	1	1	1	0	0	36.7	42.2		
06-00	5061	4	11	42	613	2259	1576	425	97	22	8	2	1	1	0	0	36.8	42.2		
00-00	5303	4	11	44	634	2332	1669	450	113	29	13	2	1	1	0	0	36.9	42.4		

02 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	106	0	0	1	10	42	44	6	1	0	0	2	0	0	0	0	37.7	42.6		
0100	46	0	0	0	5	16	16	4	3	2	0	0	0	0	0	0	38.9	47.4		
0200	35	0	0	0	1	12	10	7	3	1	1	0	0	0	0	0	42.1	49.7		
0300	27	0	0	0	3	9	9	6	0	0	0	0	0	0	0	0	38.3	46.7		
0400	20	0	0	0	3	6	5	6	0	0	0	0	0	0	0	0	38.4	45.1		
0500	35	0	0	2	3	9	16	3	1	0	1	0	0	0	0	0	38.6	43.8		
0600	78	0	0	1	11	27	24	9	5	1	0	0	0	0	0	0	38.1	44.5		
0700	106	0	0	0	10	45	33	13	4	1	0	0	0	0	0	0	37.9	44.3		
0800	140	0	1	1	16	49	50	16	3	3	0	1	0	0	0	0	38.1	43.9		
0900	276	0	0	1	15	112	107	37	2	1	1	0	0	0	0	0	38.2	43.3		
1000	359	1	0	6	37	155	135	17	6	2	0	0	0	0	0	0	36.6	41.4		
1100	357	1	0	3	41	166	108	29	7	2	0	0	0	0	0	0	36.7	42.1		
1200	383	1	0	1	49	164	139	22	6	1	0	0	0	0	0	0	36.6	41.3		
1300	386	0	0	4	36	207	114	21	3	0	1	0	0	0	0	0	36.3	40.8		
1400	334	0	1	2	22	168	108	24	4	4	1	0	0	0	0	0	37.2	42.3		
1500	373	0	2	11	64	177	81	32	3	2	0	1	0	0	0	0	35.6	41.2		
1600	319	0	0	3	66	144	81	19	5	1	0	0	0	0	0	0	35.6	41.2		
1700	294	0	0	10	43	140	87	12	1	1	0	0	0	0	0	0	35.4	40.7		
1800	287	1	0	6	53	123	74	22	7	0	1	0	0	0	0	0	35.9	41.9		
1900	264	0	0	2	35	101	87	26	9	4	0	0	0	0	0	0	37.5	43.3		
2000	145	0	0	0	13	60	52	13	5	2	0	0	0	0	0	0	38	42.9		
2100	158	0	0	1	20	52	54	25	3	0	0	2	1	0	0	0	38.6	45.1		
2200	89	1	1	0	7	33	37	6	2	1	0	1	0	0	0	0	37.6	42.6		
2300	67	0	0	0	8	27	20	9	3	0	0	0	0	0	0	0	37.6	44.2		
07-19	3614	4	4	48	452	1650	1117	264	51	18	4	2	0	0	0	0	36.5	41.7		
06-22	4259	4	4	52	531	1890	1334	337	73	25	4	4	1	0	0	0	36.7	42.1		
06-00	4415	5	5	52	546	1950	1391	352	78	26	4	5	1	0	0	0	36.8	42.1		
00-00	4684	5	5	55	571	2044	1491	384	86	29	6	7	1	0	0	0	36.9	42.3		

03 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	27	0	0	0	3	11	9	2	1	1	0	0	0	0	0	0	37.9	44.1		
0100	26	0	0	0	3	3	9	4	4	0	0	1	1	1	0	0	45.3	54.5		
0200	13	0	0	1	0	2	2	6	0	0	1	1	0	0	0	0	45.6	65.2		
0300	9	0	0	0	1	2	2	1	2	1	0	0	0	0	0	0	43.7	-		
0400	16	0	0	0	1	3	3	3	5	1	0	0	0	0	0	0	45.2	55.4		
0500	88	0	0	0	5	14	43	18	6	1	1	0	0	0	0	0	41.2	46.3		
0600	183	0	1	1	12	67	71	23	6	2	0	0	0	0	0	0	38.4	44		
0700	419	3	0	2	50	223	118	19	3	1	0	0	0	0	0	0	35.8	40.6		
0800	481	1	0	9	56	233	153	22	5	2	0	0	0	0	0	0	36	40.7		
0900	393	0	0	12	55	164	130	27	4	0	1	0	0	0	0	0	36.1	41.2		
1000	310	0	0	0	34	167	89	17	2	1	0	0	0	0	0	0	36.1	40.5		
1100	298	0	0	4	54	154	69	14	2	0	0	0	1	0	0	0	35.3	40.4		
1200	333	0	1	8	62	145	98	13	4	2	0	0	0	0	0	0	35.3	40.7		
1300	314	1	0	2	45	181	65	16	4	0	0	0	0	0	0	0	35.4	40.7		
1400	350	1	2	0	50	174	102	17	4	0	0	0	0	0	0	0	35.6	41.2		
1500	379	0	0	5	66	179	103	23	2	1	0	0	0	0	0	0	35.5	40.7		
1600	409	0	0	7	81	200	105	13	3	0	0	0	0	0	0	0	35	39.9		
1700	396	1	0	11	107	181	81	11	3	1	0	0	0	0	0	0	34	39		
1800	420	1	0	8	79	208	106	13	5	0	0	0	0	0	0	0	35.2	40		
1900	301	0	0	0	43	156	79	16	5	2	0	0	0	0	0	0	36.3	40.8		
2000	202	0	1	2	34	66	69	22	4	4	0	0	0	0	0	0	37.4	43.6		
2100	145	0	1	1	9	45	50	25	10	3	0	1	0	0	0	0	39.8	48.2		
2200	101	1	0	2	13	32	39	13	1	0	0	0	0	0	0	0	37.1	43.4		
2300	71	0	0	0	8	25	26	8	1	1	2	0	0	0	0	0	38.8	44.6		
07-19	4502	8	3	68	739	2209	1219	205	41	8	1	0	1	0	0	0	35.4	40.5		
06-22	5333	8	6	72	837	2543	1488	291	66	19	1	1	1	0	0	0	35.8	40.9		
06-00	5505	9	6	74	858	2600	1553	312	68	20	3	1	1	0	0	0	35.9	40.9		
00-00	5684	9	6	75	871	2635	1621	346	86	24	5	3	2	1	0	0	36	41.2		

04 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	33	0	0	0	0	12	13	5	2	0	1	0	0	0	0	0	40.5	46.9		
0100	15	0	0	0	1	5	5	4	0	0	0	0	0	0	0	0	37.8	45.1		
0200	12	0	0	0	1	3	2	3	3	0	0	0	0	0	0	0	43.8	55.2		
0300	11	0	0	0	0	6	0	4	1	0	0	0	0	0	0	0	39.7	49.4		
0400	19	0	0	0	1	3	10	4	1	0	0	0	0	0	0	0	40.2	45.1		
0500	89	0	0	0	2	29	34	18	5	0	1	0	0	0	0	0	40.7	47.3		
0600	228	0	0	1	17	88	79	23	16	2	1	1	0	0	0	0	38.9	44.9		
0700	389	0	1	3	44	191	128	17	3	2	0	0	0	0	0	0	36.3	40.4		
0800	461	14	15	28	48	210	117	26	3	0	0	0	0	0	0	0	33.8	40.2		
0900	377	3	7	2	45	169	122	22	4	2	0	1	0	0	0	0	36	41.4		
1000	294	0	0	10	23	138	105	16	2	0	0	0	0	0	0	0	36.3	40.5		
1100	286	0	0	7	34	145	83	15	1	1	0	0	0	0	0	0	35.7	40.2		
1200	277	0	1	1	29	135	81	22	5	2	1	0	0	0	0	0	36.8	42.2		
1300	326	0	2	10	41	144	97	24	6	1	1	0	0	0	0	0	36.1	41.3		
1400	352	0	0	0	58	181	90	15	4	2	2	0	0	0	0	0	36	40.5		
1500	417	0	0	12	67	185	118	24	8	2	1	0	0	0	0	0	35.9	40.9		
1600	368	2	0	10	76	186	74	19	1	0	0	0	0	0	0	0	34.4	39.6		
1700	363	0	0	7	69	156	110	18	2	1	0	0	0	0	0	0	35.3	40.8		
1800	392	3	0	3	58	158	137	27	4	2	0	0	0	0	0	0	36.3	41.8		
1900	328	0	0	1	34	139	114	33	5	2	0	0	0	0	0	0	37.4	42.6		
2000	203	0	0	5	17	91	66	16	7	0	1	0	0	0	0	0	37.3	42.5		
2100	156	0	0	2	18	58	51	22	2	3	0	0	0	0	0	0	38	44.1		
2200	125	0	0	7	13	36	45	20	4	0	0	0	0	0	0	0	37.7	44.7		
2300	61	0	0	0	5	17	25	10	1	3	0	0	0	0	0	0	40	46.2		
07-19	4302	22	26	93	592	1998	1262	245	43	15	5	1	0	0	0	0	35.7	40.7		
06-22	5217	22	26	102	678	2374	1572	339	73	22	7	2	0	0	0	0	36.1	41.3		
06-00	5403	22	26	109	696	2427	1642	369	78	25	7	2	0	0	0	0	36.1	41.4		
00-00	5582	22	26	109	701	2485	1706	407	90	25	9	2	0	0	0	0	36.3	41.6		

05 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	42	0	0	1	4	13	14	7	1	1	1	0	0	0	0	0	39.5	48.5		
0100	19	0	0	1	2	5	5	5	0	1	0	0	0	0	0	0	39.4	48.3		
0200	10	0	0	0	1	1	5	2	0	1	0	0	0	0	0	0	40.8	-		
0300	5	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	54.8	-		
0400	20	0	0	0	2	2	7	8	0	1	0	0	0	0	0	0	42.3	47.6		
0500	79	0	0	0	3	21	32	18	2	1	1	1	0	0	0	0	40.8	47.2		
0600	202	0	0	3	19	60	85	26	8	0	1	0	0	0	0	0	38.3	44		
0700	405	0	0	0	42	187	148	21	6	1	0	0	0	0	0	0	36.7	40.9		
0800	511	1	9	16	56	232	166	24	5	1	1	0	0	0	0	0	35.6	40.7		
0900	423	5	11	5	65	206	106	23	2	0	0	0	0	0	0	0	34.7	40.5		
1000	315	0	0	1	39	159	100	13	3	0	0	0	0	0	0	0	36.1	40.7		
1100	284	0	3	8	48	136	66	19	3	1	0	0	0	0	0	0	35.1	40.5		
1200	335	1	0	3	41	157	102	22	6	1	0	1	1	0	0	0	36.5	41.4		
1300	361	0	0	7	77	166	88	15	6	2	0	0	0	0	0	0	35.2	40.4		
1400	393	1	0	1	60	184	114	29	3	1	0	0	0	0	0	0	36.1	41.4		
1500	394	0	0	12	48	185	114	31	2	2	0	0	0	0	0	0	36	41.8		
1600	429	0	1	7	78	192	119	28	3	0	1	0	0	0	0	0	35.5	40.8		
1700	395	0	1	3	74	172	122	19	1	0	1	0	0	0	2	0	35.9	40.8		
1800	405	1	0	1	59	203	117	21	3	0	0	0	0	0	0	0	35.5	39.9		
1900	363	1	0	1	41	186	102	22	8	2	0	0	0	0	0	0	36.3	41.8		
2000	196	1	0	3	15	74	74	15	8	4	1	1	0	0	0	0	38.3	43.5		
2100	182	0	0	0	9	77	70	21	3	1	1	0	0	0	0	0	38.2	43.3		
2200	141	0	0	1	4	41	68	23	2	1	0	1	0	0	0	0	39.4	44.5		
2300	79	0	0	0	5	31	32	6	4	0	1	0	0	0	0	0	38.7	43.1		
07-19	4650	9	25	64	687	2179	1362	265	43	9	3	1	1	0	2	0	35.7	40.8		
06-22	5593	11	25	71	771	2576	1693	349	70	16	6	2	1	0	2	0	36	41.2		
06-00	5813	11	25	72	780	2648	1793	378	76	17	7	3	1	0	2	0	36.2	41.3		
00-00	5988	11	25	74	792	2690	1856	419	81	23	10	4	1	0	2	0	36.3	41.5		

06 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	36	0	0	1	0	15	12	7	1	0	0	0	0	0	0	0	38.7	46		
0100	10	0	0	0	1	3	4	1	1	0	0	0	0	0	0	0	39.4	-		
0200	15	0	0	0	0	5	2	8	0	0	0	0	0	0	0	0	42	47.8		
0300	13	0	0	1	2	5	4	0	1	0	0	0	0	0	0	0	35.9	41.7		
0400	18	0	0	0	0	6	10	1	1	0	0	0	0	0	0	0	39.9	43.5		
0500	85	0	0	2	10	22	35	15	1	0	0	0	0	0	0	0	38.2	44.3		
0600	193	0	0	3	18	71	76	18	5	2	0	0	0	0	0	0	37.7	42.8		
0700	384	2	19	8	43	185	106	21	0	0	0	0	0	0	0	0	34.7	39.9		
0800	469	5	3	5	56	259	125	13	3	0	0	0	0	0	0	0	35.1	39.6		
0900	402	3	1	2	43	197	126	25	3	1	1	0	0	0	0	0	36.2	40.9		
1000	327	0	2	9	40	127	123	21	3	2	0	0	0	0	0	0	36.3	42.1		
1100	300	15	42	47	56	91	44	2	3	0	0	0	0	0	0	0	28.4	37.5		
1200	320	39	55	44	68	93	16	3	2	0	0	0	0	0	0	0	25.3	34.3		
1300	313	5	25	57	69	92	55	8	2	0	0	0	0	0	0	0	30.1	38.6		
1400	369	0	0	0	53	184	103	19	9	1	0	0	0	0	0	0	36	40.7		
1500	370	1	0	7	66	171	101	18	4	0	2	0	0	0	0	0	35.6	40.8		
1600	386	2	1	6	63	173	117	22	2	0	0	0	0	0	0	0	35.5	41		
1700	388	2	0	7	80	200	76	20	3	0	0	0	0	0	0	0	34.5	39.6		
1800	397	2	0	6	53	206	106	16	7	0	1	0	0	0	0	0	35.6	40.7		
1900	382	2	1	13	94	176	76	16	4	0	0	0	0	0	0	0	34.2	39.8		
2000	208	0	0	2	16	83	80	19	4	4	0	0	0	0	0	0	38.1	43		
2100	151	0	2	2	17	62	42	16	8	1	1	0	0	0	0	0	37.8	44.9		
2200	120	0	0	2	6	31	59	13	7	1	1	0	0	0	0	0	39.4	45		
2300	79	0	0	3	5	28	24	13	3	1	2	0	0	0	0	0	39.2	44.9		
07-19	4425	76	148	198	690	1978	1098	188	41	4	4	0	0	0	0	0	33.9	40		
06-22	5359	78	151	218	835	2370	1372	257	62	11	5	0	0	0	0	0	34.3	40.5		
06-00	5558	78	151	223	846	2429	1455	283	72	13	8	0	0	0	0	0	34.5	40.7		
00-00	5735	78	151	227	859	2485	1522	315	77	13	8	0	0	0	0	0	34.6	40.8		

Grand Total

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
--	38982	139	236	678	5373	17471	11532	2672	626	166	58	20	7	2	2	0	36.1	41.5		

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

DIRECTION: NORTHBOUND

SPEED LIMIT: 40

Hour	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Averages	
	31-Jan	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	1-5.	1-7.
0000-010	39	73	106	27	33	42	36	35.4	50.9
0100-020	30	39	46	26	15	19	10	20	26.4
0200-030	14	33	35	13	12	10	15	12.8	18.9
0300-040	11	32	27	9	11	5	13	9.8	15.4
0400-050	23	17	20	16	19	20	18	19.2	19
0500-060	74	48	35	88	89	79	85	83	71.1
0600-070	198	118	78	183	228	202	193	200.8	171.4
0700-080	418	174	106	419	389	405	384	403	327.9
0800-090	484	237	140	481	461	511	469	481.2	397.6
0900-100	412	304	276	393	377	423	402	401.4	369.6
1000-110	300	349	359	310	294	315	327	309.2	322
1100-120	312	379	357	298	286	284	300	296	316.6
1200-130	390	452	383	333	277	335	320	331	355.7
1300-140	386	445	386	314	326	361	313	340	361.6
1400-150	428	343	334	350	352	393	369	378.4	367
1500-160	413	334	373	379	417	394	370	394.6	382.9
1600-170	342	329	319	409	368	429	386	386.8	368.9
1700-180	410	330	294	396	363	395	388	390.4	368
1800-190	364	315	287	420	392	405	397	395.6	368.6
1900-200	291	252	264	301	328	363	382	333	311.6
2000-210	210	192	145	202	203	196	208	203.8	193.7
2100-220	191	161	158	145	156	182	151	165	163.4
2200-230	150	164	89	101	125	141	120	127.4	127.1
2300-240	116	183	67	71	61	79	79	81.2	93.7
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Totals									
0700-190	4659	3991	3614	4502	4302	4650	4425	4507.6	4306.1
0600-220	5549	4714	4259	5333	5217	5593	5359	5410.2	5146.3
0600-000	5815	5061	4415	5505	5403	5813	5558	5618.8	5367.1
0000-000	6006	5303	4684	5684	5582	5988	5735	5799	5568.9
AM Peak	800	1100	1000	800	800	800	800		
	484	379	359	481	461	511	469		
PM Peak	1400	1200	1300	1800	1500	1600	1800		
	428	452	386	420	417	429	397		

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

DIRECTION: SOUTHBOUND

SPEED LIMIT: 40

31 January 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	32	25	0	5	0	0	0	0	0	0	0	0	0	2	0	45.1	53.2
0100	23	21	0	2	0	0	0	0	0	0	0	0	0	0	0	47.5	57.2
0200	10	8	0	2	0	0	0	0	0	0	0	0	0	0	0	47.8	-
0300	11	9	0	2	0	0	0	0	0	0	0	0	0	0	0	42	51.3
0400	19	17	0	2	0	0	0	0	0	0	0	0	0	0	0	45.8	58.3
0500	71	54	0	14	1	0	0	0	0	0	0	0	0	1	1	46.7	54
0600	222	194	1	23	0	1	0	0	0	0	0	0	0	2	1	44.6	50.9
0700	468	424	4	31	1	2	0	0	0	0	0	0	0	5	1	40.2	45.7
0800	364	339	1	21	0	0	0	0	1	0	0	0	0	2	0	40.8	46.4
0900	345	306	1	28	1	2	0	2	0	0	0	0	0	2	3	39.4	45.5
1000	327	295	0	27	0	0	0	0	0	0	0	0	0	5	0	39.9	45.5
1100	342	309	1	27	0	2	0	1	0	0	0	0	0	2	0	39.7	45.7
1200	320	284	0	31	0	1	0	0	0	0	0	0	0	4	0	40.9	46.9
1300	338	312	0	24	0	0	0	0	0	0	0	0	0	2	0	41.9	49
1400	361	328	0	29	0	0	0	0	0	1	0	0	0	3	0	40.4	46.2
1500	458	421	1	32	0	0	0	0	0	0	0	0	0	4	0	40	44.8
1600	493	453	1	34	0	0	0	0	0	0	0	0	0	2	3	39.2	44.5
1700	498	464	0	31	0	0	0	0	0	0	0	0	0	1	2	38	44.2
1800	419	401	0	18	0	0	0	0	0	0	0	0	0	0	0	39.1	45.4
1900	322	299	0	21	0	0	0	0	0	0	0	0	0	1	1	40.5	46.4
2000	210	191	0	16	0	1	0	0	0	0	0	0	0	2	0	41.8	48
2100	176	170	0	6	0	0	0	0	0	0	0	0	0	0	0	43.1	50.7
2200	146	140	0	5	0	0	0	0	0	0	0	0	0	1	0	41.8	48.8
2300	118	112	0	3	0	0	0	0	0	0	0	0	0	3	0	44.2	52.4
07-19	4733	4336	9	333	2	7	0	3	1	1	0	0	0	32	9	39.9	45.7
06-22	5663	5190	10	399	2	9	0	3	1	1	0	0	0	37	11	40.3	46.4
06-00	5927	5442	10	407	2	9	0	3	1	1	0	0	0	41	11	40.4	46.5
00-00	6093	5576	10	434	3	9	0	3	1	1	0	0	0	44	12	40.5	46.8

01 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	54	49	0	5	0	0	0	0	0	0	0	0	0	0	0	45.1	56
0100	31	29	0	2	0	0	0	0	0	0	0	0	0	0	0	47	54.2
0200	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	43.4	52.3
0300	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	42.8	52
0400	19	18	0	1	0	0	0	0	0	0	0	0	0	0	0	43.9	53.5
0500	36	29	0	6	1	0	0	0	0	0	0	0	0	0	0	47.3	57.3
0600	91	79	0	12	0	0	0	0	0	0	0	0	0	0	0	45.7	53.9
0700	117	112	0	4	0	0	0	0	0	0	0	0	0	0	1	44.5	54.4
0800	209	180	1	27	0	0	0	0	0	0	0	0	0	1	0	43.4	50.9
0900	312	290	0	19	0	0	0	0	0	0	0	0	0	2	1	43.1	50.6
1000	328	308	0	13	0	0	0	0	0	0	0	0	0	1	6	42.8	49.5
1100	336	325	0	10	0	0	0	0	0	0	0	0	0	1	0	43.3	49.8
1200	382	368	1	9	1	0	0	0	0	0	0	0	0	2	1	42.8	49
1300	430	412	0	11	1	0	0	0	0	0	0	0	0	5	1	41.5	47.4
1400	426	398	1	23	0	0	0	0	0	0	0	0	0	3	1	41.3	47.9
1500	404	380	1	17	0	1	0	0	0	0	0	0	0	3	2	42.5	49.6
1600	363	334	1	22	1	0	0	0	0	0	0	0	0	5	0	41.2	47.7
1700	344	329	0	13	0	0	0	0	0	0	0	0	0	2	0	40.7	46.4
1800	376	362	0	11	0	1	0	0	0	0	0	0	0	2	0	40.4	46.2
1900	287	278	0	8	0	0	0	0	0	0	0	0	0	1	0	41.4	48.3
2000	213	202	1	9	0	0	0	0	0	0	0	0	0	1	0	41	47.9
2100	152	146	0	3	0	0	0	0	0	0	0	0	0	3	0	41.9	47.9
2200	140	132	0	6	0	0	0	0	0	0	0	0	0	2	0	42.4	49.7
2300	116	112	0	4	0	0	0	0	0	0	0	0	0	0	0	41.1	50.6
07-19	4027	3798	5	179	3	2	0	0	0	0	0	0	0	27	13	42.1	48.5
06-22	4770	4503	6	211	3	2	0	0	0	0	0	0	0	32	13	42	48.7
06-00	5026	4747	6	221	3	2	0	0	0	0	0	0	0	34	13	42	48.7
00-00	5226	4932	6	235	4	2	0	0	0	0	0	0	0	34	13	42.1	49

02 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	70	67	0	3	0	0	0	0	0	0	0	0	0	0	0	44.5	52.5
0100	53	52	0	1	0	0	0	0	0	0	0	0	0	0	0	46.8	54.3
0200	30	29	0	1	0	0	0	0	0	0	0	0	0	0	0	44.3	53.9
0300	27	25	0	2	0	0	0	0	0	0	0	0	0	0	0	43.3	53.9
0400	23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	43.5	53.5
0500	24	23	0	1	0	0	0	0	0	0	0	0	0	0	0	45.1	55.2
0600	46	38	0	8	0	0	0	0	0	0	0	0	0	0	0	43.1	47.7
0700	75	70	0	5	0	0	0	0	0	0	0	0	0	0	0	42	50.4
0800	154	143	1	9	0	0	0	0	0	0	0	0	0	1	0	43.5	51.7
0900	228	215	0	12	0	0	0	0	0	0	0	0	0	1	0	43.7	50.2
1000	326	313	1	8	0	0	0	0	0	0	0	0	0	4	0	42.1	47.8
1100	367	351	1	11	0	1	0	0	0	0	0	0	0	3	0	41.9	48.4
1200	389	374	0	12	0	0	0	0	0	0	0	0	0	0	3	41.6	47.9
1300	340	330	0	8	0	1	0	0	0	0	0	0	0	1	0	41.8	48
1400	365	350	1	10	0	0	0	0	0	0	0	0	0	3	1	41.4	47.6
1500	341	329	1	11	0	0	0	0	0	0	0	0	0	0	0	42.1	48.4
1600	388	369	0	16	0	0	0	0	0	0	0	0	0	1	2	40.6	46.2
1700	320	307	0	11	0	0	0	0	0	0	0	0	0	2	0	40.1	45.7
1800	293	279	1	12	0	0	0	0	0	0	0	0	0	1	0	40.3	46.6
1900	250	242	0	5	0	0	0	0	0	0	0	0	0	3	0	40.9	47.6
2000	190	178	1	10	0	0	0	0	0	0	0	0	0	1	0	42.5	48.5
2100	132	128	0	4	0	0	0	0	0	0	0	0	0	0	0	41.9	49
2200	102	98	0	4	0	0	0	0	0	0	0	0	0	0	0	43.6	51.6
2300	71	69	0	2	0	0	0	0	0	0	0	0	0	0	0	44.8	54.2
07-19	3586	3430	6	125	0	2	0	0	0	0	0	0	0	17	6	41.6	47.9
06-22	4204	4016	7	152	0	2	0	0	0	0	0	0	0	21	6	41.6	47.9
06-00	4377	4183	7	158	0	2	0	0	0	0	0	0	0	21	6	41.7	48.1
00-00	4604	4402	7	166	0	2	0	0	0	0	0	0	0	21	6	41.9	48.3

03 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	30	23	0	7	0	0	0	0	0	0	0	0	0	0	0	41.5	50.6
0100	20	18	0	2	0	0	0	0	0	0	0	0	0	0	0	47	52.9
0200	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	46.9 -	
0300	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	45.2 -	
0400	16	15	0	0	0	0	0	0	1	0	0	0	0	0	0	45.6	53.4
0500	85	69	0	13	0	0	0	0	0	0	0	0	0	3	0	47.6	56
0600	237	202	0	26	2	3	0	0	0	0	0	0	0	2	2	44.6	50
0700	492	445	1	31	1	3	0	0	0	0	0	0	0	7	4	40.7	46
0800	408	376	2	26	1	0	0	0	1	0	0	0	0	1	1	40.2	46.8
0900	382	335	1	37	0	1	0	1	0	0	0	0	0	5	2	40.7	46.6
1000	310	280	0	24	0	2	0	0	0	1	0	0	0	3	0	40.2	46.5
1100	262	239	0	21	0	0	0	0	0	0	0	0	0	1	1	41	46.3
1200	297	268	0	24	0	1	0	0	0	0	0	0	0	4	0	41.5	47.5
1300	302	274	0	26	0	0	0	0	0	0	0	0	0	1	1	40.3	46
1400	338	297	2	37	0	1	0	0	0	0	0	0	0	0	1	40	45.8
1500	368	330	0	35	0	0	0	1	0	0	0	0	0	1	1	39.7	45.2
1600	443	395	0	42	0	1	0	0	0	0	0	0	0	5	0	39.5	44.3
1700	532	492	0	34	0	0	0	0	0	0	0	0	0	0	6	37.9	43.4
1800	353	325	0	21	1	0	0	0	0	0	0	0	0	4	2	39.5	44.4
1900	318	297	1	17	0	1	0	0	0	0	0	0	0	1	1	39.7	45.1
2000	228	209	0	17	0	0	0	0	0	0	0	0	0	2	0	41.5	47.8
2100	177	168	0	8	0	0	0	0	0	0	0	0	0	1	0	42.5	48.7
2200	128	123	1	4	0	0	0	0	0	0	0	0	0	0	0	44.9	52.5
2300	60	56	0	4	0	0	0	0	0	0	0	0	0	0	0	45	54.9
07-19	4487	4056	6	358	3	9	0	2	1	1	0	0	0	32	19	40	45.6
06-22	5447	4932	7	426	5	13	0	2	1	1	0	0	0	38	22	40.3	46.1
06-00	5635	5111	8	434	5	13	0	2	1	1	0	0	0	38	22	40.5	46.4
00-00	5798	5247	8	457	5	13	0	2	2	1	0	0	0	41	22	40.6	46.6

04 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	33	27	0	5	0	0	0	0	0	0	0	0	0	1	0	45.4	57
0100	16	15	0	1	0	0	0	0	0	0	0	0	0	0	0	49.2	60.3
0200	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	48.3	-
0300	10	9	0	1	0	0	0	0	0	0	0	0	0	0	0	50.5	-
0400	15	12	0	2	0	0	0	0	0	0	0	0	0	1	0	47.3	57.1
0500	76	66	0	8	0	0	0	0	0	0	0	0	0	2	0	46.8	54.8
0600	273	233	0	31	0	3	0	0	0	1	0	0	0	3	2	43.6	50.2
0700	524	476	5	28	1	0	0	1	0	0	0	0	0	8	5	40.6	45.5
0800	416	384	0	30	0	0	0	0	0	0	0	0	0	0	2	41.3	46.7
0900	353	311	0	36	0	0	0	0	0	1	0	0	0	3	2	40.3	45.2
1000	292	258	1	27	0	2	0	0	0	0	0	0	0	3	1	40.7	46.5
1100	274	239	1	33	1	0	0	0	0	0	0	0	0	0	0	41.8	47.4
1200	291	255	0	30	1	1	0	0	0	0	0	0	0	4	0	42	48.9
1300	337	305	1	26	1	0	0	0	0	0	0	0	0	3	1	41	47.3
1400	353	322	0	26	0	1	0	1	1	1	0	0	0	1	0	40.8	46.2
1500	384	338	1	39	1	0	0	0	0	0	0	0	0	5	0	40.8	47
1600	447	410	0	31	0	0	0	1	0	0	0	0	0	4	1	39.6	45.6
1700	522	482	0	28	0	0	0	0	1	0	0	0	0	5	6	38.6	43.7
1800	373	343	2	25	1	0	0	0	0	0	0	0	0	2	0	41	47.1
1900	315	294	0	19	0	0	0	0	0	0	0	0	0	2	0	41	47.3
2000	258	244	0	13	0	0	0	0	0	0	0	0	0	1	0	41.3	46.6
2100	142	137	0	4	0	0	0	0	0	0	0	0	0	1	0	43.6	51.6
2200	144	135	0	8	1	0	0	0	0	0	0	0	0	0	0	43.3	50.8
2300	78	72	0	5	0	0	0	0	0	0	0	0	0	1	0	44	52.9
07-19	4566	4123	11	359	6	4	0	3	2	2	0	0	0	38	18	40.6	46.3
06-22	5554	5031	11	426	6	7	0	3	2	3	0	0	0	45	20	40.9	46.6
06-00	5776	5238	11	439	7	7	0	3	2	3	0	0	0	46	20	41	46.8
00-00	5935	5375	11	457	7	7	0	3	2	3	0	0	0	50	20	41.1	47

05 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	38	31	0	7	0	0	0	0	0	0	0	0	0	0	0	45.2	53.4
0100	15	13	0	2	0	0	0	0	0	0	0	0	0	0	0	45.4	54.9
0200	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0	42.5 -	
0300	6	4	0	2	0	0	0	0	0	0	0	0	0	0	0	47 -	
0400	23	19	0	2	1	0	0	0	0	0	0	0	0	1	0	45	57.8
0500	78	65	0	8	0	0	1	0	0	0	0	0	0	3	1	47.8	57.2
0600	262	223	0	30	0	4	0	0	0	0	0	0	0	4	1	42.7	49.3
0700	568	524	2	32	2	0	0	0	0	0	0	0	0	5	3	40.6	45.9
0800	454	424	1	23	0	0	0	0	0	0	0	0	0	4	2	41.9	47.4
0900	458	402	0	51	0	2	0	0	0	0	0	0	0	3	0	40.7	46.2
1000	322	286	0	32	1	0	0	1	0	0	0	0	0	2	0	40.4	45.7
1100	292	264	0	24	0	0	0	0	0	0	0	0	0	4	0	41.3	47.6
1200	294	265	0	26	0	0	0	0	0	0	0	1	0	0	2	41.7	46.8
1300	350	313	0	31	0	0	1	0	0	0	0	0	0	5	0	41.3	47.2
1400	319	285	1	31	0	0	1	0	0	0	0	0	0	1	0	40.9	47.3
1500	401	364	1	31	0	1	0	0	0	0	0	0	0	3	1	41.5	47.9
1600	466	428	0	30	0	2	0	1	0	0	0	0	0	5	0	39.5	44.9
1700	524	492	2	21	0	1	0	0	0	0	0	0	0	4	4	39	44.4
1800	430	397	1	27	1	0	0	1	0	0	0	0	0	2	1	40	45.4
1900	314	292	0	18	0	0	0	0	0	0	0	0	0	4	0	41.3	47.7
2000	255	238	0	15	0	0	0	1	0	0	0	0	0	1	0	40.9	47.1
2100	189	176	1	11	0	0	0	0	0	0	0	0	0	1	0	40.7	46.8
2200	140	134	0	5	1	0	0	0	0	0	0	0	0	0	0	44.2	50.1
2300	68	62	0	6	0	0	0	0	0	0	0	0	0	0	0	43.8	51.8
07-19	4878	4444	8	359	4	6	2	3	0	0	0	1	0	38	13	40.6	46.3
06-22	5898	5373	9	433	4	10	2	4	0	0	0	1	0	48	14	40.8	46.5
06-00	6106	5569	9	444	5	10	2	4	0	0	0	1	0	48	14	40.9	46.8
00-00	6275	5709	9	466	6	10	3	4	0	0	0	1	0	52	15	41	47

06 February 2020

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Cls 6	Cls 7	Cls 8	Cls 9	Cls 10	Cls 11	Cls 12	Cls 14	Cls 15	Mean	Vpp 85
0000	33	27	0	5	1	0	0	0	0	0	0	0	0	0	0	44.3	50.4
0100	13	10	0	2	0	0	0	0	1	0	0	0	0	0	0	48.1	63.8
0200	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	42.8	-
0300	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	38.2	-
0400	18	16	0	2	0	0	0	0	0	0	0	0	0	0	0	45.8	55.6
0500	83	68	0	10	0	0	0	0	0	0	0	0	0	3	2	44.3	51.9
0600	258	220	0	29	1	1	0	0	0	0	0	0	0	4	3	42.9	48.7
0700	515	469	3	29	1	3	0	0	1	0	0	0	0	4	5	39.8	45.3
0800	434	398	1	29	0	1	0	0	0	0	0	0	0	3	2	40.4	45.2
0900	398	343	0	47	1	2	0	0	0	0	0	0	0	4	1	40.7	46.1
1000	298	263	1	32	0	0	0	0	0	1	0	0	0	1	0	40.7	46.6
1100	280	251	1	24	0	0	0	1	0	0	0	0	0	2	1	39.3	44.9
1200	337	302	0	33	0	1	0	0	0	0	0	0	0	1	0	37.8	43.4
1300	347	314	0	30	0	2	0	0	1	0	0	0	0	0	0	36.2	42.8
1400	309	281	1	24	0	0	1	0	0	0	0	0	0	2	0	41.3	47.4
1500	402	370	0	30	0	0	0	1	0	0	0	0	0	1	0	40.9	46.6
1600	449	414	0	30	0	0	0	1	0	0	0	0	0	2	2	40.2	45.8
1700	532	485	1	39	0	0	0	0	0	0	0	0	0	3	4	38.9	44.5
1800	430	403	1	20	1	0	0	0	1	0	0	0	0	4	0	39	43.8
1900	321	302	2	17	0	0	0	0	0	0	0	0	0	0	0	39.1	45.5
2000	276	254	0	18	0	0	0	0	0	0	0	0	0	3	1	40.9	47
2100	197	190	0	5	0	0	0	0	0	0	0	0	0	2	0	40.7	47.2
2200	155	142	0	11	0	0	0	0	0	0	0	0	0	2	0	43.2	50.3
2300	78	75	0	3	0	0	0	0	0	0	0	0	0	0	0	43.7	52.3
07-19	4731	4293	9	367	3	9	1	3	3	1	0	0	0	27	15	39.6	45.3
06-22	5783	5259	11	436	4	10	1	3	3	1	0	0	0	36	19	39.8	45.6
06-00	6016	5476	11	450	4	10	1	3	3	1	0	0	0	38	19	40	45.9
00-00	6176	5609	11	470	5	10	1	3	4	1	0	0	0	41	21	40.1	46.1

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

DIRECTION: SOUTHBOUND SPEED LIMIT: 40

31 January 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	32	0	0	0	2	6	6	6	11	1	0	0	0	0	0	0	45.1	53.2		45.5
0100	23	0	0	0	0	3	4	7	5	3	1	0	0	0	0	0	47.5	57.2		45.7
0200	10	0	0	0	0	0	3	4	1	1	1	0	0	0	0	0	47.8			46.2
0300	11	0	0	0	1	2	2	4	1	1	0	0	0	0	0	0	42	51.3		44.8
0400	19	0	0	0	1	2	7	3	3	1	1	1	0	0	0	0	45.8	58.3		46.5
0500	71	0	0	0	0	7	21	22	12	6	1	1	0	1	0	0	46.7	54		46.3
0600	222	0	0	0	0	20	97	64	30	6	4	1	0	0	0	0	44.6	50.9		45.8
0700	468	0	0	0	23	109	227	84	23	2	0	0	0	0	0	0	40.2	45.7		45.2
0800	364	0	0	1	10	95	159	73	21	3	1	1	0	0	0	0	40.8	46.4		46.5
0900	345	0	0	3	11	115	148	49	15	4	0	0	0	0	0	0	39.4	45.5		47.4
1000	327	0	0	0	11	100	140	57	17	2	0	0	0	0	0	0	39.9	45.5		46.2
1100	342	0	0	1	9	111	141	63	16	1	0	0	0	0	0	0	39.7	45.7		47
1200	320	0	0	0	9	81	128	83	16	2	1	0	0	0	0	0	40.9	46.9		45.7
1300	338	0	0	0	5	79	139	72	32	7	3	1	0	0	0	0	41.9	49		47.6
1400	361	0	1	4	8	87	158	83	13	7	0	0	0	0	0	0	40.4	46.2		47.3
1500	458	0	0	0	8	146	209	67	21	2	3	2	0	0	0	0	40	44.8		47.9
1600	493	0	0	2	28	145	224	79	15	0	0	0	0	0	0	0	39.2	44.5		46.6
1700	498	1	0	1	37	222	155	60	20	1	0	1	0	0	0	0	38	44.2		44.9
1800	419	1	0	0	22	138	174	69	14	1	0	0	0	0	0	0	39.1	45.4		47.4
1900	322	0	0	0	7	101	127	65	14	5	3	0	0	0	0	0	40.5	46.4		46.6
2000	210	0	0	0	7	43	84	54	14	4	3	1	0	0	0	0	41.8	48		
2100	176	0	0	1	4	34	63	43	21	7	2	1	0	0	0	0	43.1	50.7		46.36
2200	146	0	0	1	4	31	57	36	11	5	1	0	0	0	0	0	41.8	48.8		
2300	118	0	0	0	2	27	30	32	14	10	1	1	0	0	1	0	44.2	52.4		
07-19	4733	2	1	12	181	1428	2002	839	223	32	8	5	0	0	0	0	39.9	45.7		
06-22	5663	2	1	13	199	1626	2373	1065	302	54	20	8	0	0	0	0	40.3	46.4		
06-00	5927	2	1	14	205	1684	2460	1133	327	69	22	9	0	0	1	0	40.4	46.5		
00-00	6093	2	1	14	209	1704	2503	1179	360	82	26	11	0	1	1	0	40.5	46.8		

01 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	54	0	0	0	0	8	20	11	7	8	0	0	0	0	0	0	45.1	56		
0100	31	0	0	0	0	3	9	6	11	2	0	0	0	0	0	0	47	54.2		
0200	29	0	0	0	2	3	10	9	3	2	0	0	0	0	0	0	43.4	52.3		
0300	31	0	0	0	1	7	12	5	3	2	1	0	0	0	0	0	42.8	52		
0400	19	0	0	0	0	6	5	5	1	1	1	0	0	0	0	0	43.9	53.5		
0500	36	0	0	0	0	3	12	11	4	2	3	1	0	0	0	0	47.3	57.3		
0600	91	0	0	0	2	14	23	22	19	7	3	1	0	0	0	0	45.7	53.9		
0700	117	0	0	0	5	13	40	30	16	11	2	0	0	0	0	0	44.5	54.4		
0800	209	0	0	3	4	28	80	54	34	4	2	0	0	0	0	0	43.4	50.9		
0900	312	0	0	1	2	62	111	79	46	10	1	0	0	0	0	0	43.1	50.6		
1000	328	0	2	0	6	50	129	95	34	10	2	0	0	0	0	0	42.8	49.5		
1100	336	0	0	0	8	47	131	99	41	7	3	0	0	0	0	0	43.3	49.8		
1200	382	0	0	1	7	63	159	103	38	6	3	1	0	0	1	0	42.8	49		
1300	430	0	0	0	9	91	200	96	29	4	0	0	1	0	0	0	41.5	47.4		
1400	426	0	3	8	8	79	184	100	36	3	3	1	1	0	0	0	41.3	47.9		
1500	404	0	0	1	1	84	157	104	42	12	3	0	0	0	0	0	42.5	49.6		
1600	363	0	0	1	13	106	125	82	22	8	4	1	1	0	0	0	41.2	47.7		
1700	344	0	0	0	6	99	143	72	16	6	1	1	0	0	0	0	40.7	46.4		
1800	376	0	1	2	16	99	154	79	19	4	2	0	0	0	0	0	40.4	46.2		
1900	287	0	0	0	6	82	102	62	27	5	2	1	0	0	0	0	41.4	48.3		
2000	213	0	0	4	8	50	84	43	14	9	1	0	0	0	0	0	41	47.9		
2100	152	0	0	0	1	28	75	31	8	7	1	1	0	0	0	0	41.9	47.9		
2200	140	0	0	0	3	35	52	30	13	5	1	0	1	0	0	0	42.4	49.7		
2300	116	0	0	0	10	30	38	19	12	6	1	0	0	0	0	0	41.1	50.6		
07-19	4027	0	6	17	85	821	1613	993	373	85	26	4	3	0	1	0	42.1	48.5		
06-22	4770	0	6	21	102	995	1897	1151	441	113	33	7	3	0	1	0	42	48.7		
06-00	5026	0	6	21	115	1060	1987	1200	466	124	35	7	4	0	1	0	42	48.7		
00-00	5226	0	6	21	118	1090	2055	1247	495	141	40	8	4	0	1	0	42.1	49		

02 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	70	0	0	0	0	9	25	23	7	2	3	1	0	0	0	0	44.5	52.5		
0100	53	0	0	0	0	7	14	15	10	5	1	0	1	0	0	0	46.8	54.3		
0200	30	0	0	0	0	7	9	4	8	1	1	0	0	0	0	0	44.3	53.9		
0300	27	0	0	0	2	4	12	2	4	3	0	0	0	0	0	0	43.3	53.9		
0400	23	0	0	0	1	4	10	3	3	1	0	1	0	0	0	0	43.5	53.5		
0500	24	0	0	0	0	6	6	4	6	0	2	0	0	0	0	0	45.1	55.2		
0600	46	0	0	0	0	8	18	17	2	0	1	0	0	0	0	0	43.1	47.7		
0700	75	0	0	0	2	22	22	17	9	2	1	0	0	0	0	0	42	50.4		
0800	154	0	0	1	3	26	54	38	26	3	2	1	0	0	0	0	43.5	51.7		
0900	228	0	0	0	1	34	83	70	34	5	0	0	0	1	0	0	43.7	50.2		
1000	326	0	0	0	4	52	156	85	22	5	2	0	0	0	0	0	42.1	47.8		
1100	367	0	0	0	7	69	174	77	28	9	3	0	0	0	0	0	41.9	48.4		
1200	389	0	0	2	10	72	173	93	32	4	3	0	0	0	0	0	41.6	47.9		
1300	340	0	0	1	3	65	159	77	28	4	3	0	0	0	0	0	41.8	48		
1400	365	0	1	1	5	82	150	86	33	6	1	0	0	0	0	0	41.4	47.6		
1500	341	0	1	5	3	55	152	93	24	5	2	1	0	0	0	0	42.1	48.4		
1600	388	0	0	3	10	85	190	70	21	8	1	0	0	0	0	0	40.6	46.2		
1700	320	0	0	0	15	96	130	62	13	4	0	0	0	0	0	0	40.1	45.7		
1800	293	0	0	0	12	89	112	61	15	2	2	0	0	0	0	0	40.3	46.6		
1900	250	0	0	2	7	66	97	56	18	4	0	0	0	0	0	0	40.9	47.6		
2000	190	0	0	0	6	34	69	60	16	3	1	1	0	0	0	0	42.5	48.5		
2100	132	0	0	0	1	34	46	34	11	5	1	0	0	0	0	0	41.9	49		
2200	102	0	0	1	4	17	30	33	8	6	2	1	0	0	0	0	43.6	51.6		
2300	71	0	0	0	0	8	33	11	11	7	1	0	0	0	0	0	44.8	54.2		
07-19	3586	0	2	13	75	747	1555	829	285	57	20	2	0	1	0	0	41.6	47.9		
06-22	4204	0	2	15	89	889	1785	996	332	69	23	3	0	1	0	0	41.6	47.9		
06-00	4377	0	2	16	93	914	1848	1040	351	82	26	4	0	1	0	0	41.7	48.1		
00-00	4604	0	2	16	96	951	1924	1091	389	94	33	6	1	1	0	0	41.9	48.3		

03 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	30	0	0	1	2	8	4	8	6	1	0	0	0	0	0	0	41.5	50.6		
0100	20	0	0	0	1	0	7	4	6	1	0	1	0	0	0	0	47	52.9		
0200	9	0	0	0	0	0	4	2	1	2	0	0	0	0	0	0	46.9	-		
0300	3	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	45.2	-		
0400	16	0	0	0	0	3	1	7	4	1	0	0	0	0	0	0	45.6	53.4		
0500	85	0	0	0	0	6	19	39	8	9	2	1	1	0	0	0	47.6	56		
0600	237	0	0	1	2	15	96	77	35	7	3	0	1	0	0	0	44.6	50		
0700	492	0	0	0	17	103	245	100	19	8	0	0	0	0	0	0	40.7	46		
0800	408	0	0	1	17	118	160	87	21	3	0	1	0	0	0	0	40.2	46.8		
0900	382	0	0	1	8	90	187	63	29	3	1	0	0	0	0	0	40.7	46.6		
1000	310	0	0	2	13	81	128	69	15	1	0	1	0	0	0	0	40.2	46.5		
1100	262	0	0	0	3	71	111	54	19	4	0	0	0	0	0	0	41	46.3		
1200	297	0	0	0	4	64	137	64	24	4	0	0	0	0	0	0	41.5	47.5		
1300	302	0	0	2	10	84	130	54	18	3	1	0	0	0	0	0	40.3	46		
1400	338	0	0	2	15	99	135	65	21	0	1	0	0	0	0	0	40	45.8		
1500	368	0	2	3	12	99	169	65	14	4	0	0	0	0	0	0	39.7	45.2		
1600	443	0	0	0	16	135	204	71	14	3	0	0	0	0	0	0	39.5	44.3		
1700	532	0	0	2	49	199	209	60	11	2	0	0	0	0	0	0	37.9	43.4		
1800	353	0	0	0	6	112	171	53	9	2	0	0	0	0	0	0	39.5	44.4		
1900	318	0	0	1	6	113	133	46	12	7	0	0	0	0	0	0	39.7	45.1		
2000	228	0	0	0	8	51	90	54	19	4	2	0	0	0	0	0	41.5	47.8		
2100	177	0	0	0	2	41	63	49	15	5	0	2	0	0	0	0	42.5	48.7		
2200	128	0	0	0	1	20	33	40	24	8	1	1	0	0	0	0	44.9	52.5		
2300	60	0	0	0	1	14	18	11	8	3	3	1	1	0	0	0	45	54.9		
07-19	4487	0	2	13	170	1255	1986	805	214	37	3	2	0	0	0	0	40	45.6		
06-22	5447	0	2	15	188	1475	2368	1031	295	60	8	4	1	0	0	0	40.3	46.1		
06-00	5635	0	2	15	190	1509	2419	1082	327	71	12	6	2	0	0	0	40.5	46.4		
00-00	5798	0	2	16	193	1526	2455	1144	352	85	14	8	3	0	0	0	40.6	46.6		

04 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	33	0	0	0	0	6	10	8	4	4	0	1	0	0	0	0	45.4	57		
0100	16	0	0	0	0	0	5	5	3	1	1	0	0	1	0	0	49.2	60.3		
0200	9	0	0	0	1	1	2	2	1	1	0	0	0	1	0	0	48.3	-		
0300	10	0	0	0	0	0	2	2	5	0	1	0	0	0	0	0	50.5	-		
0400	15	0	0	0	1	0	4	3	5	2	0	0	0	0	0	0	47.3	57.1		
0500	76	0	0	0	0	6	24	22	16	3	3	2	0	0	0	0	46.8	54.8		
0600	273	0	0	1	1	39	115	72	34	7	3	1	0	0	0	0	43.6	50.2		
0700	524	0	0	0	16	101	275	104	23	5	0	0	0	0	0	0	40.6	45.5		
0800	416	1	0	1	5	79	209	87	28	4	2	0	0	0	0	0	41.3	46.7		
0900	353	0	0	1	6	89	172	71	13	0	0	1	0	0	0	0	40.3	45.2		
1000	292	0	0	0	8	79	129	56	15	4	1	0	0	0	0	0	40.7	46.5		
1100	274	0	0	0	10	49	119	71	18	7	0	0	0	0	0	0	41.8	47.4		
1200	291	0	0	0	0	73	115	70	28	4	1	0	0	0	0	0	42	48.9		
1300	337	0	1	1	10	79	144	75	21	3	2	1	0	0	0	0	41	47.3		
1400	353	0	0	0	7	99	148	78	14	5	0	1	0	1	0	0	40.8	46.2		
1500	384	0	1	2	3	92	180	78	24	3	0	1	0	0	0	0	40.8	47		
1600	447	0	0	4	32	117	185	88	16	4	1	0	0	0	0	0	39.6	45.6		
1700	522	0	0	1	27	191	221	69	11	2	0	0	0	0	0	0	38.6	43.7		
1800	373	0	0	0	10	96	151	89	24	1	2	0	0	0	0	0	41	47.1		
1900	315	0	0	0	8	81	131	73	18	3	0	1	0	0	0	0	41	47.3		
2000	258	0	0	0	7	58	123	48	13	6	2	1	0	0	0	0	41.3	46.6		
2100	142	0	0	0	1	28	52	33	19	6	2	0	1	0	0	0	43.6	51.6		
2200	144	0	0	0	4	21	61	32	20	3	3	0	0	0	0	0	43.3	50.8		
2300	78	0	0	0	3	11	27	21	9	6	0	1	0	0	0	0	44	52.9		
07-19	4566	1	2	10	134	1144	2048	936	235	42	9	4	0	1	0	0	40.6	46.3		
06-22	5554	1	2	11	151	1350	2469	1162	319	64	16	7	1	1	0	0	40.9	46.6		
06-00	5776	1	2	11	158	1382	2557	1215	348	73	19	8	1	1	0	0	41	46.8		
00-00	5935	1	2	11	160	1395	2604	1257	382	84	24	11	1	3	0	0	41.1	47		

05 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	38	0	0	1	1	4	10	11	8	1	2	0	0	0	0	0	45.2	53.4		
0100	15	0	0	0	0	3	4	4	3	0	1	0	0	0	0	0	45.4	54.9		
0200	9	0	0	0	0	2	4	2	1	0	0	0	0	0	0	0	42.5	-		
0300	6	0	0	0	2	1	1	0	0	1	0	0	0	0	0	1	47	-		
0400	23	0	0	0	0	4	10	3	1	4	1	0	0	0	0	0	45	57.8		
0500	78	0	0	0	0	6	15	36	9	7	3	1	0	1	0	0	47.8	57.2		
0600	262	0	0	0	6	40	106	76	26	6	0	1	1	0	0	0	42.7	49.3		
0700	568	0	0	0	14	135	270	122	21	5	1	0	0	0	0	0	40.6	45.9		
0800	454	0	0	0	20	74	191	125	32	10	1	1	0	0	0	0	41.9	47.4		
0900	458	0	0	1	6	117	219	84	26	5	0	0	0	0	0	0	40.7	46.2		
1000	322	0	0	0	14	86	135	67	15	4	0	1	0	0	0	0	40.4	45.7		
1100	292	0	0	1	6	70	122	72	19	2	0	0	0	0	0	0	41.3	47.6		
1200	294	0	0	0	5	55	133	77	19	5	0	0	0	0	0	0	41.7	46.8		
1300	350	0	0	0	11	73	164	77	15	8	1	1	0	0	0	0	41.3	47.2		
1400	319	0	6	2	3	68	146	67	20	6	0	1	0	0	0	0	40.9	47.3		
1500	401	0	0	0	7	96	162	99	25	11	0	1	0	0	0	0	41.5	47.9		
1600	466	0	0	3	15	151	198	81	15	2	0	1	0	0	0	0	39.5	44.9		
1700	524	0	0	1	43	158	221	77	17	5	1	0	0	0	1	0	39	44.4		
1800	430	0	0	1	14	124	192	79	15	4	1	0	0	0	0	0	40	45.4		
1900	314	0	0	0	8	74	128	76	22	5	1	0	0	0	0	0	41.3	47.7		
2000	255	0	0	0	6	68	114	43	15	8	0	1	0	0	0	0	40.9	47.1		
2100	189	0	0	3	8	37	84	45	10	1	1	0	0	0	0	0	40.7	46.8		
2200	140	0	0	0	2	18	49	45	17	1	6	2	0	0	0	0	44.2	50.1		
2300	68	0	0	0	1	9	28	17	7	4	2	0	0	0	0	0	43.8	51.8		
07-19	4878	0	6	9	158	1207	2153	1027	239	67	5	6	0	0	1	0	40.6	46.3		
06-22	5898	0	6	12	186	1426	2585	1267	312	87	7	8	1	0	1	0	40.8	46.5		
06-00	6106	0	6	12	189	1453	2662	1329	336	92	15	10	1	0	1	0	40.9	46.8		
00-00	6275	0	6	13	192	1473	2706	1385	358	105	22	11	1	1	1	1	41	47		

06 February 2020

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
0000	33	0	0	0	1	3	11	13	3	2	0	0	0	0	0	0	44.3	50.4		
0100	13	0	0	0	0	3	1	3	4	0	1	1	0	0	0	0	48.1	63.8		
0200	9	0	0	0	1	0	4	2	1	1	0	0	0	0	0	0	42.8	-		
0300	4	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	38.2	-		
0400	18	0	0	0	0	3	7	1	6	1	0	0	0	0	0	0	45.8	55.6		
0500	83	0	0	0	1	13	27	25	12	4	1	0	0	0	0	0	44.3	51.9		
0600	258	0	0	0	1	48	97	79	22	10	1	0	0	0	0	0	42.9	48.7		
0700	515	0	5	5	14	126	239	106	19	1	0	0	0	0	0	0	39.8	45.3		
0800	434	0	0	0	8	101	227	83	14	1	0	0	0	0	0	0	40.4	45.2		
0900	398	1	0	1	13	92	183	80	23	4	1	0	0	0	0	0	40.7	46.1		
1000	298	0	0	0	9	85	120	66	12	5	1	0	0	0	0	0	40.7	46.6		
1100	280	0	1	2	12	88	119	41	16	1	0	0	0	0	0	0	39.3	44.9		
1200	337	1	1	8	28	126	126	38	7	1	1	0	0	0	0	0	37.8	43.4		
1300	347	0	6	21	53	98	125	34	10	0	0	0	0	0	0	0	36.2	42.8		
1400	309	0	0	0	9	70	139	69	16	5	1	0	0	0	0	0	41.3	47.4		
1500	402	0	0	0	8	97	180	89	24	4	0	0	0	0	0	0	40.9	46.6		
1600	449	0	0	0	34	102	194	92	22	2	2	1	0	0	0	0	40.2	45.8		
1700	532	0	0	2	21	203	205	86	12	2	0	1	0	0	0	0	38.9	44.5		
1800	430	0	0	0	11	161	186	60	8	3	0	1	0	0	0	0	39	43.8		
1900	321	0	0	3	26	98	127	50	13	4	0	0	0	0	0	0	39.1	45.5		
2000	276	0	0	1	4	72	120	55	18	5	1	0	0	0	0	0	40.9	47		
2100	197	0	0	2	7	57	75	38	14	1	1	2	0	0	0	0	40.7	47.2		
2200	155	0	0	0	7	24	58	39	15	9	2	1	0	0	0	0	43.2	50.3		
2300	78	0	0	1	2	18	23	17	10	2	3	2	0	0	0	0	43.7	52.3		
07-19	4731	2	13	39	220	1349	2043	844	183	29	6	3	0	0	0	0	39.6	45.3		
06-22	5783	2	13	45	258	1624	2462	1066	250	49	9	5	0	0	0	0	39.8	45.6		
06-00	6016	2	13	46	267	1666	2543	1122	275	60	14	8	0	0	0	0	40	45.9		
00-00	6176	2	13	46	271	1689	2594	1167	301	68	16	9	0	0	0	0	40.1	46.1		

Grand Total

Time	Total	Vbin 6 12	Vbin 12 19	Vbin 19 25	Vbin 25 31	Vbin 31 37	Vbin 37 43	Vbin 43 50	Vbin 50 56	Vbin 56 62	Vbin 62 68	Vbin 68 75	Vbin 75 81	Vbin 81 87	Vbin 87 93	Vbin 93 99	Mean	Vpp 85		
--	40107	5	32	137	1239	9828	16841	8470	2637	659	175	64	10	6	3	1	41	47.2		

K&M TRAFFIC SURVEYS

SITE: A5 STANMORE

LOCATION: Attached to trees

GRID REFERENCE: 51.627503, -0.299259

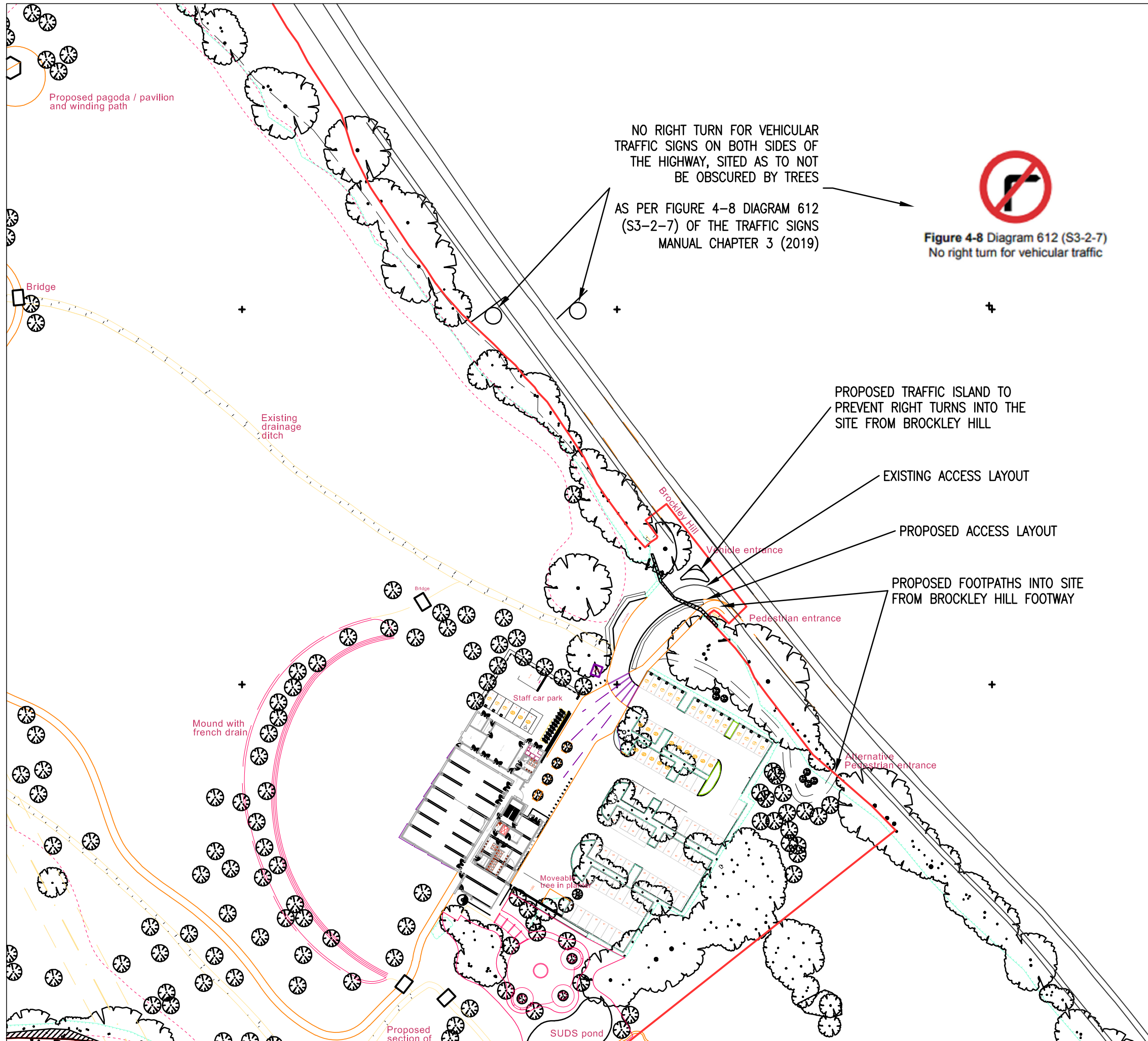
DIRECTION: SOUTHBOUND

SPEED LIMIT: 40

Hour	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Averages	
	31-Jan	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	1-5.	1-7.
0000-010	32	54	70	30	33	38	33	33.2	41.4
0100-020	23	31	53	20	16	15	13	17.4	24.4
0200-030	10	29	30	9	9	9	9	9.2	15
0300-040	11	31	27	3	10	6	4	6.8	13.1
0400-050	19	19	23	16	15	23	18	18.2	19
0500-060	71	36	24	85	76	78	83	78.6	64.7
0600-070	222	91	46	237	273	262	258	250.4	198.4
0700-080	468	117	75	492	524	568	515	513.4	394.1
0800-090	364	209	154	408	416	454	434	415.2	348.4
0900-100	345	312	228	382	353	458	398	387.2	353.7
1000-110	327	328	326	310	292	322	298	309.8	314.7
1100-120	342	336	367	262	274	292	280	290	307.6
1200-130	320	382	389	297	291	294	337	307.8	330
1300-140	338	430	340	302	337	350	347	334.8	349.1
1400-150	361	426	365	338	353	319	309	336	353
1500-160	458	404	341	368	384	401	402	402.6	394
1600-170	493	363	388	443	447	466	449	459.6	435.6
1700-180	498	344	320	532	522	524	532	521.6	467.4
1800-190	419	376	293	353	373	430	430	401	382
1900-200	322	287	250	318	315	314	321	318	303.9
2000-210	210	213	190	228	258	255	276	245.4	232.9
2100-220	176	152	132	177	142	189	197	176.2	166.4
2200-230	146	140	102	128	144	140	155	142.6	136.4
2300-240	118	116	71	60	78	68	78	80.4	84.1
<hr/>									
Totals									
0700-190	4733	4027	3586	4487	4566	4878	4731	4679	4429.7
0600-220	5663	4770	4204	5447	5554	5898	5783	5669	5331.3
0600-000	5927	5026	4377	5635	5776	6106	6016	5892	5551.9
0000-000	6093	5226	4604	5798	5935	6275	6176	6055.4	5729.6
AM Peak	700	1100	1100	700	700	700	700		
	468	336	367	492	524	568	515		
PM Peak	1700	1300	1200	1700	1700	1700	1700		
	498	430	389	532	522	524	532		



Appendix F – Proposed Access Design



NO RIGHT TURN FOR VEHICULAR TRAFFIC SIGNS ON BOTH SIDES OF THE HIGHWAY, SITED AS TO NOT BE OBSCURED BY TREES

AS PER FIGURE 4-8 DIAGRAM 612 (S3-2-7) OF THE TRAFFIC SIGNS MANUAL CHAPTER 3 (2019)



Figure 4-8 Diagram 612 (S3-2-7)
No right turn for vehicular traffic

PROPOSED TRAFFIC ISLAND TO PREVENT RIGHT TURNS INTO THE SITE FROM BROCKLEY HILL

EXISTING ACCESS LAYOUT

PROPOSED ACCESS LAYOUT

PROPOSED FOOTPATHS INTO SITE FROM BROCKLEY HILL FOOTWAY

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS:

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Unit 23, The Maltings, Stanstead Abbots, Hertfordshire, SG12 8HG
Tel: 01920 871777
www.eastp.co.uk

CLIENT:

ARCHITECT:

PROJECT:

FORMER STANMORE & EDGWARE GOLF CENTRE
BROCKLEY HILL, STANMORE

TITLE:

PROPOSED ACCESS FEATURES

SCALE © A3: 1:1000	DESIGN-DRAWN: BM	DATE: 26/08/20
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PROJECT No: 2660	DRAWING No: SK05 REV A
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Appendix G – Stage 1 Road Safety Audit



**ROAD SAFETY AUDIT
STAGE 1**

**PROPOSED SITE ACCESS,
BROCKLEY HILL,
STANMORE,
WATFORD**

REPORT REF: BN/EAS/20-108

Job no	BN-EAS-20-108	Issue no	1	Date	August 2020
Prepared by	BN	Verified by	JB	Approved by	BN

**ROAD SAFETY AUDIT
STAGE 1**

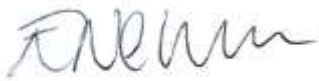
**PROPOSED SITE ACCESS,
BROCKLEY HILL,
STANMORE, WATFORD**

August 2020

REPORT REF: BN/EAS/20-108

CLIENT: EAS
Unit 23,
The Maltings,
Roydon Road,
Stanstead Abbots,
Hertfordshire,
SG12 8HG.

Report Prepared By:



Beth Newiss MSoRSA

Checked By:



Jason Bown MSoRSA

NB: This report was produced for EAS, for the specific purpose of documenting the Stage 1 Road Safety Audit process undertaken under the principles of GG119.

This report may not be used by any person other than EAS without their express permission.

PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	August 2020
Document reference and revision:	BN-EAS-20-108
Prepared by:	Beth Newiss and Associates
Design Organisation:	EAS
Project Sponsor:	Angel Care PLC
Overseeing Organisation:	London Borough of Harrow/London Borough of Barnet

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions.	BN			18/08/2020
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation.	BN	JB	BN	18/08/2020

CONTENTS

1.0	INTRODUCTION	2
2.0	ITEMS RAISED AT PREVIOUS AUDIT (S)	4
3.0	ITEMS RAISED AT THIS STAGE 1 AUDIT	5
4.0	AUDIT TEAM STATEMENT	6

DRAWINGS/DOCUMENTS PRESENTED FOR AUDIT

SK04 Access Visibility Splays
 SK05 New Access Coach Tracking 28052020 PM
 SK06 Proposed Access Features
 Collision Data
 Traffic Surveys

APPENDICES

A1	LOCATION PLAN
A2	DESIGNERS RESPONSE (TO BE ADDED)

1.0 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out on the proposed site access located off Brockley Hill, Stanmore, Watford. The audit was requested by EAS on behalf of Angel Care PLC.

1.2 The Scheme:

The site is located on Brockley Hill, Stanmore at an existing Golf course and driving range site which is to be turned into a wedding/banqueting venue.

1.3 The Proposals:

- Widening of the existing access.
- Introduction of a traffic island across the junction to prevent drivers travelling southbound from the north turning right into the site.
- Introduction of signage in association with the banned right turn.

1.4 The Road Safety Audit was undertaken during August 2020 in accordance with the scheme drawing provided on the 12th August 2020 as well as the full Road Safety Audit Brief supplied, on the 12th August 2020 by the Design Organisation, EAS, on behalf of the Project Sponsor, Angel Care PLC. The Road Safety Audit comprised of an examination of the documents provided and a visit to site.

1.5 A visit to site was undertaken by the Audit Team together on the 17th August 2020. During the site visit the weather was fine and dry. A steady stream of vehicles was observed travelling both ways along Brockley Hill. No Pedestrians, but one cyclist was observed.

1.6 The Audit Team were provided with collision data within the audit brief for the area. It is noted that there have been three (3) slight collisions recorded within the direct vicinity of the proposals in the last 10 years. Each of these collisions were the result of driver error and cannot be attributed to the road network.

1.7 Brockley Hill Road is a 40mph zone. Traffic surveys produced for this audit show that the current 85thile speeds are higher than the posted speed limit. Southbound speeds average at 47.2 mph and the Northbound speeds average at 41.5mph.

1.8 The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of the Local Authority. The Audit Team consists of the following members:

Beth Newiss MCIHT MSoRSA
Beth Newiss & Associates
Captiva 19a Grange Hill, Coggeshall, Essex, CO6 1RE
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Jason Bown MCIHT MSoRSA
Beth Newiss & Associates
Captiva 19a Grange Hill, Coggeshall, Essex, CO6 1RE

- 1.9 The terms of reference of this Road Safety Audit are as described in GG119. This Road Safety Audit has been undertaken based on the Road Safety Audit Team’s previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. A technical audit has not been included. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated adjacent to the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A1**.
- 1.10 It should be highlighted that whilst the audit has been undertaken in accordance with the principle procedures laid out in GG119, the current COVID-19 pandemic may have altered the observations undertaken during the site visit and it may be beneficial to have this site revisited at a later date when normal journey patterns resume.
- 1.11 Recommendations made in this report are proportionate and viable suggestions for improvement to eliminate or mitigate, in accordance with GG119, and do not imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when the Design Organisation responds to this report.
- 1.12 The Designer Organisation Response to the RSA should be formally recorded and reported to the Overseeing Organisation and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion. Any drawings or documents associated with the Design Organisation Response are listed at **Appendix A2**, if applicable.

2.0 PREVIOUS ROAD SAFETY AUDIT(S)

- 2.1 The Audit Team have not been made aware of any other Road Safety Audits having been undertaken.

3.0 SAFETY ISSUES RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

As a result of an examination of the drawings and documents supplied by EAS, the problems highlighted in Section 3.0 were identified. The recommended course of action that should be taken in respect of each problem was also indicated, and the locations are shown on the drawings in **Appendix A1** where necessary.

3.1 GENERAL

PROBLEM	
Location:	A – Brockley Hill/Pipers Green Lane
Summary:	Proposed banned right turn may present obstruction or shunts due to hesitation at Pipers Green Lane.
<p>The proposals include a banned right turn into the site from the North. Drivers travelling from the north will be expected to pass the site and will likely attempt a U-turn at the mini roundabout at Pipers Green Lane further south of the proposed access. There is a concern that the mini roundabout at Pipers Green Lane may not provide suitable road provision to allow for a U-turn to be successfully made, particularly if larger service vehicles i.e. Limousine or similar wedding car are attempting this manoeuvre. This may result in obstruction, shunts due to hesitation amongst other collision types.</p>	
RECOMMENDATION	
<p>It is recommended that the Design Team provide information regarding the potential U-turn routes expected to be taken by drivers approaching the site from the north. It is recommended that Auto Tracking is provided detailing whether these are suitable for all expected vehicle maneuvers.</p>	

3.2 WALKING CYCLING HORSE RIDING

PROBLEM	
Location:	B – Brockley Hill Junction
Summary:	Lack of pedestrian facility across the junction may result in Pedestrian injury
<p>The proposals include the introduction of a traffic island with overrun-able area within the widened junction. No details have been provided as to how pedestrian crossing will be facilitated within the island. Failure to introduce suitable crossing facilities may result in pedestrian injury, i.e. trip hazards at this location.</p>	
RECOMMENDATION	
<p>It is recommended that the Design Team introduce clear pedestrian crossing facility within the proposed traffic island.</p>	

4.0 AUDIT TEAM STATEMENT

- 4.1 We certify that this audit has been undertaken in accordance with the relaxed principles of GG119.

Audit Team Leader

Beth Newiss MCIHT MSoRSA



Date: 18th August 2020

Jason Bown MCIHT MSoRSA



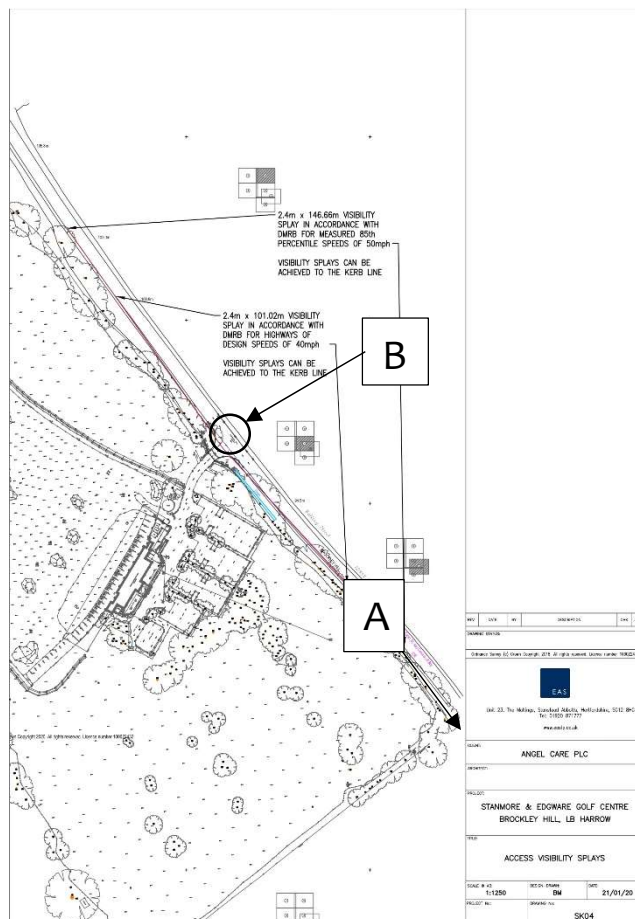
Date: 18th August 2020

APPENDIX A1

LOCATION PLAN



Photo taken from GoogleMaps



APPENDIX A2
DESIGNERS RESPONSE
(TO BE ADDED)



Appendix H – 2019 Events Schedule at Current Banqueting Venue

JANUARY 2019							CAR PARK
S.No.	Date	Day	From	To		Pax	
	01.01.2019	TUESDAY	18:00	00:00	PM	180	NOT BOOKED
	02.01.2019	WEDNESDAY	18:00	00:00	PM	180	NOT BOOKED
	03.01.2019	THURSDAY	18:00	00:00	PM	200	NOT BOOKED
	04.01.2019	FRIDAY	18:00	00:00	PM	250	BOOKED
	12.01.2019	SATURDAY	19:00	02:00	PM	500	BOOKED
	19.01.2019	SATURDAY	18:00	01:00	PM	300	BOOKED
	22.01.2019	TUESDAY	18:00	00:00	PM	200	NOT BOOKED
	25.01.2019	FRIDAY	18:00	00:00	PM	350	BOOKED
	26.01.2019	SATURDAY	17:00	00:00	PM	350	BOOKED
	27.01.2019	SUNDAY	08:00	16:00	AM	400	BOOKED
	28.01.2019	MONDAY	18:00	00:00	PM	280	BOOKED
	Feb-19						
	Date	Day	From	To			
	01.02.2019	FRIDAY	18:00	00:00	PM	350	BOOKED
	02.02.2019	SATURDAY	18:00	00:00	PM	400	BOOKED
	09.02.2019	SATURDAY	18:00	01:00	PM	250	BOOKED
	13.02.2019	WEDNESDAY	18:00	01:00	PM	200	NOT BOOKED
	17.02.2019	SUNDAY	11:00	18:00	AM	500	BOOKED
	18.02.2019	MONDAY	18:00	00:00	PM	200	NOT BOOKED
	19.02.2019	TUESDAY	18:00	00:00	PM	300	BOOKED
	21.02.2019	THURSDAY	18:00	00:00	PM	280	BOOKED
	22.02.2019	FRIDAY	18:00	00:00	PM	500	BOOKED
	23.02.2019	SATURDAY	18:00	00:00	PM	450	BOOKED
	24.02.2019	SUNDAY	18:00	00:00	PM	400	BOOKED
	25.02.2019	MONDAY	18:00	00:00	PM	140	NOT BOOKED
	MARCH 2019						
	Date	Day	From	To	AM/PM		
	03.03.2019	SUNDAY	17:00	00:00	PM	400	BOOKED
	07.03.2019	THURSDAY	18:00	01:00	PM	120	NOT BOOKED
	08.03.2019	FRIDAY	18:00	01:00	PM	450	BOOKED
	09.03.2019	SATURDAY	08:00	16:00	AM	350	BOOKED
	09.03.2019	SATURDAY	18:00	01:00	PM	250	BOOKED
	11.03.2019	MONDAY	18:00	01:00	PM	200	NOT BOOKED
	22.03.2019	FRIDAY	18:00	01:00	PM	160	NOT BOOKED
	23.03.2019	SATURDAY	08:00	16:00	AM	300	XXLD
	Apr-19						
	Date	Day	From	To	AM/PM		

	07.04.2019	SUNDAY	18:00	00:00	PM	450	BOOKED
	09.04.2019	TUESDAY	18:00	00:00	PM	200	NOT BOOKED
	11.04.2019	THURSDAY	18:00	00:00	PM	180	NOT BOOKED
	12.04.2019	FRIDAY	18:00	01:00	PM	300	BOOKED
	13.04.2019	SATURDAY	18:00	01:00	PM	450	BOOKED
	14.04.2019	SUNDAY	11:00	17:00	AM	350	BOOKED
	14.04.2019	SUNDAY	18:30	00:30	PM	500	BOOKED
	15.04.2019	MONDAY	18:00	00:30	PM	300	BOOKED
	16.04.2019	TUESDAY	18:00	00:30	PM	350	BOOKED
	17.04.2019	WEDNESDAY	18:00	00:30	PM	220	NOT BOOKED
	18.04.2019	THURSDAY	17:00	00:00	PM	275	BOOKED
	19.04.2019	FRIDAY	08:00	16:00	AM	300	BOOKED
	19.04.2019	FRIDAY	18:00	01:00	PM	450	BOOKED
	20.04.2019	SATURDAY	08:00	16:00	AM	280	BOOKED
	20.04.2019	SATURDAY	17:00	01:00	PM	450	BOOKED
	24.04.2019	WEDNESDAY	18:00	00:00	PM	200	BOOKED
	24.04.2019	THURSDAY	18:00	00:00	PM	200	NOT BOOKED
	27.04.2019	SATURDAY	18:00	00:30	PM	450	BOOKED

	MAY 2019						
	Date	Day	From	To		PAX	CAR PARK
	04.05.2019	SATURDAY	18:00	01:00	PM	400	BOOKED
	05.05.2019	SUNDAY	10:00	16:00	AM	300	BOOKED
	05.05.2019	TUESDAY	14:00	20:00	PM	200	NOT BOOKED
	09.05.2019	THURSDAY	18:00	01:00	PM	250	BOOKED
	18.05.2019	SATURDAY	08:00	16:00	AM	250	BOOKED
	18.05.2019	SATURDAY	18:00	01:00	PM	250	BOOKED
	25.05.2019	SATURDAY	16:00	01:00	PM	500	BOOKED
	26.05.2019	SUNDAY	18:00	01:00	PM	350	BOOKED
	28.05.2019	TUESDAY	08:00	16:00	AM	250	BOOKED
	30.05.2019	THURSDAY	08:00	16:00	AM	200	NOT BOOKED
	31.05.2019	FRIDAY	16:30	00:00	PM	220	BOOKED
	Jun-19						
	Date	Day	From	To			
	01.06.2019	SATURDAY	10:00	16:00	AM	400	BOOKED
	01.06.2019	SATURDAY	18:00	01:00	PM	350	BOOKED
	07.06.2019	FRIDAY	16:00	00:00	PM	300	BOOKED
	08.06.2019	SATURDAY	10:00	21:00	AM	250	BOOKED
	10.06.2019	MONDAY	18:00	00:00	PM	160	NOT BOOKED
	12.06.2019	WEDNESDAY	16:00	11:00	PM	250	BOOKED
	13.06.2019	THURSDAY	18:00	00:00	PM	200	NOT BOOKED
	14.06.2019	FRIDAY	18:00	01:00	PM	300	BOOKED
	15.06.2019	SATURDAY	08:00	16:00	AM	300	BOOKED
	16.06.2019	SUNDAY	10:00	16:00	AM	350	BOOKED
	16.06.2019	SUNDAY	18:00	01:00	PM	500	BOOKED
	19.06.2019	WEDNESDAY	18:00	00:00	PM	120	NOT BOOKED
	22.06.2019	SATURDAY	18:00	01:00	PM	350	BOOKED
	23.06.2019	SUNDAY	10:00	16:30	AM	400	BOOKED
	27.06.2019	THURSDAY	18:00	00:00	PM	160	NOT BOOKED
	28.06.2019	FRIDAY	18:00	00:00	PM	350	BOOKED
	29.06.2019	SATURDAY	18:00	01:30	PM	300	BOOKED
	30.06.2019	SUNDAY	08:00	16:00	AM	450	BOOKED
	Jul-19						
	Date	Day	From	To			
	04.07.2019	THURSDAY	18:00	00:00	PM	160	NOT BOOKED
	05.07.2019	FRIDAY	08:00	16:00	AM	250	BOOKED
	05.07.2019	FRIDAY	18:00	01:00	PM	300	BOOKED
	06.07.2019	SATURDAY	08:00	16:00	AM	400	BOOKED
	07.07.2019	SUNDAY	08:00	16:00	AM	400	BOOKED
	07.07.2019	SUNDAY	18:00	01:00	PM	350	BOOKED
	08.07.2019	MONDAY	18:00	00:00	PM	180	NOT BOOKED
	11.07.2019	THURSDAY	18:00	00:00	PM	225	NOT BOOKED
	12.07.2019	FRIDAY	18:00	01:00	PM	250	BOOKED
	13.07.2019	SATURDAY	10:00	16:00	AM	400	BOOKED
	13.07.2019	SATURDAY	18:00	01:00	PM	250	BOOKED

	17.07.2019	WEDNESDAY	18:00	00:00	PM	200	NOT BOOKED
	18.07.2019	THURSDAY	18:00	00:00	PM	180	NOT BOOKED
	19.07.2019	FRIDAY	18:00	01:00	PM	280	BOOKED
	20.07.2019	SATURDAY	10:00	16:30	AM	350	BOOKED
	20.07.2019	SATURDAY	18:00	00:00	PM	300	BOOKED
	21.07.2019	SUNDAY	18:00	01:00	PM	300	BOOKED
	25.07.2019	THURSDAY	18:00	00:00	PM	200	NOT BOOKED
	26.07.2019	FRIDAY	18:00	01:00	PM	450	BOOKED
	27.07.2019	SATURDAY	08:00	16:00	AM	300	BOOKED
	27.07.2019	SATURDAY	18:00	01:00	PM	450	BOOKED
	28.07.2019	SUNDAY	08:00	16:00	AM	400	BOOKED
	29.07.2019	MONDAY	18:00	00:00	PM	200	BOOKED
	30.07.2019	TUESDAY	18:00	00:00	PM	250	NOT BOOKED
	31.07.2019	WEDNESDAY	18:00	00:30	PM	320	BOOKED

	Aug-19						
	Date	Day	From	To			
	01.08.2019	THURSDAY	18:00	01:00	PM	250	NOT BOOKED
	02.08.2019	FRIDAY	18:00	01:00	PM	550	BOOKED
	03.08.2019	SATURDAY	18:00	01:00	PM	350	BOOKED
	04.08.2019	SUNDAY	08:00	16:00	AM	300	BOOKED
	04.08.2019	SUNDAY	18:00	01:00	PM	350	BOOKED
	05.08.2019	MONDAY	18:00	01:00	PM	350	BOOKED
	08.08.2019	THURSDAY	18:00	01:00	PM	180	NOT BOOKED
	10.08.2019	SATURDAY	01:00	20:00	PM	300	BOOKED
	11.08.2019	SUNDAY	17:30	00:30	PM	400	BOOKED
	13.08.2019	TUESDAY	18:00	01:00	PM	200	NOT BOOKED
	14.08.2019	WEDNESDAY	18:00	01:00	PM	300	BOOKED
	15.08.2019	THURSDAY	18:00	01:00	PM	200	BOOKED
	16.08.2019	FRIDAY	18:00	00:00	PM	320	BOOKED
	17.08.2019	SATURDAY	08:00	16:00	AM	400	BOOKED
	17.08.2019	SATURDAY	18:00	01:00	PM	350	BOOKED
	18.08.2019	SUNDAY	18:00	01:00	PM	450	BOOKED
	19.08.2019	MONDAY	18:00	01:00	PM	250	BOOKED
	21.08.2019	WEDNESDAY	18:00	01:00	PM	150	NOT BOOKED
	22.08.2019	THURSDAY	18:00	00:00	PM	400	XXLD
	23.08.2019	FRIDAY	08:00	16:00	AM	300	BOOKED
	23.08.2019	FRIDAY	18:00	01:00	PM	300	BOOKED
	24.08.2019	SATURDAY	18:00	00:00	PM	450	BOOKED
	25.08.2019	SUNDAY	08:00	01:00	AM & PM	400	BOOKED
	26.08.2019	MONDAY	18:00	01:00	PM	550	BOOKED
	28.08.2019	WEDNESDAY	18:00	00:00	PM	450	BOOKED
	29.08.2019	THURSDAY	18:00	01:00	PM	300	BOOKED
	30.08.2019	FRIDAY	18:00	00:00	PM	220	NOT BOOKED
	31.08.2019	SATURDAY	08:00	01:00	AM & PM	400	BOOKED

Sep-19							
Date	Day	From	To		PAX	CAR PARK	
07.09.2019	SATURDAY	18:00	01:00	PM	300	BOOKED	
12.09.2019	THURSDAY	18:00	01:00	PM	200	NOT BOOKED	
13.09.2019	FRIDAY	08:00	16:00	AM	200	NOT BOOKED	
13.09.2019	FRIDAY	18:00	01:00	PM	300	BOOKED	
14.09.2019	SATURDAY	18:00	01:00	PM	450	BOOKED	
15.09.2019	SUNDAY	10:00	16:00	AM	200	NOT BOOKED	
21.09.2019	SATURDAY	18:00	01:00	PM	350	BOOKED	
28.09.2019	SATURDAY	18:00	01:00	PM	350	BOOKED	
29.09.2019	SUNDAY	07:00	16:00	AM	400	BOOKED	

Oct-19							
Date	Day	From	To		PAX	CAR PARK	
03.10.2019	THURSDAY	18:00	01:00	PM	180	NOT BOOKED	
04.10.2019	FRIDAY	15:00	01:00	PM	300	BOOKED	
06.10.2019	SUNDAY	18:00	00:00	PM	400	BOOKED	
10.10.2019	THURSDAY	18:00	01:00	PM	300	BOOKED	
11.10.2019	FRIDAY	12:00	18:00	AM	300	BOOKED	
12.10.2019	SATURDAY	18:00	01:00	PM	250	BOOKED	
17.10.2019	THURSDAY	18:00	00:00	PM	150	NOT BOOKED	
19.10.2019	SATURDAY	18:00	00:00	PM	450	BOOKED	
20.10.2019	SUNDAY	11:00	16:30	AM	400	BOOKED	
20.10.2019	SUNDAY	18:00	01:00	PM	450	BOOKED	
21.10.2019	MONDAY	18:00	00:00	PM	250	BOOKED	
22.10.2019	TUESDAY	18:00	01:00	PM	200	NOT BOOKED	
23.10.2019	WEDNESDAY	18:00	01:00	PM	220	NOT BOOKED	
24.10.2019	THURSDAY	18:00	01:00	PM	150	NOT BOOKED	
26.10.2019	SATURDAY	18:00	01:00	PM	450	BOOKED	
27.10.2019	SUNDAY	12:30	19:30	AM	450	BOOKED	

Nov-19							
Date	Day	From	To		PAX	CAR PARK	
01.11.19	FRIDAY	13:00	22:00	PM	400	BOOKED	
02.11.19	SATURDAY	08:00	16:00	AM	300	BOOKED	
02.11.19	SATURDAY	18:00	01:00	PM	300	BOOKED	
03.11.19	SUNDAY	11:00	16:30	AM	400	BOOKED	
03.11.19	SUNDAY	18:00	00:00	PM	450	BOOKED	
06.11.19	WEDNESDAY	18:00	01:00	PM	200	NOT BOOKED	
07.11.19	THURSDAY	18:00	00:30	PM	150	BOOKED	
08.11.19	FRIDAY	18:00	01:00	PM	160	NOT BOOKED	
10.11.19	SUNDAY	14:00	22:00	PM	400	BOOKED	
16.11.19	SATURDAY	10:00	16:30	AM	250	BOOKED	
16.11.19	SATURDAY	18:00	02:00	PM	350	BOOKED	
19.11.19	TUESDAY	18:00	01:00	PM	170	NOT BOOKED	
24.11.19	SUNDAY	17:00	00:00	PM	550	BOOKED	

	29.11.19	FRIDAY	18:00	01:00	PM	400	BOOKED
	30.11.19	SATURDAY	08:00	16:00	AM	300	BOOKED
	30.11.19	SATURDAY	18:00	01:00	PM	350	BOOKED
Dec-19							
	Date	Day	From	To			
	01.12.19	SUNDAY	18:00	00:00	PM	200	NOT BOOKED
	06.12.19	FRIDAY	18:00	00:00	PM	250	BOOKED
	07.12.19	SATURDAY	18:00	01:00	PM	300	BOOKED
	14.12.19	SATURDAY	18:00	01:00	PM	220	BOOKED
	15.12.19	SUNDAY	08:00	16:00	AM	400	BOOKED
	15.12.19	SUNDAY	18:00	01:00	PM	450	BOOKED
	17.12.19	TUESDAY	18:00	00:00	PM	200	NOT BOOKED
	19.12.19	THURSDAY	18:00	00:00	PM	110	NOT BOOKED
	20.12.19	FRIDAY	18:00	00:00	PM	250	BOOKED
	21.12.19	SATURDAY	18:00	01:00	PM	370	BOOKED
	24.12.19	TUESDAY	19:00	01:00	PM	350	BOOKED
	26.12.19	THURSDAY	18:00	01:00	PM	550	BOOKED
	31.12.19	TUESDAY	18:00	02:00	PM	325	BOOKED



Appendix I – Copy of Guest Travel Survey

Guest Travel Survey Questionnaire.

Premier Banqueting London Ltd will be relocating. In establishing a suitable new location, we are trying to determine the travel patterns of our guests. Please complete one questionnaire per group travelling here today - i.e. one per car, coach etc.

	Date	Time of arrival	Time of departure				
Please indicate when you arrived at and left Premier Banqueting London today.							
So that we can see where our customers travel from, can you tell us where you were immediately before you travelled here today? (Please give a place name, street name or postcode).	Place Name/Street Name/Postcode						
How did your party travel here today?	Walk	Cycle	Car	Coach	Bus	Train	Other (please specify)
How many people were in your group to travel to Premier Banqueting London today?							
	0-15mins	16-30	30-45	45-60	over 60		
How long did it take you to get here today?							

Many Thanks!

Guest Travel Survey Questionnaire.

Premier Banqueting London Ltd will be relocating. In establishing a suitable new location, we are trying to determine the travel patterns of our guests. Please complete one questionnaire per group travelling here today - i.e. one per car, coach etc.

	Date	Time of arrival	Time of departure				
Please indicate when you arrived at and left Premier Banqueting London today.							
So that we can see where our customers travel from, can you tell us where you were immediately before you travelled here today? (Please give a place name, street name or postcode).	Place Name/Street Name/Postcode						
How did your party travel here today?	Walk	Cycle	Car	Coach	Bus	Train	Other (please specify)
How many people were in your group to travel to Premier Banqueting London today?							
	0-15mins	16-30	30-45	45-60	over 60		
How long did it take you to get here today?							

Many Thanks!



Appendix J – Guest Travel Survey Results

Guest Travel Survey Responses

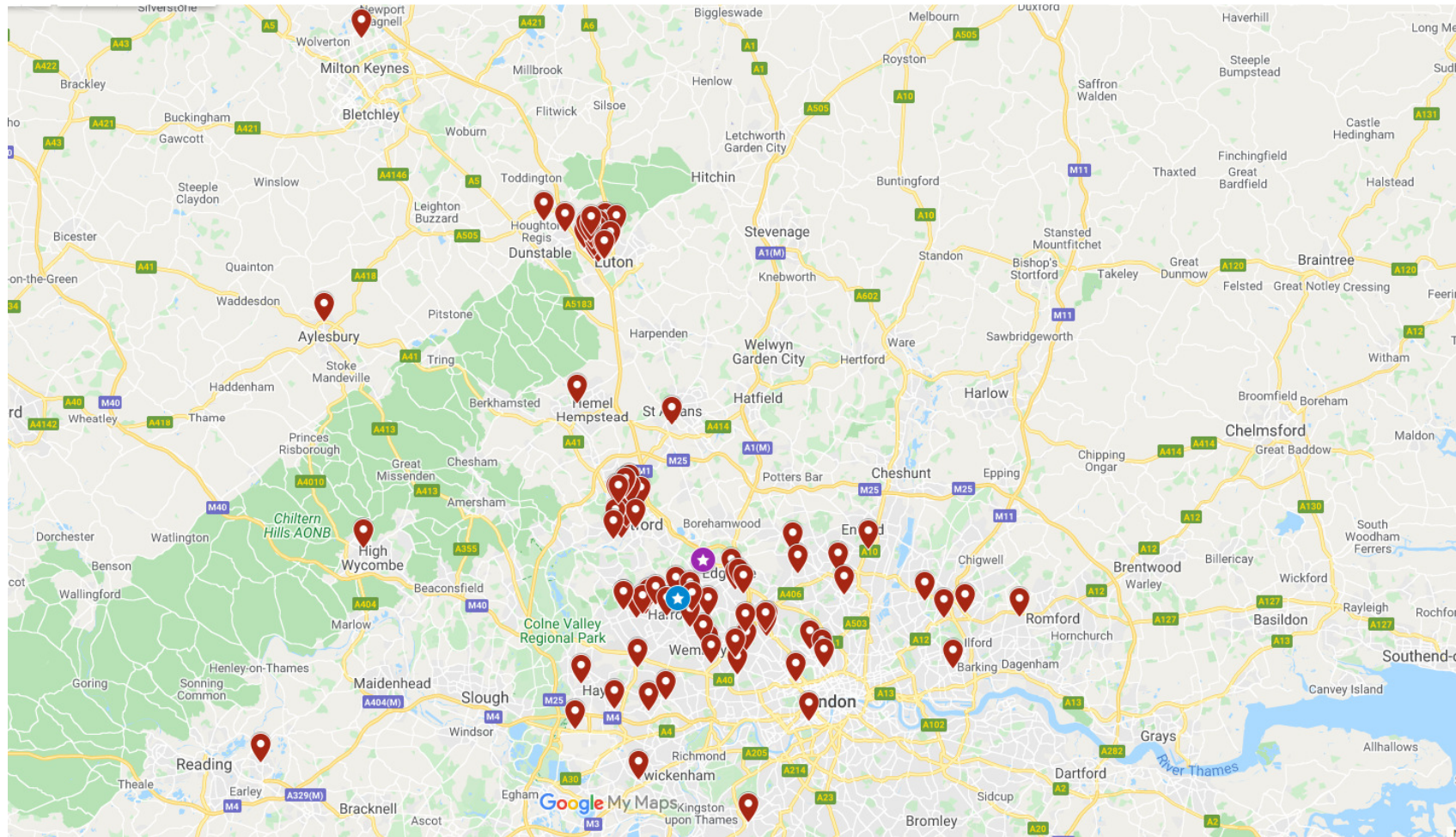
Day	Date	Arr. Time	Dep. time	Post code	Mode	Journey time (minutes)	Car occupancy		
Thursday	16/01/2020	14:00		HA0 2BE	Uber	16-30	4		
		14:00		N22 6EW	Car	Over 60	3		
		13:50		HA0 1NG	Car	16-30	3		
		14:50		NW8 8PR	Car	Over 60	4		
		14:20		W11 1KA	Car	Over 60	2		
		16:30		NW10 6DD	Uber	45-60	4		
		17:00		NW10 1DH	Taxi	45-60	5		
		14:45		NW10 9ED	Car	30-45	4		
		14:50		SC15 2JD	Car	Over 60	2		
		14:35		TW13 6AL	Car	Over 60	2		
		14:45		UB2 4JR	Car	Over 60	4		
		13:10		SW1W 8NJ	Car	Over 60	4		
		13:20		NW1 1TS	Car	30-45	4		
		13:00		HA0 1HA	Bus	30-45			
		13:40		NW9 5NG	Taxi	30-45	4		
						NW2 7NG	Taxi	Over 60	3
				14:00		HA0 3SJ	Bus	30-45	
		14:10		UB2 4UL	Car	45-60	4		
		14:15		E6 1QZ	Car	45-60	3		
Friday	17/01/2020	20:25		HP2 5XH	Car	45-60			
		20:25		LU3 1AH	Car	45-60	3		
		20:25		RG5 4LD	Car	Over 60	4		
		20:25		WD24 6RY	Car	30-45	2		
		20:20		LR6 9HZ	Car	30-45	4		
		20:20		WD18 6JD	Car	16-30	3		
		20:20		WD18 7DU	Uber	30-45	5		
		19:20		LU3 1UU	Car		3		
		19:40		LU1 1LF	Car	Over 60	4		
		19:30		HA5 2EP	Uber	30-45	5		
		19:30		WD24 7HE	Uber	30-45	4		
		19:35		WV1 4QU	Taxi	Over 60	5		
		19:30		LU1 1PE	Car	45-60	4		
		17:30		LU1 1UL	Car	45-60	2		
		19:25		HA3 0HD	Car	16-30	3		
		19:20		LU1 1LF	Car	Over 60	4		
		19:30		WD18 0RG	Car	30-45	4		
		19:20		HA1 4EE	Bus	16-30			
		19:20		LU1 1LH	Car	Over 60			
		19:20		N12 9DL	Taxi	45-60	7		
		19:20		UB3 4NN	Car	45-60	5		
		19:10		UB7 8DW	Car	45-60	3		
		19:15		UB7 0DJ	Car	45-60	3		
19:15		LU1 1TX	Car	Over 60	4				
17:00		LU4 8SJ	Car	Over 60	3				
19:00				WD17 4LL	Taxi	30-45	4		

18:30	LU1 1PF	Taxi	30-45	3
18:30	WD24 6BX	Car	30-45	4
18:45	LU1 5QN	Car	Over 60	4
17:10	LU1 1TH	Car	Over 60	2
19:05	WD24 6NG	Car	16-30	2
19:05		Uber	30-45	4
19:10	LU2 7DU	Car	30-45	3
19:10	LU3 1RZ	Car	30-45	4
21:00	BL3 2HX	Coach		30
21:00	PL32 5PE?	Coach		24
20:55	LU4 0UY	Coach		30
20:55	WD24 6QS	Car	30-45	3
20:50	HP5 2MS	Car	45-60	4
20:50	DH66 1LU	Coach		30
20:50	WD17 2AP	Car	30-45	5
20:40	LD24 4ED	Coach		24
20:40	BL3 3DH	Coach		30
20:45	LU4 8EB	Coach		24
20:45	LU3 1AH	Coach		22
20:45	LU4 8ES	Coach		30
20:45	LWD24 6NS?	Coach		30
20:40	LD24 6QS	Car	45-60	4
20:40	DL3 2HD	Coach		30
20:40	LU1 1LA	Car	45-60	5
20:40	WD24 6QS	Car	16-30	2
20:45	NM3 3BY	Taxi	45-60	4
20:40	LU4 9SS	Car	45-60	3
20:35	E17 3RH	Uber	45-60	4
20:35	MK14 6BE	Train	45-60	
20:30	LU4 9RX	Car	45-60	3
20:25	LU1 1NR	Car	45-60	4
20:30	LU3 1AH	Car	45-60	4
20:25	LU1 1JX	Car	45-60	3
19:15	WD18 7FH	Uber	30-45	4
19:15	WD17 4WE	Car	30-45	2
19:25	LU4 9BT	Car	30-45	4
19:20	LH1 1HX	Car	30-45	3
19:20	WD18 6PR	Uber	16-30	4



Appendix K – Map of Guest Home Locations

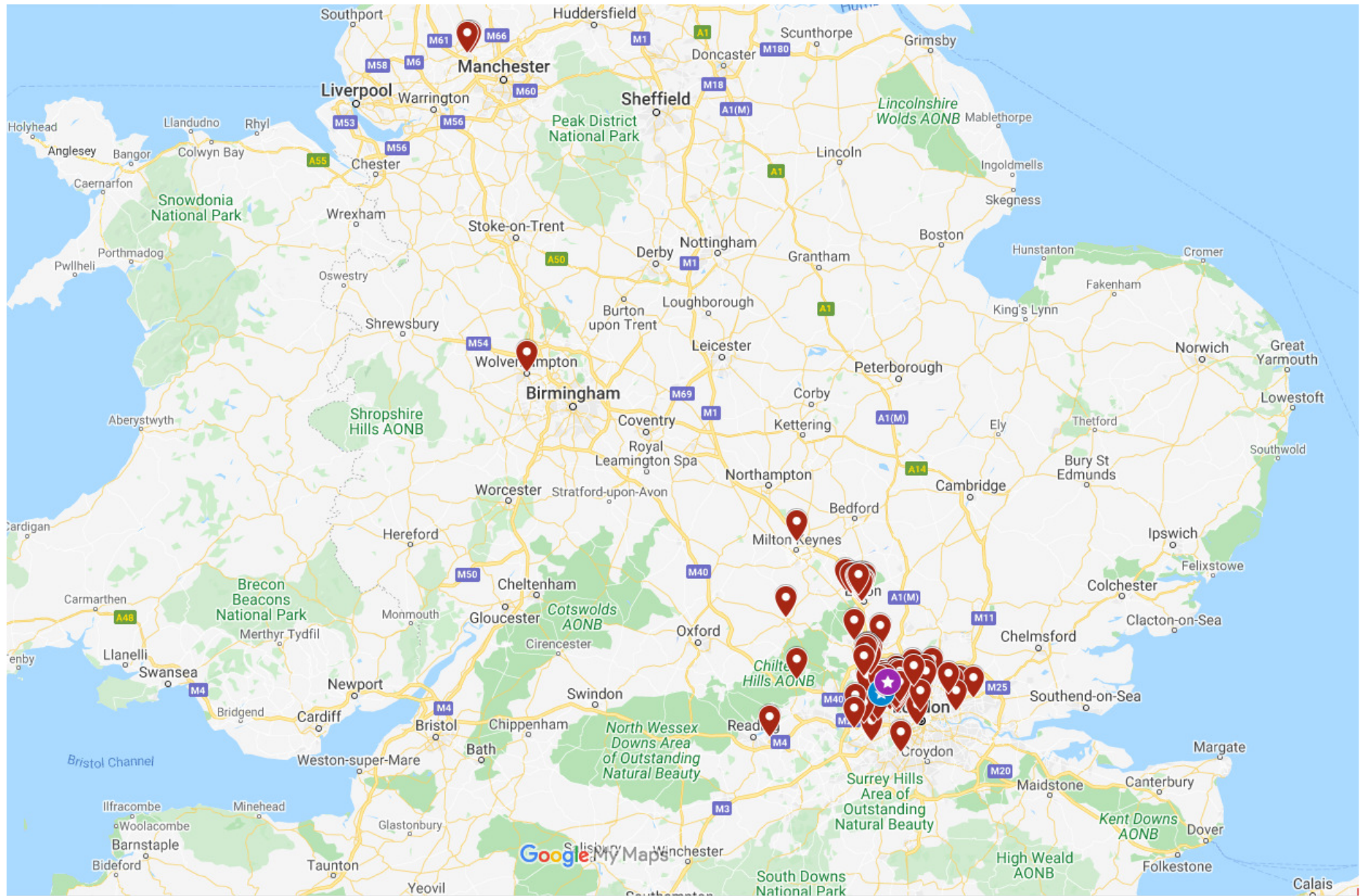
Home locations of Surveyed Premier Banqueting Guests of the Existing Venue



Red pointer = guest locations

Blue star = current Premier Banqueting venue

Purple star = proposed Premier Banqueting venue





Appendix L – Emails Regarding Wembley Stadium Trip Generation

Ben McKeown

From: Laura.McIntosh@harrow.gov.uk
Sent: 06 July 2020 16:02
To: Ben McKeown
Cc: Patrick Eggenton
Subject: RE: Premier Banqueting / Former Stanmore & Edgware Golf Centre

Hi Ben,

This looks okay in terms of exploring the potential impact of the proposal. As much as possible, it is important for new proposals to encourage sustainable travel. I understand that this is an extract which would suggest that there will be more to the final document, however, please can you ensure that this TA relates to the Healthy Streets approach by demonstrating how the highways impact of the proposal can be minimised. At the previous site, it would have been feasible for some visitors to travel by public transport however, the options are not as plentiful at the new site. There need to be measures, perhaps through Travel Planning where it can be shown that efforts are being made to reduce car travel, particularly single occupancy and promote other modes eg. coaches and car sharing.

It is also important to put forward recommendations for any improvements that could be made to make walking, cycling and use of public transport easier and reduce existing risks. Unless necessary to facilitate the development, these will be put forward to ward Councillors to consider for possible future implementation. It is understood that people attending weddings or parties are not likely to walk to this venue but staff may choose sustainable options.

Kind regards

Laura McIntosh | Infrastructure Engineer
Community | Traffic, Highways and Asset Management

BUILDING A BETTER
HARROW
www.harrow.gov.uk

From: Ben McKeown [mailto:ben.mckeown@eastp.co.uk]
Sent: 19 June 2020 11:34
To: Laura McIntosh
Cc: Patrick Eggenton
Subject: RE: Premier Banqueting / Former Stanmore & Edgware Golf Centre

Hi Laura,

Thank you for the comments from our meeting.

Please find attached an excerpt from the Transport Assessment, covering the development proposals, trip generation and junction modelling.

Any comments at this stage would be greatly welcomed.

Kind regards,

Ben

Ben McKeown



Graduate Engineer

Unit 23, The Maltings, Roydon Road, Stanstead Abbots, Hertfordshire, SG12 8HG.
Tel: 01920 871777

Mob: 07756 659356
Web: www.eastp.co.uk

TRANSPORT ASSESSMENT, TRAFFIC MODELLING, FLOOD RISK ASSESSMENT,
FLOOD MODELLING, DETAILED HIGHWAY AND DRAINAGE DESIGN, TOPOGRAPHICAL SURVEYS.

EAS is a trading name of EAS Transport Planning Ltd registered 5751442.



From: Patrick Eggenton <patrick.eggenton@eastp.co.uk>
Sent: 12 June 2020 14:28
To: Laura.McIntosh@harrow.gov.uk; Ben McKeown <ben.mckeown@eastp.co.uk>
Subject: RE: Premier Banqueting / Former Stanmore & Edgware Golf Centre

Thanks Laura,

Ben will be sending you the work we have completed to consider the interaction/impact of any events at Wembley. This point was raised in the pre-app with Harrow planning section.

I am off next week! so will catch up when i return, but hopefully Bens information will be helpful. Ideally of course we would like your opinion on the work completed.

Have a good weekend!

Kind Regards

Patrick Eggenton



Director

Unit 23, The Maltings, Roydon Road, Stanstead Abbots, Hertfordshire, SG12 8HG.
T: 01920 871777

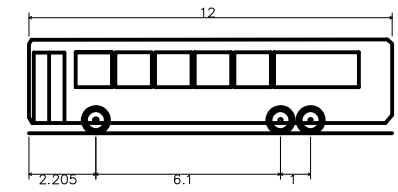
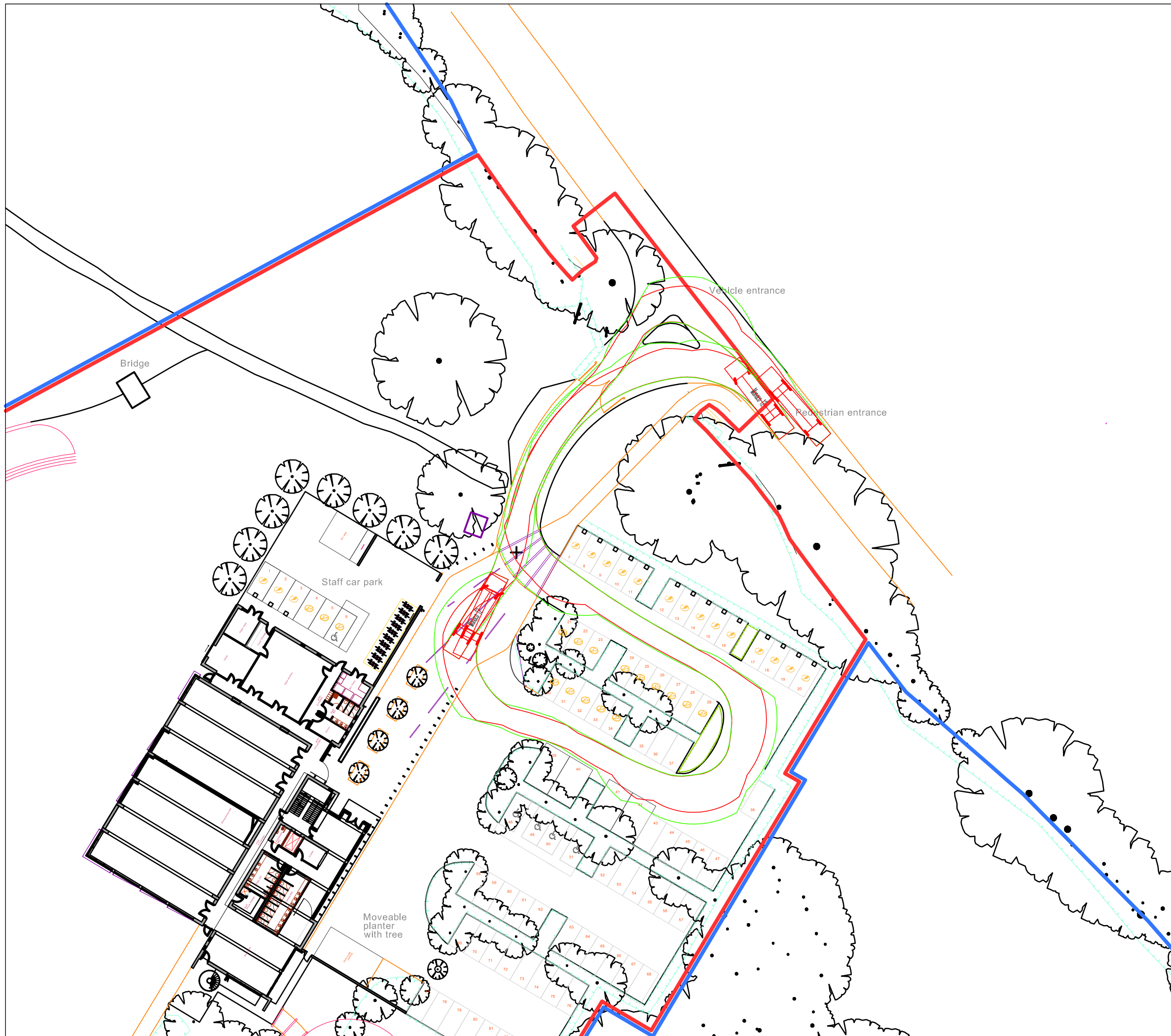
M: 07709 694819
Web: www.eastp.co.uk

TRANSPORT ASSESSMENT, TRAFFIC MODELLING, FLOOD RISK ASSESSMENT,
FLOOD MODELLING, DETAILED HIGHWAY AND DRAINAGE DESIGN, TOPOGRAPHICAL SURVEYS.



From: Laura.McIntosh@harrow.gov.uk <Laura.McIntosh@harrow.gov.uk>
Sent: 12 June 2020 14:13

Appendix M – Swept Path Analysis - Coach Access



Monaco 12
 Overall Length 12.000m
 Overall Width 2.550m
 Overall Body Height 3.102m
 Min Body Ground Clearance 0.337m
 Track Width 2.500m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 9.924m

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS:

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Unit 23, The Maltings, Stanstead Abbots, Hertfordshire,
 SG12 8HG
 Tel: 01920 871777
 www.eastp.co.uk

CLIENT:

ARCHITECT:

PROJECT:
**BROCKLEY HILL, STANMORE
 BANQUETING FACILITY**

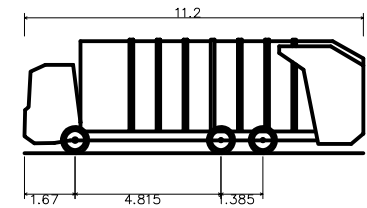
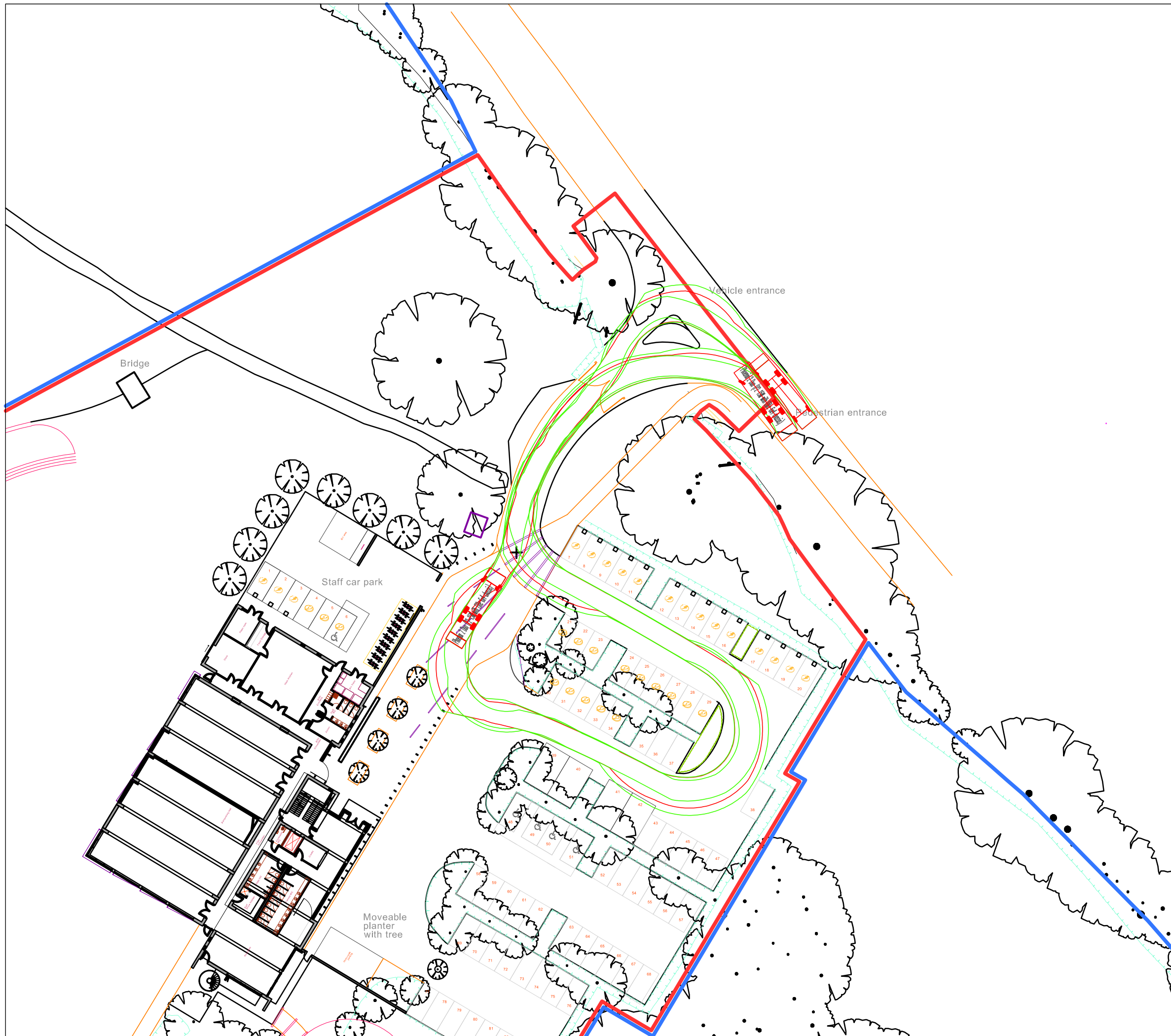
TITLE:
**SWEPT PATH ANALYSIS
 12m COACH ACCESS AND EGRESS**

SCALE @ A3: **1:500** DESIGN-DRAWN: **ET** DATE: **07/01/2021**

PROJECT No: **2660** DRAWING No: **SK02 REV I**



Appendix N – Swept Path Analysis - Refuse Vehicle Access



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)
 Overall Length 11.200m
 Overall Width 2.530m
 Overall Body Height 3.751m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 9.500m

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS:

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 SG12 8HG
 Tel: 01920 871777
 www.eastp.co.uk

CLIENT:

ARCHITECT:

PROJECT:

**BROCKLEY HILL, STANMORE
 BANQUETING FACILITY**

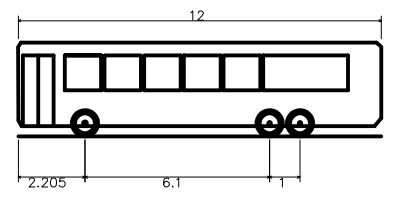
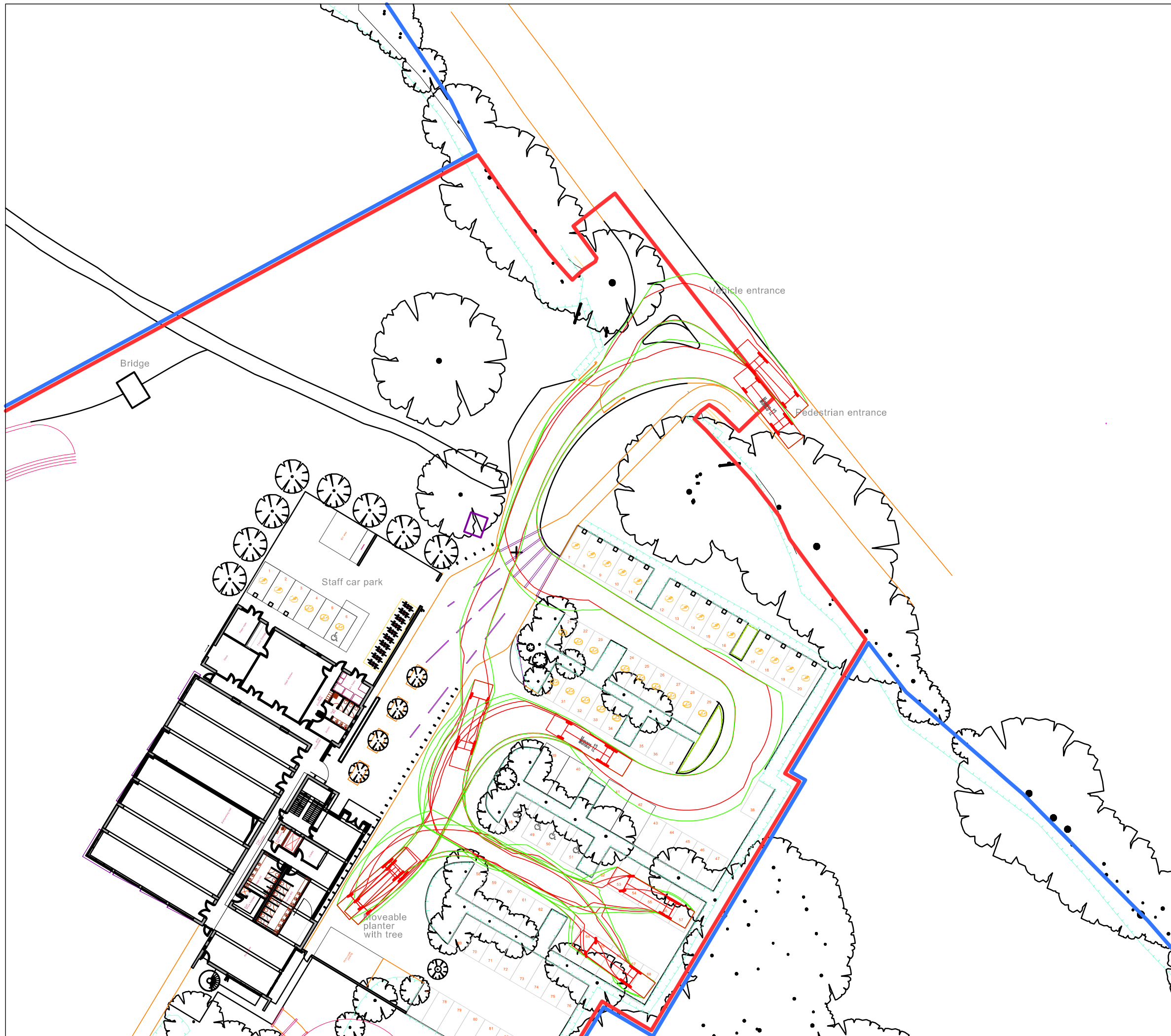
TITLE:

**SWEPT PATH ANALYSIS
 REFUSE VEHICLE ACCESS**

SCALE @ A3: 1:500	DESIGN-DRAWN: ET	DATE: 07/01/2021
-----------------------------	----------------------------	----------------------------

PROJECT No: 2660	DRAWING No: SK03 REV F
----------------------------	----------------------------------

Appendix O – Swept Path Analysis - Coach Parking



Monaco 12	12.000m
Overall Length	12.000m
Overall Width	2.550m
Overall Body Height	3.102m
Min Body Ground Clearance	0.337m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.924m

REV	DATE	BY	DESCRIPTION	CHK	APD

DRAWING STATUS:

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Unit 23, The Maltings, Stanstead Abbots, Hertfordshire, SG12 8HG
 Tel: 01920 871777
 www.eastp.co.uk

CLIENT:

ARCHITECT:

PROJECT:
**BROCKLEY HILL, STANMORE
 BANQUETING FACILITY**

TITLE:
**SWEPT PATH ANALYSIS
 12m COACH PARKING**

SCALE @ A3: 1:500	DESIGN-DRAWN: ET	DATE: 26/01/2021
-----------------------------	----------------------------	----------------------------

PROJECT No: 2660	DRAWING No: SK15 REV A
----------------------------	----------------------------------



Appendix P – Existing Use TRICS Output

Calculation Reference: AUDIT-743101-200205-0207

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : G - DRIVING RANGE
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
	KC KENT	2 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 ranges
Actual Range:	15 to 30 (units:)
Range Selected by User:	15 to 30 (units:)
Parking Spaces Range:	All Surveys Included

Public Transport Provision:

Selection by:	Include all surveys
---------------	---------------------

Date Range:	12/01/93 to 14/12/17
-------------	----------------------

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:

Monday	1 days
Wednesday	1 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 undertaken using machines.

Selected Locations:

Edge of Town	2
Free Standing (PPS6 Out of Town)	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	1
Out of Town	2

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

Secondary Filtering selection:

Use Class:

D2	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:

5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days

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

Population within 5 miles:

100,001 to 125,000	2 days
250,001 to 500,000	1 days

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

Car ownership within 5 miles:

1.1 to 1.5	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:

Not Known	1 days
No	2 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:

No PTAL Present	3 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	HC-09-G-02	DRIVING RANGE	HAMPSHIRE
	CHESTNUT AVENUE EASTLEIGH		
	Edge of Town Out of Town		
	Total Number of ranges:	30	
	Survey date: <i>WEDNESDAY</i>	<i>02/12/09</i>	Survey Type: <i>MANUAL</i>
2	KC-09-G-01	DRIVING RANGE	KENT
	SUTTON ROAD NEAR MAIDSTONE SHEPWAY		
	Free Standing (PPS6 Out of Town) Out of Town		
	Total Number of ranges:	25	
	Survey date: <i>MONDAY</i>	<i>17/06/02</i>	Survey Type: <i>MANUAL</i>
3	KC-09-G-02	DRIVING RANGE	KENT
	BULLOCKSTONE ROAD HERNE BAY GREENHILL		
	Edge of Town Residential Zone		
	Total Number of ranges:	15	
	Survey date: <i>FRIDAY</i>	<i>11/12/09</i>	Survey Type: <i>MANUAL</i>

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

TRIP RATE for Land Use 09 - GOLF/G - DRIVING RANGE
VEHICLES

Calculation factor: 1 RANGES

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RANGES	Trip Rate	No. Days	Ave. RANGES	Trip Rate	No. Days	Ave. RANGES	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	1	30	0.133	1	30	0.000	1	30	0.133
08:00 - 09:00	1	30	0.033	1	30	0.067	1	30	0.100
09:00 - 10:00	3	23	0.243	3	23	0.043	3	23	0.286
10:00 - 11:00	3	23	0.200	3	23	0.200	3	23	0.400
11:00 - 12:00	3	23	0.286	3	23	0.271	3	23	0.557
12:00 - 13:00	3	23	0.229	3	23	0.329	3	23	0.558
13:00 - 14:00	3	23	0.186	3	23	0.271	3	23	0.457
14:00 - 15:00	3	23	0.271	3	23	0.229	3	23	0.500
15:00 - 16:00	3	23	0.314	3	23	0.214	3	23	0.528
16:00 - 17:00	3	23	0.257	3	23	0.243	3	23	0.500
17:00 - 18:00	3	23	0.329	3	23	0.343	3	23	0.672
18:00 - 19:00	3	23	0.329	3	23	0.200	3	23	0.529
19:00 - 20:00	3	23	0.500	3	23	0.414	3	23	0.914
20:00 - 21:00	3	23	0.171	3	23	0.400	3	23	0.571
21:00 - 22:00	3	23	0.029	3	23	0.200	3	23	0.229
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.510			3.424			6.934

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.*

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Parameter summary

Trip rate parameter range selected: 15 - 30 (units:)
 Survey date range: 12/01/93 - 14/12/17
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 1
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. 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 CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : G - DRIVING RANGE
 VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	MR MERTON	1 days
02	SOUTH EAST	
	HC HAMPSHIRE	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 ranges
 Actual Range: 50 to 60 (units:)
 Range Selected by User: 50 to 60 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 22/01/07 to 16/07/16

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:

Saturday 2 days

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

Selected survey types:

Manual count 2 days
 Directional ATC Count 0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	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	1
No Sub Category	1

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:

D2 2 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	1 days

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

Travel Plan:

No	2 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:

No PTAL Present	1 days
1b Very poor	1 days

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

LIST OF SITES relevant to selection parameters

1	HC-09-G-03	DRIVING RANGE	HAMPSHIRE
	UPPER NORTHAM ROAD		
	SOUTHAMPTON		
	HEDGE END		
	Edge of Town		
	Residential Zone		
	Total Number of ranges:	50	
	Survey date: SATURDAY	16/07/16	Survey Type: MANUAL
2	MR-09-G-01	DRIVING RANGE	MERTON
	BEVERLEY WAY		
	NEW MALDEN		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of ranges:	60	
	Survey date: SATURDAY	19/09/09	Survey Type: MANUAL

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

TRIP RATE for Land Use 09 - GOLF/G - DRIVING RANGE
VEHICLES

Calculation factor: 1 RANGES

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RANGES	Trip Rate	No. Days	Ave. RANGES	Trip Rate	No. Days	Ave. RANGES	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	1	50	0.080	1	50	0.020	1	50	0.100
07:00 - 08:00	2	55	0.091	2	55	0.036	2	55	0.127
08:00 - 09:00	2	55	0.473	2	55	0.073	2	55	0.546
09:00 - 10:00	2	55	0.782	2	55	0.418	2	55	1.200
10:00 - 11:00	2	55	0.891	2	55	0.736	2	55	1.627
11:00 - 12:00	2	55	0.891	2	55	0.818	2	55	1.709
12:00 - 13:00	2	55	0.836	2	55	0.964	2	55	1.800
13:00 - 14:00	2	55	0.918	2	55	0.936	2	55	1.854
14:00 - 15:00	2	55	1.255	2	55	0.927	2	55	2.182
15:00 - 16:00	2	55	1.000	2	55	1.064	2	55	2.064
16:00 - 17:00	2	55	0.682	2	55	0.982	2	55	1.664
17:00 - 18:00	2	55	0.591	2	55	0.900	2	55	1.491
18:00 - 19:00	2	55	0.491	2	55	0.636	2	55	1.127
19:00 - 20:00	2	55	0.500	2	55	0.400	2	55	0.900
20:00 - 21:00	2	55	0.345	2	55	0.609	2	55	0.954
21:00 - 22:00	2	55	0.118	2	55	0.373	2	55	0.491
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			9.944			9.892			19.836

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: 50 - 60 (units:)
 Survey date range: 22/01/07 - 16/07/16
 Number of weekdays (Monday-Friday): 0
 Number of Saturdays: 2
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-743101-200205-0225

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : H - "3-PAR" COURSES
 VEHICLES

Selected regions and areas:

06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
10	WALES	
	IA ISLE OF ANGLESEY	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 holes
 Actual Range: 9 to 18 (units:)
 Range Selected by User: 9 to 18 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 10/01/00 to 08/02/08

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:

Monday	1 days
Wednesday	1 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

Free Standing (PPS6 Out of Town)	2
----------------------------------	---

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:

Out of Town	2
-------------	---

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

Secondary Filtering selection:

Use Class:

D2	2 days
----	--------

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	1 days

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

Travel Plan:

No	2 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:

No PTAL Present	2 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	IA-09-H-01 B5111 NEAR LLANGFNI RHOSMEIRCH Free Standing (PPS6 Out of Town) Out of Town Total Number of holes: <i>Survey date: MONDAY</i>	GOLF COURSE	9 <i>03/11/03</i>	ISLE OF ANGLESEY	<i>Survey Type: MANUAL</i>
2	WM-09-H-01 BRINKLOW ROAD NEAR COVENTRY ANSTY Free Standing (PPS6 Out of Town) Out of Town Total Number of holes: <i>Survey date: WEDNESDAY</i>	GOLF CENTRE	18 <i>08/02/06</i>	WEST MIDLANDS	<i>Survey Type: MANUAL</i>

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

TRIP RATE for Land Use 09 - GOLF/H - "3-PAR" COURSES
VEHICLES

Calculation factor: 1 HOLES

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	14	0.407	2	14	0.037	2	14	0.444
08:00 - 09:00	2	14	1.259	2	14	0.185	2	14	1.444
09:00 - 10:00	2	14	1.259	2	14	0.481	2	14	1.740
10:00 - 11:00	2	14	0.778	2	14	0.630	2	14	1.408
11:00 - 12:00	2	14	0.778	2	14	1.519	2	14	2.297
12:00 - 13:00	2	14	0.741	2	14	0.593	2	14	1.334
13:00 - 14:00	2	14	1.074	2	14	0.667	2	14	1.741
14:00 - 15:00	2	14	0.593	2	14	1.037	2	14	1.630
15:00 - 16:00	2	14	0.963	2	14	1.185	2	14	2.148
16:00 - 17:00	2	14	0.333	2	14	1.148	2	14	1.481
17:00 - 18:00	2	14	0.148	2	14	0.963	2	14	1.111
18:00 - 19:00	1	18	0.000	1	18	0.111	1	18	0.111
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			8.333			8.556			16.889

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: 9 - 18 (units:)
Survey date range: 10/01/00 - 08/02/08
Number of weekdays (Monday-Friday): 2
Number of Saturdays: 1
Number of Sundays: 1
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

Calculation Reference: AUDIT-743101-200205-0253

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 09 - GOLF
 Category : H - "3-PAR" COURSES
 VEHICLES

Selected regions and areas:

08	NORTH WEST	
	LC LANCASHIRE	1 days
11	SCOTLAND	
	AD ABERDEEN CITY	1 days
	GC GLASGOW CITY	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 holes
 Actual Range: 9 to 9 (units:)
 Range Selected by User: 9 to 9 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 19/01/99 to 14/06/16

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:

Saturday	2 days
Sunday	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 undertaken using machines.

Selected Locations:

Edge of Town	2
Free Standing (PPS6 Out of Town)	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:

Out of Town	1
No Sub Category	2

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

Secondary Filtering selection:

Use Class:

D2	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:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days

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

Population within 5 miles:

75,001 to 100,000	1 days
125,001 to 250,000	1 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
1.1 to 1.5	2 days

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

Travel Plan:

Yes	1 days
No	2 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:

No PTAL Present	3 days
-----------------	--------

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

LIST OF SITES relevant to selection parameters

1	AD-09-H-01	GOLF COURSE	ABERDEEN CITY
	SOUTH DEESIDE ROAD ABERDEEN		
	Free Standing (PPS6 Out of Town) Out of Town		
	Total Number of holes:	9	
	<i>Survey date: SATURDAY</i>		<i>Survey Type: MANUAL</i>
2	GC-09-H-01	PITCH AND PUTT	GLASGOW CITY
	CUMBERNAULD ROAD GLASGOW HOGGANFIELD LOCH		
	Edge of Town No Sub Category		
	Total Number of holes:	9	
	<i>Survey date: SATURDAY</i>		<i>Survey Type: MANUAL</i>
3	LC-09-H-01	GOLF CENTRE	LANCASHIRE
	EUXTON LANE CHORLEY		
	Edge of Town No Sub Category		
	Total Number of holes:	9	
	<i>Survey date: SUNDAY</i>		<i>Survey Type: MANUAL</i>

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

TRIP RATE for Land Use 09 - GOLF/H - "3-PAR" COURSES
VEHICLES

Calculation factor: 1 HOLES

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate	No. Days	Ave. HOLES	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	9	0.000	2	9	0.000	2	9	0.000
08:00 - 09:00	2	9	0.444	2	9	0.000	2	9	0.444
09:00 - 10:00	3	9	0.444	3	9	0.074	3	9	0.518
10:00 - 11:00	3	9	0.370	3	9	0.370	3	9	0.740
11:00 - 12:00	3	9	0.778	3	9	0.407	3	9	1.185
12:00 - 13:00	3	9	1.000	3	9	0.889	3	9	1.889
13:00 - 14:00	3	9	0.778	3	9	0.778	3	9	1.556
14:00 - 15:00	3	9	0.926	3	9	1.037	3	9	1.963
15:00 - 16:00	3	9	0.815	3	9	0.815	3	9	1.630
16:00 - 17:00	3	9	0.630	3	9	1.074	3	9	1.704
17:00 - 18:00	3	9	0.333	3	9	0.926	3	9	1.259
18:00 - 19:00	2	9	0.000	2	9	0.333	2	9	0.333
19:00 - 20:00	1	9	0.000	1	9	0.000	1	9	0.000
20:00 - 21:00	1	9	0.000	1	9	0.000	1	9	0.000
21:00 - 22:00	1	9	0.000	1	9	0.000	1	9	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			6.518			6.703			13.221

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: 9 - 9 (units:)
Survey date range: 19/01/99 - 14/06/16
Number of weekdays (Monday-Friday): 0
Number of Saturdays: 2
Number of Sundays: 1
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

Appendix Q – Traffic and Queue Data A5/A410

Appendix Q – Traffic and Queue Data A5/A410

K&M TRAFFIC SURVEYS

DATE : SATURDAY 8TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A5 BROCKLEY HILL NORTH LEFT TURN TO A410 SPUR RD EAST						A5 BROCKLEY HILL NORTH STRAIGHT AHEAD TO A5 STONEGROVE SOUTH						A5 BROCKLEY HILL NORTH RIGHT TURN TO A410 LONDON RD WEST						A5 BROCKLEY HILL NORTH U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	
1400-1415	15	0	1	1	0	17	48	0	0	0	0	48	25	0	0	0	0	25	0	0	0	0	0	0
1415-1430	15	0	1	0	0	16	45	0	1	2	0	48	20	1	0	0	0	21	0	0	0	0	0	0
1430-1445	11	0	1	0	0	12	61	0	0	0	0	61	23	0	0	0	0	23	0	0	0	0	0	0
1445-1500	16	0	1	0	0	17	52	0	0	0	0	52	22	0	0	0	0	22	0	0	0	0	0	0
1500-1515	18	0	1	1	0	20	54	2	0	0	0	56	27	0	0	3	0	30	0	0	0	0	0	0
1515-1530	16	0	1	0	0	17	54	0	0	0	0	54	19	0	0	0	0	19	0	0	0	0	0	0
1530-1545	20	0	1	0	0	21	54	0	0	1	0	55	22	1	0	0	0	23	0	0	0	0	0	0
1545-1600	21	0	1	0	0	22	55	0	0	0	1	56	28	1	0	0	0	29	0	0	0	0	0	0
1600-1615	13	0	1	0	0	14	48	0	0	0	0	48	26	0	0	0	0	26	0	0	0	0	0	0
1615-1630	18	0	1	0	0	19	52	1	0	0	0	53	34	0	0	0	0	34	0	0	0	0	0	0
1630-1645	9	0	1	0	0	10	42	0	0	0	0	42	26	0	0	0	0	26	0	0	0	0	0	0
1645-1700	16	0	1	0	0	17	55	0	0	1	0	56	24	0	0	0	0	24	0	0	0	0	0	0
1400-1700	188	0	12	2	0	202	620	3	1	4	1	629	296	3	0	3	0	302	0	0	0	0	0	0
1400-1500	57	0	4	1	0	62	206	0	1	2	0	209	90	1	0	0	0	91	0	0	0	0	0	0
1415-1515	60	0	4	1	0	65	212	2	1	2	0	217	92	1	0	3	0	96	0	0	0	0	0	0
1430-1530	61	0	4	1	0	66	221	2	0	0	0	223	91	0	0	3	0	94	0	0	0	0	0	0
1445-1545	70	0	4	1	0	75	214	2	0	1	0	217	90	1	0	3	0	94	0	0	0	0	0	0
1500-1600	75	0	4	1	0	80	217	2	0	1	1	221	96	2	0	3	0	101	0	0	0	0	0	0
1515-1615	70	0	4	0	0	74	211	0	0	1	1	213	95	2	0	0	0	97	0	0	0	0	0	0
1530-1630	72	0	4	0	0	76	209	1	0	1	1	212	110	2	0	0	0	112	0	0	0	0	0	0
1545-1645	61	0	4	0	0	65	197	1	0	0	1	199	114	1	0	0	0	115	0	0	0	0	0	0
1600-1700	56	0	4	0	0	60	197	1	0	1	0	199	110	0	0	0	0	110	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : TUESDAY 11TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A5 BROCKLEY HILL NORTH LEFT TURN TO A410 SPUR RD EAST						A5 BROCKLEY HILL NORTH STRAIGHT AHEAD TO A5 STONEGROVE SOUTH						A5 BROCKLEY HILL NORTH RIGHT TURN TO A410 LONDON RD WEST						A5 BROCKLEY HILL NORTH U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1700-1715	38	0	1	0	0	39	69	1	0	0	0	70	14	1	0	0	0	15	0	0	1	0	0	1
1715-1730	26	0	2	0	0	28	76	0	0	0	0	76	26	0	0	0	0	26	0	0	0	0	0	0
1730-1745	19	1	0	0	0	20	66	2	0	0	0	68	16	0	0	0	0	16	0	0	0	0	0	0
1745-1800	25	1	2	0	0	28	66	1	2	0	1	70	20	0	0	0	0	20	0	0	0	0	0	0
1800-1815	28	0	1	0	0	29	88	1	1	0	0	90	10	0	0	0	0	10	0	0	0	0	0	0
1815-1830	24	0	2	0	0	26	63	1	0	1	1	66	12	0	0	0	0	12	0	0	0	0	0	0
1830-1845	19	1	0	0	1	21	62	0	0	0	0	62	19	0	0	0	0	19	0	0	0	0	0	0
1845-1900	18	2	0	0	0	20	44	0	1	1	0	46	21	0	1	0	0	22	0	0	0	0	0	0
1900-1915	9	1	1	0	0	11	53	0	0	0	0	53	20	0	0	0	0	20	0	0	0	0	0	0
1915-1930	11	0	2	0	0	13	53	0	0	1	0	54	21	1	0	0	0	22	0	0	0	0	0	0
1930-1945	14	0	1	0	0	15	38	0	0	0	0	38	14	0	0	1	0	15	0	0	0	0	0	0
1945-2000	13	0	1	0	0	14	40	0	0	0	0	40	24	0	0	0	0	24	0	0	0	0	0	0
1700-2000	244	6	13	0	1	264	718	6	4	3	2	733	217	2	1	1	0	221	0	0	1	0	0	1
1700-1800	108	2	5	0	0	115	277	4	2	0	1	284	76	1	0	0	0	77	0	0	1	0	0	1
1715-1815	98	2	5	0	0	105	296	4	3	0	1	304	72	0	0	0	0	72	0	0	0	0	0	0
1730-1830	96	2	5	0	0	103	283	5	3	1	2	294	58	0	0	0	0	58	0	0	0	0	0	0
1745-1845	96	2	5	0	1	104	279	3	3	1	2	288	61	0	0	0	0	61	0	0	0	0	0	0
1800-1900	89	3	3	0	1	96	257	2	2	2	1	264	62	0	1	0	0	63	0	0	0	0	0	0
1815-1915	70	4	3	0	1	78	222	1	1	2	1	227	72	0	1	0	0	73	0	0	0	0	0	0
1830-1930	57	4	3	0	1	65	212	0	1	2	0	215	81	1	1	0	0	83	0	0	0	0	0	0
1845-1945	52	3	4	0	0	59	188	0	1	2	0	191	76	1	1	1	0	79	0	0	0	0	0	0
1900-2000	47	1	5	0	0	53	184	0	0	1	0	185	79	1	0	1	0	81	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : SATURDAY 8TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A410 SPUR RD EAST LEFT TURN TO A5 STONEGROVE SOUTH						A410 SPUR RD EAST STRAIGHT AHEAD TO A410 LONDON RD WEST						A410 SPUR RD EAST RIGHT TURN TO A5 BROCKLEY HILL NORTH						A410 SPUR RD EAST U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1400-1415	65	0	0	2	0	67	174	2	0	0	0	176	8	0	1	0	0	9	5	0	0	0	0	5
1415-1430	72	0	0	7	0	79	153	2	0	3	0	158	10	0	1	0	0	11	2	0	0	0	0	2
1430-1445	57	1	0	0	0	58	121	4	0	2	0	127	15	0	1	0	0	16	1	0	0	0	0	1
1445-1500	70	3	0	2	0	75	119	2	0	3	0	124	9	0	1	0	0	10	2	0	0	0	0	2
1500-1515	56	2	0	0	0	58	145	1	0	1	0	147	10	0	1	0	0	11	0	0	0	0	0	0
1515-1530	58	0	0	0	0	58	147	3	0	1	0	151	9	0	1	0	0	10	1	0	0	0	0	1
1530-1545	66	0	0	0	0	66	143	1	1	0	0	145	10	0	1	1	0	12	1	0	0	0	0	1
1545-1600	55	2	0	1	0	58	127	1	0	0	0	128	12	0	1	0	0	13	1	0	0	0	0	1
1600-1615	57	0	0	0	0	57	168	1	0	1	0	170	26	0	1	0	0	27	2	0	0	0	0	2
1615-1630	63	1	0	0	0	64	144	3	0	0	0	147	10	0	1	0	0	11	0	0	0	0	0	0
1630-1645	57	1	0	0	0	58	182	0	1	1	1	185	10	0	0	0	0	10	0	0	0	0	0	0
1645-1700	58	1	0	0	0	59	170	2	0	0	0	172	17	0	1	0	0	18	0	0	0	0	0	0
1400-1700	734	11	0	12	0	757	1793	22	2	12	1	1830	146	0	11	1	0	158	15	0	0	0	0	15
1400-1500	264	4	0	11	0	279	567	10	0	8	0	585	42	0	4	0	0	46	10	0	0	0	0	10
1415-1515	255	6	0	9	0	270	538	9	0	9	0	556	44	0	4	0	0	48	5	0	0	0	0	5
1430-1530	241	6	0	2	0	249	532	10	0	7	0	549	43	0	4	0	0	47	4	0	0	0	0	4
1445-1545	250	5	0	2	0	257	554	7	1	5	0	567	38	0	4	1	0	43	4	0	0	0	0	4
1500-1600	235	4	0	1	0	240	562	6	1	2	0	571	41	0	4	1	0	46	3	0	0	0	0	3
1515-1615	236	2	0	1	0	239	585	6	1	2	0	594	57	0	4	1	0	62	5	0	0	0	0	5
1530-1630	241	3	0	1	0	245	582	6	1	1	0	590	58	0	4	1	0	63	4	0	0	0	0	4
1545-1645	232	4	0	1	0	237	621	5	1	2	1	630	58	0	3	0	0	61	3	0	0	0	0	3
1600-1700	235	3	0	0	0	238	664	6	1	2	1	674	63	0	3	0	0	66	2	0	0	0	0	2

K&M TRAFFIC SURVEYS

DATE : TUESDAY 11TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A410 SPUR RD EAST LEFT TURN TO A5 STONEGROVE SOUTH						A410 SPUR RD EAST STRAIGHT AHEAD TO A410 LONDON RD WEST						A410 SPUR RD EAST RIGHT TURN TO A5 BROCKLEY HILL NORTH						A410 SPUR RD EAST U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1700-1715	61	2	1	0	0	64	125	0	1	0	0	126	17	0	1	0	0	18	4	0	1	0	0	5
1715-1730	76	2	0	1	0	79	150	2	0	0	0	152	15	0	0	0	0	15	10	0	0	0	0	10
1730-1745	82	1	0	1	0	84	131	2	1	5	0	139	16	0	0	0	0	16	5	0	0	0	0	5
1745-1800	83	0	0	1	0	84	164	3	1	1	0	169	15	0	1	0	0	16	2	0	0	0	0	2
1800-1815	98	3	0	1	0	102	122	2	0	0	0	124	5	0	1	0	0	6	0	0	0	0	0	0
1815-1830	84	1	1	0	0	86	157	1	0	2	0	160	12	0	1	0	0	13	2	0	0	0	0	2
1830-1845	87	1	0	2	0	90	173	3	0	1	0	177	16	0	1	0	0	17	2	0	0	0	0	2
1845-1900	80	0	0	0	0	80	158	2	0	4	0	164	15	0	1	0	0	16	0	0	0	0	0	0
1900-1915	65	0	0	2	0	67	156	4	3	3	0	166	13	0	0	1	0	14	4	0	0	0	0	4
1915-1930	67	1	1	0	0	69	141	0	1	0	0	142	10	0	1	0	0	11	2	0	0	0	0	2
1930-1945	53	2	0	1	0	56	142	1	0	2	0	145	8	0	1	0	0	9	1	0	0	0	0	1
1945-2000	60	1	0	1	0	62	136	3	2	0	0	141	10	0	1	0	0	11	2	0	0	0	0	2
1700-2000	896	14	3	10	0	923	1755	23	9	18	0	1805	152	0	9	1	0	162	34	0	1	0	0	35
1700-1800	302	5	1	3	0	311	570	7	3	6	0	586	63	0	2	0	0	65	21	0	1	0	0	22
1715-1815	339	6	0	4	0	349	567	9	2	6	0	584	51	0	2	0	0	53	17	0	0	0	0	17
1730-1830	347	5	1	3	0	356	574	8	2	8	0	592	48	0	3	0	0	51	9	0	0	0	0	9
1745-1845	352	5	1	4	0	362	616	9	1	4	0	630	48	0	4	0	0	52	6	0	0	0	0	6
1800-1900	349	5	1	3	0	358	610	8	0	7	0	625	48	0	4	0	0	52	4	0	0	0	0	4
1815-1915	316	2	1	4	0	323	644	10	3	10	0	667	56	0	3	1	0	60	8	0	0	0	0	8
1830-1930	299	2	1	4	0	306	628	9	4	8	0	649	54	0	3	1	0	58	8	0	0	0	0	8
1845-1945	265	3	1	3	0	272	597	7	4	9	0	617	46	0	3	1	0	50	7	0	0	0	0	7
1900-2000	245	4	1	4	0	254	575	8	6	5	0	594	41	0	3	1	0	45	9	0	0	0	0	9

K&M TRAFFIC SURVEYS

DATE : SATURDAY 8TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A5 STONEGROVE SOUTH LEFT TURN TO A410 LONDON RD WEST						A5 STONEGROVE SOUTH STRAIGHT AHEAD TO A5 BROCKLEY HILL NORTH						A5 STONEGROVE SOUTH RIGHT TURN TO A410 SPUR RD EAST						A5 STONEGROVE SOUTH U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1400-1415	37	0	1	1	1	40	59	0	0	0	0	59	101	0	0	1	0	102	0	0	0	1	0	1
1415-1430	41	0	3	1	0	45	49	0	0	0	1	50	130	3	0	0	0	133	1	0	0	0	0	1
1430-1445	37	0	0	1	0	38	36	0	0	0	0	36	136	1	0	0	0	137	0	0	0	0	0	0
1445-1500	27	1	2	1	0	31	57	0	0	0	0	57	106	1	0	0	0	107	0	0	0	0	0	0
1500-1515	36	0	1	1	0	38	61	1	0	1	0	63	90	1	0	0	0	91	0	0	0	0	0	0
1515-1530	36	0	2	2	0	40	56	0	0	0	0	56	95	0	0	3	0	98	1	0	0	0	0	1
1530-1545	31	0	2	0	0	33	50	0	0	2	0	52	77	1	0	0	0	78	0	0	0	0	0	0
1545-1600	41	1	0	0	0	42	51	0	0	0	0	51	130	0	0	1	0	131	0	0	0	0	0	0
1600-1615	44	0	1	0	1	46	36	0	0	0	0	36	72	0	0	0	0	72	0	0	0	0	0	0
1615-1630	29	0	2	1	0	32	48	0	0	0	0	48	87	1	0	1	0	89	0	0	0	0	0	0
1630-1645	33	0	1	1	0	35	46	0	0	0	0	46	76	0	0	2	0	78	0	0	0	0	0	0
1645-1700	32	1	1	1	0	35	51	0	0	0	0	51	83	1	0	1	0	85	0	0	0	0	0	0
1400-1700	424	3	16	10	2	455	600	1	0	3	1	605	1183	9	0	9	0	1201	2	0	0	1	0	3
1400-1500	142	1	6	4	1	154	201	0	0	0	1	202	473	5	0	1	0	479	1	0	0	1	0	2
1415-1515	141	1	6	4	0	152	203	1	0	1	1	206	462	6	0	0	0	468	1	0	0	0	0	1
1430-1530	136	1	5	5	0	147	210	1	0	1	0	212	427	3	0	3	0	433	1	0	0	0	0	1
1445-1545	130	1	7	4	0	142	224	1	0	3	0	228	368	3	0	3	0	374	1	0	0	0	0	1
1500-1600	144	1	5	3	0	153	218	1	0	3	0	222	392	2	0	4	0	398	1	0	0	0	0	1
1515-1615	152	1	5	2	1	161	193	0	0	2	0	195	374	1	0	4	0	379	1	0	0	0	0	1
1530-1630	145	1	5	1	1	153	185	0	0	2	0	187	366	2	0	2	0	370	0	0	0	0	0	0
1545-1645	147	1	4	2	1	155	181	0	0	0	0	181	365	1	0	4	0	370	0	0	0	0	0	0
1600-1700	138	1	5	3	1	148	181	0	0	0	0	181	318	2	0	4	0	324	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : TUESDAY 11TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A5 STONEGROVE SOUTH LEFT TURN TO A410 LONDON RD WEST						A5 STONEGROVE SOUTH STRAIGHT AHEAD TO A5 BROCKLEY HILL NORTH						A5 STONEGROVE SOUTH RIGHT TURN TO A410 SPUR RD EAST						A5 STONEGROVE SOUTH U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1700-1715	25	0	1	0	0	26	54	1	1	1	0	57	80	0	0	1	0	81	0	0	0	0	0	0
1715-1730	45	1	1	0	0	47	58	0	0	0	0	58	97	1	0	0	1	99	0	0	0	0	0	0
1730-1745	35	1	2	0	0	38	66	0	0	0	0	66	86	2	0	0	0	88	0	0	0	0	0	0
1745-1800	26	1	0	1	0	28	68	0	0	2	0	70	96	1	0	1	1	99	0	0	0	0	0	0
1800-1815	34	0	1	1	0	36	49	0	0	1	0	50	107	1	0	0	0	108	0	0	0	0	0	0
1815-1830	24	0	3	0	1	28	78	1	0	0	0	79	94	1	0	0	0	95	0	0	0	0	0	0
1830-1845	31	0	1	2	0	34	49	0	0	0	0	49	86	1	0	1	1	89	0	0	0	0	0	0
1845-1900	34	0	1	2	0	37	58	1	0	0	0	59	81	1	0	0	0	82	0	0	0	0	0	0
1900-1915	40	1	2	1	1	45	60	0	0	1	1	62	74	2	0	0	0	76	0	0	0	0	0	0
1915-1930	39	0	1	1	0	41	62	0	0	0	0	62	71	1	0	2	1	75	0	0	0	0	0	0
1930-1945	34	0	1	0	0	35	49	1	0	0	1	51	85	0	0	3	0	88	1	0	0	0	0	1
1945-2000	29	0	2	2	0	33	45	0	0	0	0	45	81	1	0	1	0	83	1	0	0	0	0	1
1700-2000	396	4	16	10	2	428	696	4	1	5	2	708	1038	12	0	9	4	1063	2	0	0	0	0	2
1700-1800	131	3	4	1	0	139	246	1	1	3	0	251	359	4	0	2	2	367	0	0	0	0	0	0
1715-1815	140	3	4	2	0	149	241	0	0	3	0	244	386	5	0	1	2	394	0	0	0	0	0	0
1730-1830	119	2	6	2	1	130	261	1	0	3	0	265	383	5	0	1	1	390	0	0	0	0	0	0
1745-1845	115	1	5	4	1	126	244	1	0	3	0	248	383	4	0	2	2	391	0	0	0	0	0	0
1800-1900	123	0	6	5	1	135	234	2	0	1	0	237	368	4	0	1	1	374	0	0	0	0	0	0
1815-1915	129	1	7	5	2	144	245	2	0	1	1	249	335	5	0	1	1	342	0	0	0	0	0	0
1830-1930	144	1	5	6	1	157	229	1	0	1	1	232	312	5	0	3	2	322	0	0	0	0	0	0
1845-1945	147	1	5	4	1	158	229	2	0	1	2	234	311	4	0	5	1	321	1	0	0	0	0	1
1900-2000	142	1	6	4	1	154	216	1	0	1	2	220	311	4	0	6	1	322	2	0	0	0	0	2

K&M TRAFFIC SURVEYS

DATE : SATURDAY 8TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A410 LONDON RD WEST LEFT TURN TO A5 BROCKLEY HILL NORTH						A410 LONDON RD WEST STRAIGHT AHEAD TO A410 SPUR RD EAST						A410 LONDON RD WEST RIGHT TURN TO A5 STONEGROVE SOUTH						A410 LONDON RD WEST U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1400-1415	15	0	0	0	0	15	157	0	0	0	0	157	22	3	2	1	1	29	0	0	0	0	0	0
1415-1430	20	0	0	0	0	20	169	3	0	0	0	172	17	0	2	0	0	19	0	0	0	0	0	0
1430-1445	22	0	0	0	0	22	147	5	1	1	0	154	39	1	1	1	0	42	0	0	0	0	0	0
1445-1500	18	0	0	0	0	18	160	1	0	0	0	161	28	0	1	0	0	29	0	0	0	0	0	0
1500-1515	19	0	0	0	0	19	178	3	0	0	0	181	38	0	2	1	0	41	0	0	0	0	0	0
1515-1530	12	1	0	0	0	13	150	2	0	0	0	152	36	0	2	0	0	38	0	0	0	0	0	0
1530-1545	19	0	0	0	0	19	155	2	0	0	0	157	28	0	2	0	0	30	0	0	0	0	0	0
1545-1600	14	0	0	0	0	14	170	2	0	0	0	172	46	0	1	0	0	47	0	0	0	0	0	0
1600-1615	13	0	0	0	0	13	135	0	0	0	0	135	24	0	1	0	0	25	0	0	0	0	0	0
1615-1630	24	0	0	0	0	24	166	0	0	0	0	166	35	0	2	0	0	37	0	0	0	0	0	0
1630-1645	24	0	0	1	0	25	161	1	0	0	0	162	23	0	1	0	1	25	0	0	0	0	0	0
1645-1700	16	0	0	0	0	16	169	1	0	3	0	173	23	0	1	0	0	24	0	0	0	0	0	0
1400-1700	216	1	0	1	0	218	1917	20	1	4	0	1942	359	4	18	3	2	386	0	0	0	0	0	0
1400-1500	75	0	0	0	0	75	633	9	1	1	0	644	106	4	6	2	1	119	0	0	0	0	0	0
1415-1515	79	0	0	0	0	79	654	12	1	1	0	668	122	1	6	2	0	131	0	0	0	0	0	0
1430-1530	71	1	0	0	0	72	635	11	1	1	0	648	141	1	6	2	0	150	0	0	0	0	0	0
1445-1545	68	1	0	0	0	69	643	8	0	0	0	651	130	0	7	1	0	138	0	0	0	0	0	0
1500-1600	64	1	0	0	0	65	653	9	0	0	0	662	148	0	7	1	0	156	0	0	0	0	0	0
1515-1615	58	1	0	0	0	59	610	6	0	0	0	616	134	0	6	0	0	140	0	0	0	0	0	0
1530-1630	70	0	0	0	0	70	626	4	0	0	0	630	133	0	6	0	0	139	0	0	0	0	0	0
1545-1645	75	0	0	1	0	76	632	3	0	0	0	635	128	0	5	0	1	134	0	0	0	0	0	0
1600-1700	77	0	0	1	0	78	631	2	0	3	0	636	105	0	5	0	1	111	0	0	0	0	0	0

K&M TRAFFIC SURVEYS

DATE : TUESDAY 11TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

A5 BROCKLEY HILL / SPUR ROAD / A5 STONEGROVE / A410 LONDON RD ROUNDABOUT

	A410 LONDON RD WEST LEFT TURN TO A5 BROCKLEY HILL NORTH						A410 LONDON RD WEST STRAIGHT AHEAD TO A410 SPUR RD EAST						A410 LONDON RD WEST RIGHT TURN TO A5 STONEGROVE SOUTH						A410 LONDON RD WEST U TURNS					
	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT	CAR	HGV	BUS	MCY	PCY	TOT
1700-1715	31	0	0	1	0	32	120	2	0	2	0	124	27	0	1	1	0	29	0	0	0	0	0	0
1715-1730	26	0	0	0	0	26	121	3	1	0	1	126	22	2	0	1	0	25	1	0	0	0	0	1
1730-1745	22	0	0	0	0	22	135	1	1	0	2	139	30	1	1	0	0	32	0	0	0	0	0	0
1745-1800	28	0	0	0	0	28	150	3	0	0	0	153	19	0	3	0	0	22	0	0	0	0	0	0
1800-1815	23	1	1	0	0	25	151	1	0	0	1	153	31	1	1	2	0	35	0	0	0	0	0	0
1815-1830	24	0	0	0	0	24	130	0	0	0	0	130	29	0	1	1	0	31	1	0	0	0	0	1
1830-1845	26	0	0	0	0	26	144	1	0	3	0	148	27	0	1	1	0	29	0	0	0	0	0	0
1845-1900	20	0	0	0	0	20	154	2	1	4	0	161	16	0	1	1	0	18	0	0	0	0	0	0
1900-1915	26	1	0	0	0	27	130	1	1	0	0	132	36	0	1	1	0	38	0	0	0	0	0	0
1915-1930	24	0	0	0	0	24	124	2	0	3	0	129	25	0	2	1	0	28	1	0	0	0	0	1
1930-1945	13	0	0	0	0	13	114	2	0	1	0	117	35	1	1	0	0	37	1	0	0	0	0	1
1945-2000	18	1	0	0	0	19	126	0	0	0	0	126	28	0	2	0	0	30	0	0	0	0	0	0
1700-2000	281	3	1	1	0	286	1599	18	4	13	4	1638	325	5	15	9	0	354	4	0	0	0	0	4
1700-1800	107	0	0	1	0	108	526	9	2	2	3	542	98	3	5	2	0	108	1	0	0	0	0	1
1715-1815	99	1	1	0	0	101	557	8	2	0	4	571	102	4	5	3	0	114	1	0	0	0	0	1
1730-1830	97	1	1	0	0	99	566	5	1	0	3	575	109	2	6	3	0	120	1	0	0	0	0	1
1745-1845	101	1	1	0	0	103	575	5	0	3	1	584	106	1	6	4	0	117	1	0	0	0	0	1
1800-1900	93	1	1	0	0	95	579	4	1	7	1	592	103	1	4	5	0	113	1	0	0	0	0	1
1815-1915	96	1	0	0	0	97	558	4	2	7	0	571	108	0	4	4	0	116	1	0	0	0	0	1
1830-1930	96	1	0	0	0	97	552	6	2	10	0	570	104	0	5	4	0	113	1	0	0	0	0	1
1845-1945	83	1	0	0	0	84	522	7	2	8	0	539	112	1	5	3	0	121	2	0	0	0	0	2
1900-2000	81	2	0	0	0	83	494	5	1	4	0	504	124	1	6	2	0	133	2	0	0	0	0	2

K&M TRAFFIC SURVEYS

DATE : SATURDAY 8TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

QUEUE DATA - TOTAL NUMBER OF VEHICLES

	A5 / A410 ROUNDABOUT							
	A5 BROCKLEY HILL NORTH		A410 SPUR RD EAST		A5 STONEGROVE SOUTH		A410 LONDON RD WEST	
	INSIDE	OUTSIDE	INSIDE	OUTSIDE	INSIDE	OUTSIDE	INSIDE	OUTSIDE
1405	0	0	10	0	10	0	4	0
1410	0	0	3	0	4	0	5	0
1415	2	2	0	0	12	0	6	0
1420	0	0	0	0	8	0	10	0
1425	0	0	0	0	12	0	25+	0
1430	0	0	0	0	18	0	16	0
1435	0	0	0	0	14	0	16	0
1440	0	0	0	0	19	0	14	0
1445	2	0	0	0	10	0	25+	0
1450	0	0	0	0	8	0	25+	0
1455	0	0	0	0	0	0	25+	0
1500	0	0	0	0	3	0	35+	0
1505	0	0	7	0	6	0	5	0
1510	0	0	25+	0	9	0	14	0
1515	0	0	0	0	6	0	4	0
1520	3	0	5	0	3	0	0	0
1525	0	0	0	0	0	0	3	0
1530	0	0	0	0	0	0	0	0
1535	0	0	0	0	3	0	8	0
1540	4	0	6	0	4	0	2	0
1545	0	0	4	0	16	0	5	0
1550	2	2	0	0	12	0	5	0
1555	0	0	0	0	0	0	6	0
1600	0	0	0	0	0	0	5	0
1605	0	0	0	0	3	0	4	0
1610	4	0	0	0	2	0	3	0
1615	0	0	0	0	3	0	0	0
1620	2	0	0	0	3	0	0	0
1625	0	0	0	0	8	0	10	0
1630	0	0	0	0	3	0	5	0
1635	0	4	0	0	0	0	2	0
1640	0	0	0	0	6	0	5	0
1645	0	0	0	0	0	0	0	0
1650	3	4	0	0	0	0	0	0
1655	0	0	0	0	6	0	4	0
1700	0	0	0	0	0	0	0	0

Slow moving traffic
throughout the entirety
of the survey.

K&M TRAFFIC SURVEYS

DATE : TUESDAY 11TH FEBRUARY 2020

LOCATION : A5 / A410, STANMORE

QUEUE DATA - TOTAL NUMBER OF VEHICLES

	A5 / A410 ROUNDABOUT							
	A5 BROCKLEY HILL NORTH		A410 SPUR RD EAST		A5 STONEGROVE SOUTH		A410 LONDON RD WEST	
	INSIDE	OUTSIDE	INSIDE	OUTSIDE	INSIDE	OUTSIDE	INSIDE	OUTSIDE
1705	3	0	0	0	30+	0	30+	0
1710	25+	0	0	0	30+	0	30+	0
1715	25+	0	0	0	30+	0	30+	0
1720	7	0	0	0	30+	0	30+	0
1725	3	0	4	2	30+	0	30+	0
1730	4	0	7	0	30+	0	40+	0
1735	15	0	0	0	30+	0	30+	0
1740	17	0	0	0	18	0	20+	0
1745	0	0	0	0	10	0	30+	0
1750	0	0	0	0	10	0	30+	0
1755	0	0	0	0	6	0	30+	0
1800	3	0	0	0	3	0	19	0
1805	25+	0	7	0	3	0	6	0
1810	2	0	8	0	3	0	3	0
1815	12	0	25+	0	3	0	0	0
1820	0	0	0	0	4	0	2	0
1825	0	0	0	0	10	0	12	0
1830	0	0	0	0	5	0	3	0
1835	0	0	0	0	4	0	4	0
1840	0	0	0	0	6	0	10	0
1845	0	0	0	0	2	0	2	0
1850	0	0	0	0	0	0	0	0
1855	0	0	0	0	0	0	3	0
1900	3	0	0	0	0	0	3	0
1905	7	0	0	0	2	0	0	0
1910	0	0	0	0	0	0	3	0
1915	0	0	0	0	4	0	0	0
1920	0	0	0	0	2	0	0	0
1925	0	0	0	0	0	0	3	0
1930	2	0	0	0	0	0	0	0
1935	0	0	0	0	2	0	2	0
1940	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0
1950	2	0	0	0	2	0	3	0
1955	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0

Slow moving traffic
throughout the entirety
of the survey.

Appendix R – Junction Modelling Output

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020
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Filename: Existing Brockley Hill_Stonegrove Road Roundabout.j9
Path: Z:\EAS\Current Projects\Harrow, Stanmore, Old Golf Academy\Analysis\ARCADY
Report generation date: 26/02/2020 11:07:30

- »2020 Weekend , IP
- »2020 Weekday, PM

Summary of junction performance

	IP				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2020 Weekend								
Arm A	1.7	15.11	0.62	C				
Arm B	3.0	11.51	0.74	B				
Arm C	1.3	5.94	0.55	A				
Arm D	2.6	10.04	0.71	B				
2020 Weekday								
Arm A					0.9	8.55	0.44	A
Arm B					3.5	12.26	0.76	B
Arm C					1.3	5.98	0.54	A
Arm D					1.5	6.77	0.57	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/02/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Asus\EAS
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020 Weekend	IP	ONE HOUR	14:30	16:00	15
D2	2020 Weekday	PM	ONE HOUR	18:30	20:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2020 Weekend , IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	10.10	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Brockley Hill	
B	Spur Road	
C	Stonegrove Road	
D	London Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	3.25	7.78	7.9	24.0	38.0	37.0	
B	3.80	8.30	11.5	14.0	38.0	50.0	
C	5.60	8.50	4.4	67.0	38.0	29.0	
D	4.50	8.10	10.3	19.0	38.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.590	1445
B	0.598	1598
C	0.729	2054
D	0.657	1808

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020 Weekend	IP	ONE HOUR	14:30	16:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	386	100.000
B		✓	871	100.000
C		✓	745	100.000
D		✓	858	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	75	217	94
	B	43	4	257	567
	C	228	374	1	142
	D	69	651	138	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	10	10	10
	B	10	0	10	10
	C	10	10	0	10
	D	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.62	15.11	1.7	C
B	0.74	11.51	3.0	B
C	0.55	5.94	1.3	A
D	0.71	10.04	2.6	B

Main Results for each time segment

14:30 - 14:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	291	875	929	0.313	289	0.5	6.167	A
B	656	337	1397	0.469	652	1.0	5.287	A
C	561	530	1668	0.336	559	0.6	3.561	A
D	646	487	1488	0.434	643	0.8	4.668	A

14:45 - 15:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	347	1048	827	0.420	346	0.8	8.213	A
B	783	403	1357	0.577	781	1.5	6.849	A
C	670	635	1591	0.421	669	0.8	4.286	A
D	771	583	1425	0.541	770	1.3	6.024	A

15:00 - 15:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	425	1280	690	0.616	421	1.7	14.560	B
B	959	492	1304	0.735	953	2.9	11.102	B
C	820	775	1490	0.551	818	1.3	5.877	A
D	945	714	1340	0.705	940	2.5	9.773	A

15:15 - 15:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	425	1286	686	0.619	425	1.7	15.105	C
B	959	495	1302	0.737	959	3.0	11.509	B
C	820	779	1486	0.552	820	1.3	5.945	A
D	945	716	1338	0.706	944	2.6	10.037	B

15:30 - 15:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	347	1056	822	0.422	351	0.8	8.465	A
B	783	408	1354	0.578	789	1.5	7.076	A
C	670	642	1587	0.422	672	0.8	4.340	A
D	771	586	1423	0.542	776	1.3	6.169	A

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	291	882	925	0.314	292	0.5	6.265	A
B	656	340	1395	0.470	658	1.0	5.388	A
C	561	535	1664	0.337	562	0.6	3.596	A
D	646	490	1486	0.435	648	0.9	4.732	A

2020 Weekday, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	8.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2020 Weekday	PM	ONE HOUR	18:30	20:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	329	100.000
B		✓	946	100.000
C		✓	714	100.000
D		✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	59	191	79
	B	50	7	272	617
	C	234	321	1	158
	D	84	539	84	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	10	10
	B	10	0	10	10
	C	10	10	0	10
	D	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.44	8.55	0.9	A
B	0.76	12.26	3.5	B
C	0.54	5.98	1.3	A
D	0.57	6.77	1.5	A

Main Results for each time segment

18:30 - 18:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	248	715	1023	0.242	246	0.3	5.087	A
B	712	267	1438	0.495	708	1.1	5.388	A
C	538	565	1642	0.327	535	0.5	3.571	A
D	534	460	1507	0.354	531	0.6	4.050	A

18:45 - 19:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	296	856	940	0.315	295	0.5	6.137	A
B	850	320	1406	0.605	848	1.6	7.057	A
C	642	677	1561	0.411	641	0.8	4.300	A
D	637	550	1447	0.440	636	0.9	4.877	A

19:00 - 19:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	362	1047	827	0.438	361	0.8	8.467	A
B	1042	392	1364	0.764	1035	3.4	11.781	B
C	786	826	1452	0.541	784	1.3	5.910	A
D	781	673	1367	0.571	778	1.4	6.703	A

19:15 - 19:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	362	1050	825	0.439	362	0.9	8.547	A
B	1042	393	1363	0.764	1041	3.5	12.261	B
C	786	831	1448	0.543	786	1.3	5.977	A
D	781	675	1365	0.572	781	1.5	6.771	A

19:30 - 19:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	296	861	937	0.316	297	0.5	6.200	A
B	850	322	1405	0.605	857	1.7	7.311	A
C	642	684	1556	0.413	644	0.8	4.352	A
D	637	553	1445	0.441	640	0.9	4.930	A

19:45 - 20:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	248	720	1021	0.243	248	0.4	5.131	A
B	712	269	1437	0.496	715	1.1	5.499	A
C	538	570	1638	0.328	538	0.5	3.604	A
D	534	462	1505	0.355	535	0.6	4.085	A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020
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Filename: Proposed Brockley Hill_Stonegrove Road Roundabout.j9
Path: Z:\EAS\Current Projects\Harrow, Stanmore, Old Golf Academy\Analysis\ARCADY
Report generation date: 26/02/2020 10:58:43

- »2020 Weekend + Dev, IP
- »2020 Weekday + Dev, PM

Summary of junction performance

	IP				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2020 Weekend + Dev								
Arm A	2.1	16.85	0.66	C				
Arm B	3.3	12.50	0.76	B				
Arm C	1.6	6.53	0.59	A				
Arm D	3.1	11.78	0.74	B				
2020 Weekday + Dev								
Arm A					1.0	9.08	0.47	A
Arm B					3.8	13.38	0.78	B
Arm C					1.5	6.57	0.58	A
Arm D					1.7	7.51	0.60	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/02/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Asus\EAS
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020 Weekend + Dev	IP	ONE HOUR	14:30	16:00	15
D2	2020 Weekday + Dev	PM	ONE HOUR	18:30	20:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2020 Weekend + Dev, IP

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	11.31	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Brockley Hill	
B	Spur Road	
C	Stonegrove Road	
D	London Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	3.25	7.78	7.9	24.0	38.0	37.0	
B	3.80	8.30	11.5	14.0	38.0	50.0	
C	5.60	8.50	4.4	67.0	38.0	29.0	
D	4.50	8.10	10.3	19.0	38.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.590	1445
B	0.598	1598
C	0.729	2054
D	0.657	1808

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2020 Weekend + Dev	IP	ONE HOUR	14:30	16:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	411	100.000
B		✓	884	100.000
C		✓	786	100.000
D		✓	876	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	80	231	100
	B	56	4	257	567
	C	269	374	1	142
	D	87	651	138	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	10	10
	B	10	0	10	10
	C	10	10	0	10
	D	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.66	16.85	2.1	C
B	0.76	12.50	3.3	B
C	0.59	6.53	1.6	A
D	0.74	11.78	3.1	B

Main Results for each time segment

14:30 - 14:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	309	875	929	0.333	307	0.5	6.349	A
B	666	352	1388	0.480	662	1.0	5.421	A
C	592	544	1658	0.357	589	0.6	3.699	A
D	659	528	1462	0.451	656	0.9	4.892	A

14:45 - 15:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	369	1048	827	0.447	368	0.9	8.606	A
B	795	421	1346	0.590	792	1.6	7.120	A
C	707	652	1579	0.447	705	0.9	4.526	A
D	788	632	1393	0.565	785	1.4	6.490	A

15:00 - 15:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	453	1279	690	0.655	448	2.0	16.045	C
B	973	513	1291	0.754	967	3.2	11.956	B
C	865	795	1475	0.587	863	1.5	6.442	A
D	964	773	1301	0.741	958	3.0	11.337	B

15:15 - 15:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	453	1286	687	0.659	452	2.1	16.852	C
B	973	517	1289	0.755	973	3.3	12.496	B
C	865	800	1471	0.588	865	1.6	6.535	A
D	964	775	1299	0.742	964	3.1	11.782	B

15:30 - 15:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	369	1057	821	0.450	374	0.9	8.940	A
B	795	427	1342	0.592	801	1.6	7.401	A
C	707	659	1574	0.449	709	0.9	4.594	A
D	788	635	1391	0.566	794	1.5	6.704	A

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	309	882	925	0.335	311	0.6	6.463	A
B	666	355	1386	0.480	668	1.0	5.533	A
C	592	549	1654	0.358	593	0.6	3.738	A
D	659	531	1460	0.452	662	0.9	4.975	A

2020 Weekday + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2020 Weekday + Dev	PM	ONE HOUR	18:30	20:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	354	100.000
B		✓	959	100.000
C		✓	755	100.000
D		✓	726	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	64	205	85
	B	63	7	272	617
	C	275	321	1	158
	D	101	539	84	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	10	10
	B	10	0	10	10
	C	10	10	0	10
	D	10	10	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
A	0.47	9.08	1.0	A
B	0.78	13.38	3.8	B
C	0.58	6.57	1.5	A
D	0.60	7.51	1.7	A

Main Results for each time segment

18:30 - 18:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	267	715	1023	0.260	265	0.4	5.211	A
B	722	282	1429	0.505	718	1.1	5.526	A
C	568	579	1632	0.348	566	0.6	3.707	A
D	547	500	1480	0.369	544	0.6	4.219	A

18:45 - 19:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	318	856	940	0.339	318	0.6	6.355	A
B	862	338	1396	0.618	860	1.7	7.345	A
C	679	694	1548	0.438	678	0.9	4.541	A
D	653	599	1415	0.461	651	0.9	5.176	A

19:00 - 19:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	390	1047	827	0.471	388	1.0	8.981	A
B	1056	413	1351	0.782	1048	3.7	12.747	B
C	831	846	1437	0.578	829	1.5	6.478	A
D	799	732	1328	0.602	797	1.6	7.413	A

19:15 - 19:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	390	1050	825	0.472	390	1.0	9.084	A
B	1056	415	1350	0.782	1055	3.8	13.384	B
C	831	852	1433	0.580	831	1.5	6.574	A
D	799	734	1326	0.603	799	1.7	7.510	A

19:30 - 19:45

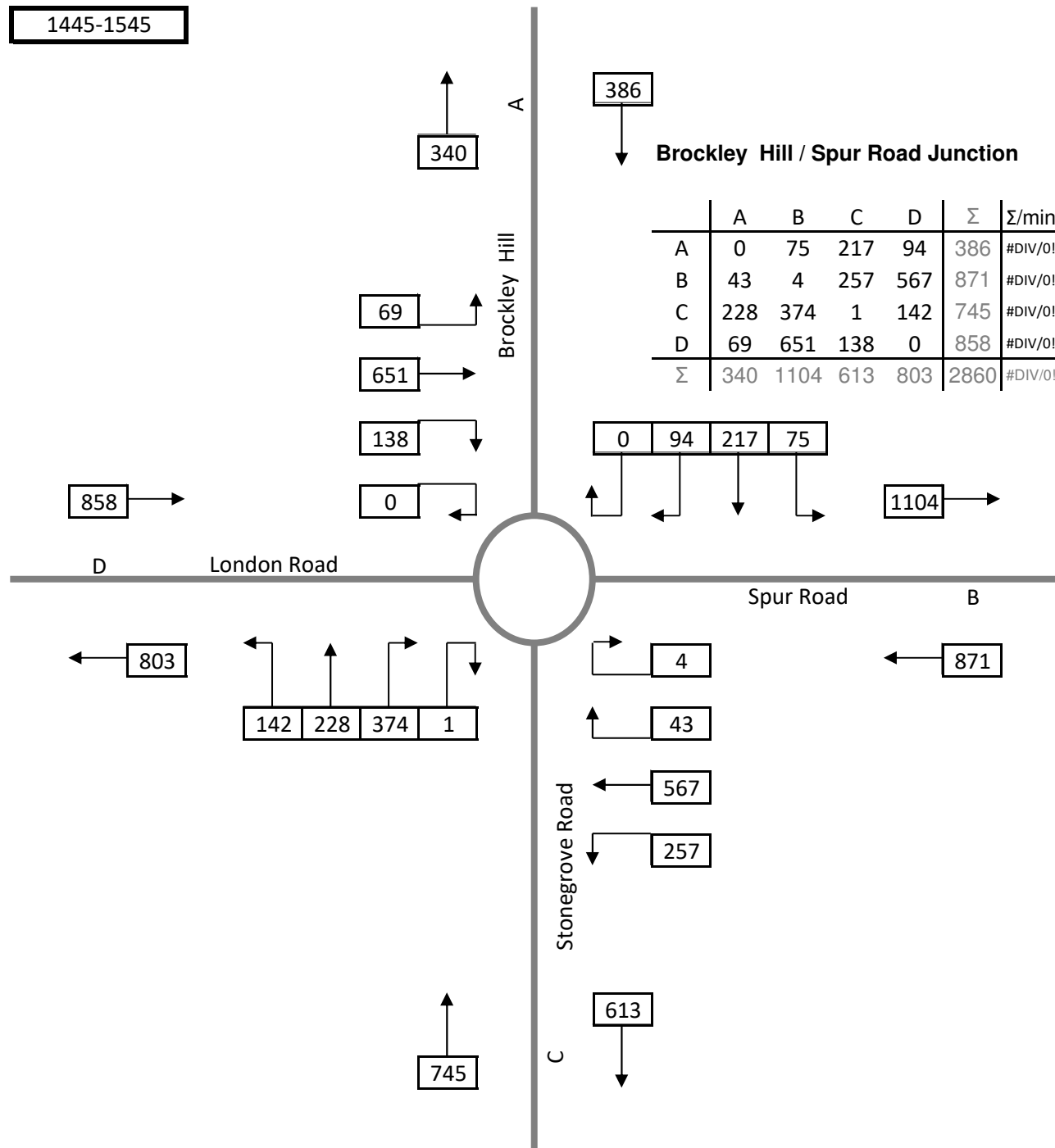
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	318	861	937	0.340	320	0.6	6.434	A
B	862	341	1394	0.618	870	1.8	7.658	A
C	679	702	1543	0.440	681	0.9	4.612	A
D	653	602	1413	0.462	655	1.0	5.246	A

19:45 - 20:00

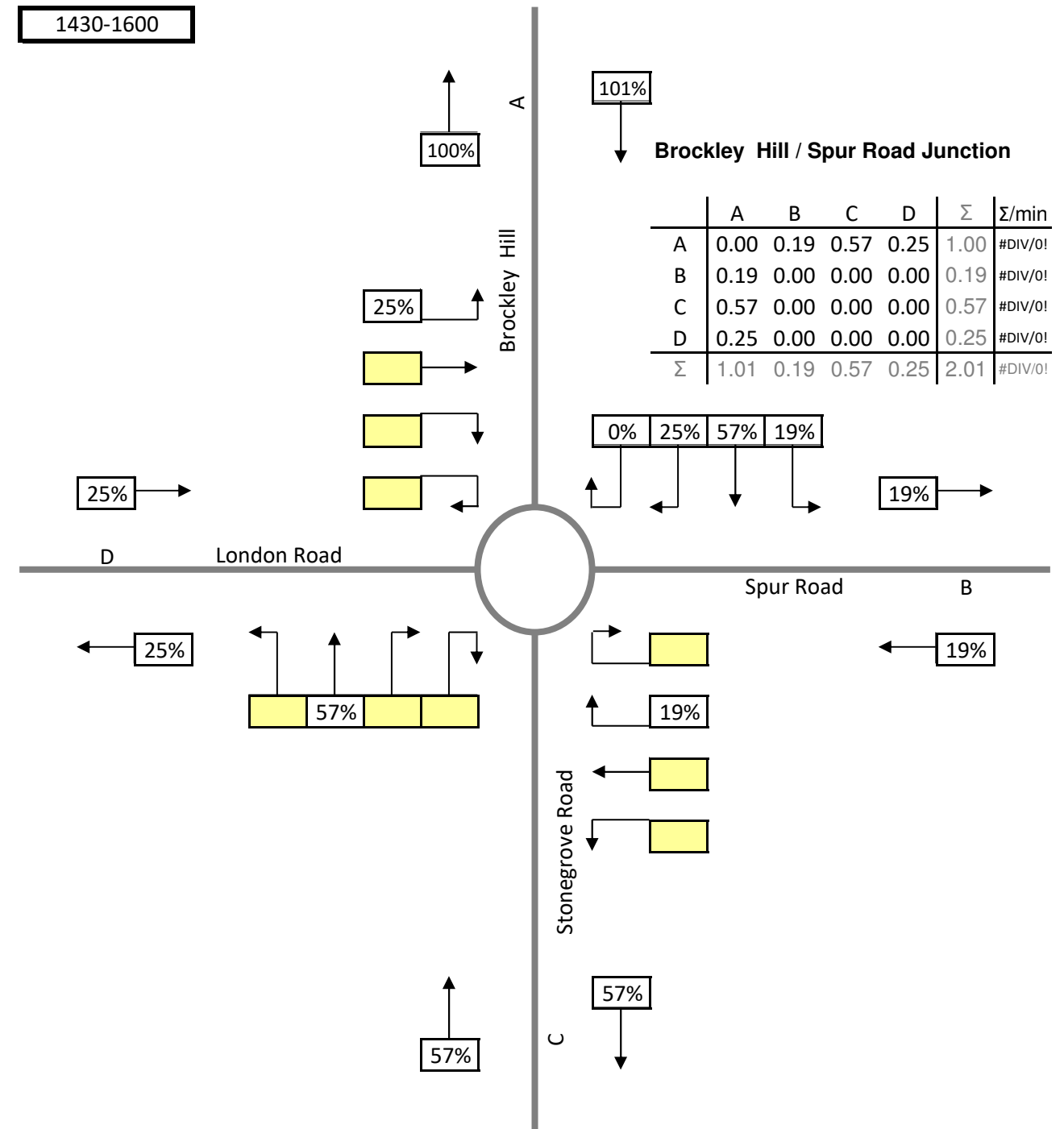
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
A	267	720	1020	0.261	267	0.4	5.261	A
B	722	285	1428	0.506	725	1.1	5.648	A
C	568	585	1628	0.349	570	0.6	3.747	A
D	547	503	1478	0.370	548	0.7	4.261	A

Appendix S – Junction Modelling Turning Counts

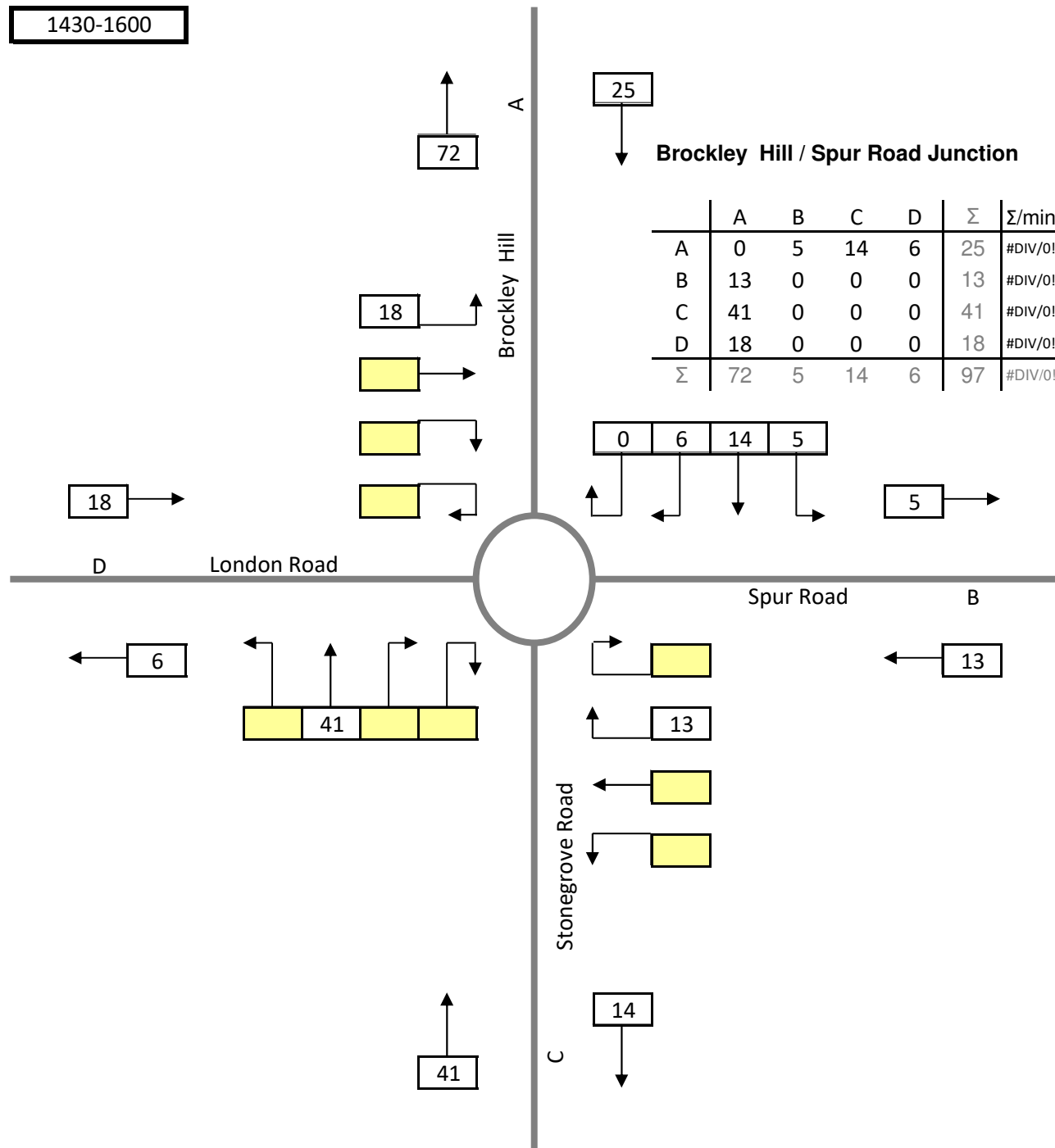
Weekend Base Flow



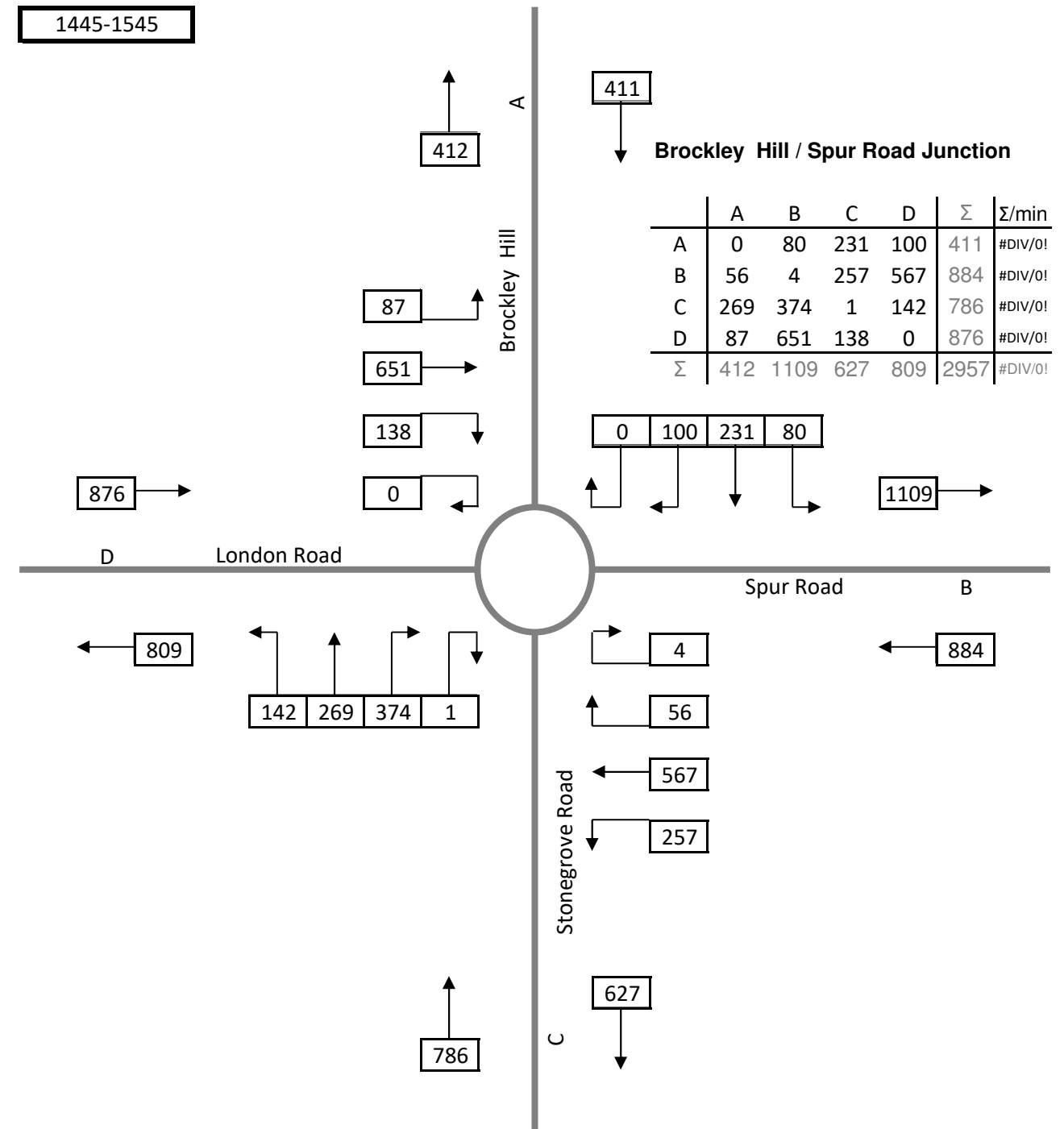
Weekend Base Distribution



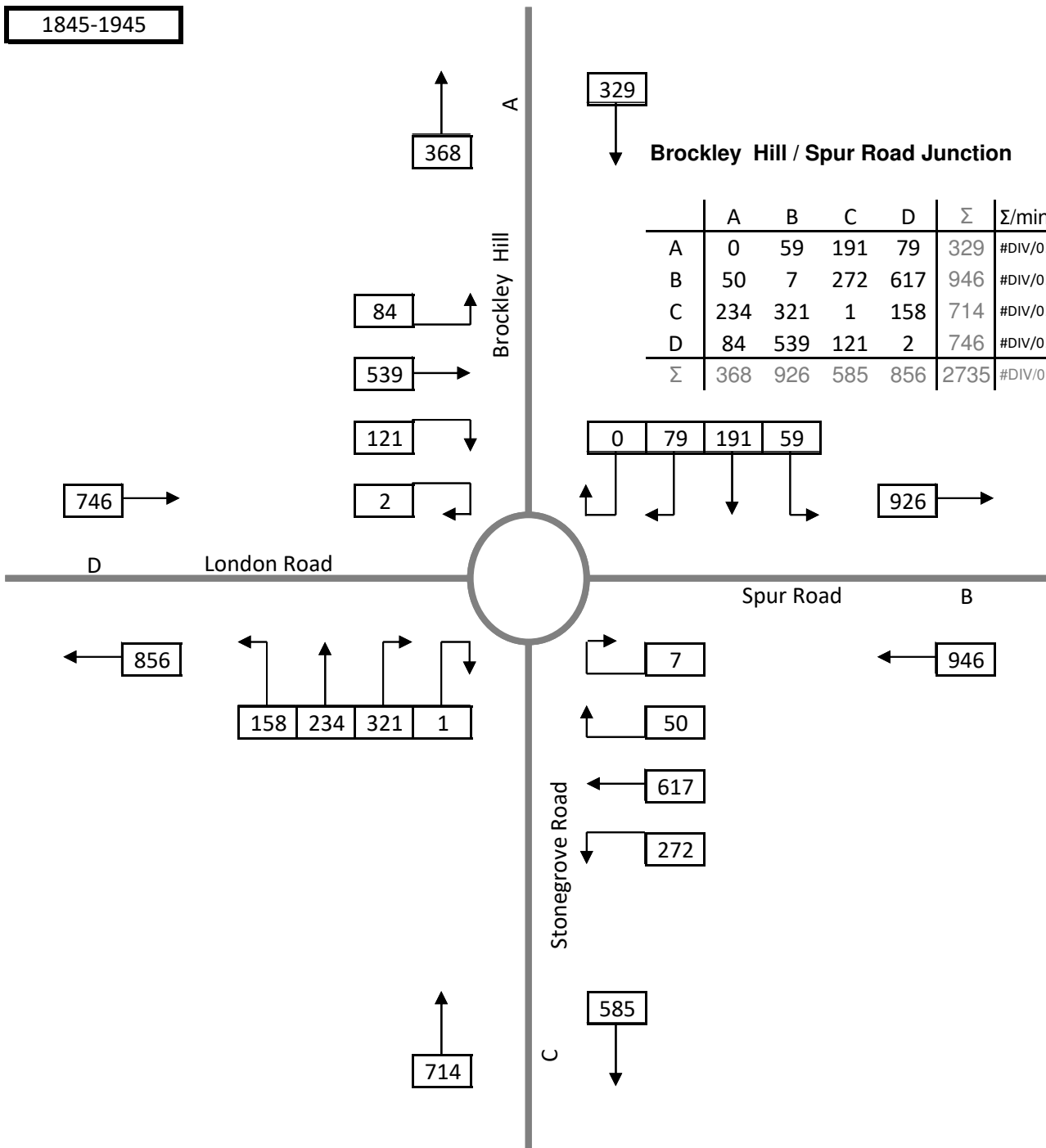
Weekend Development Flows



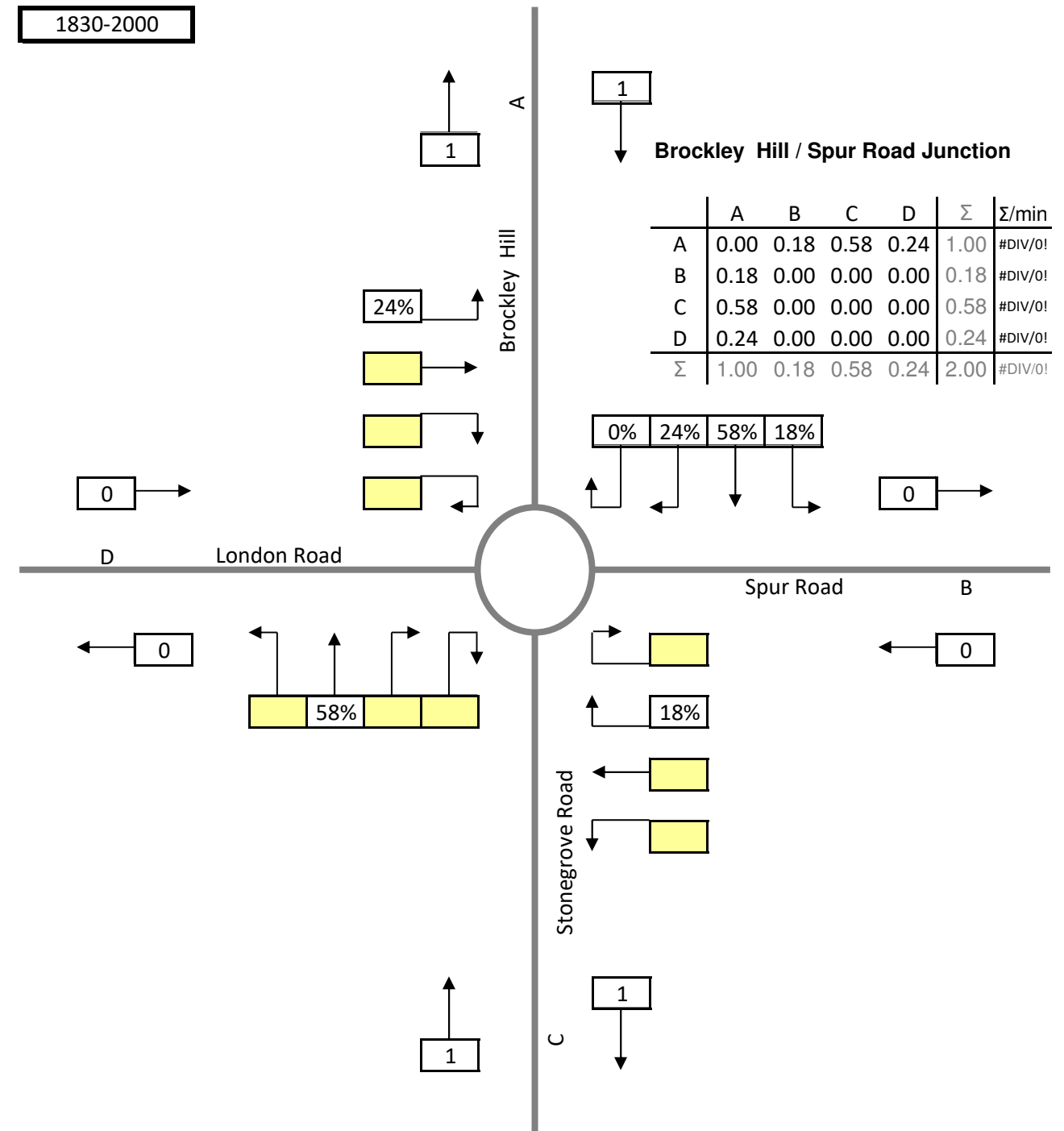
Weekend Base + Development Flows



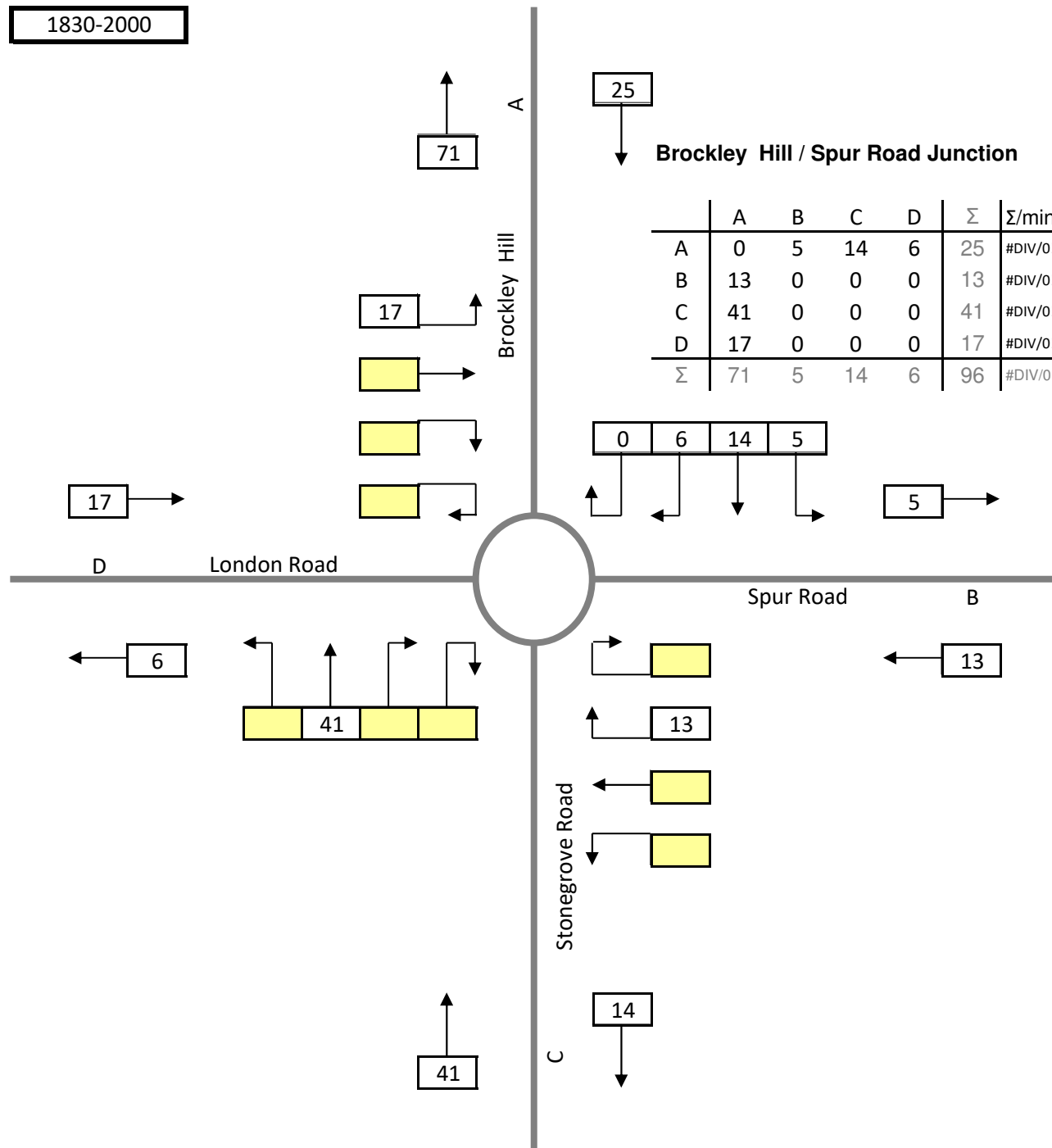
Weekday Base Flows



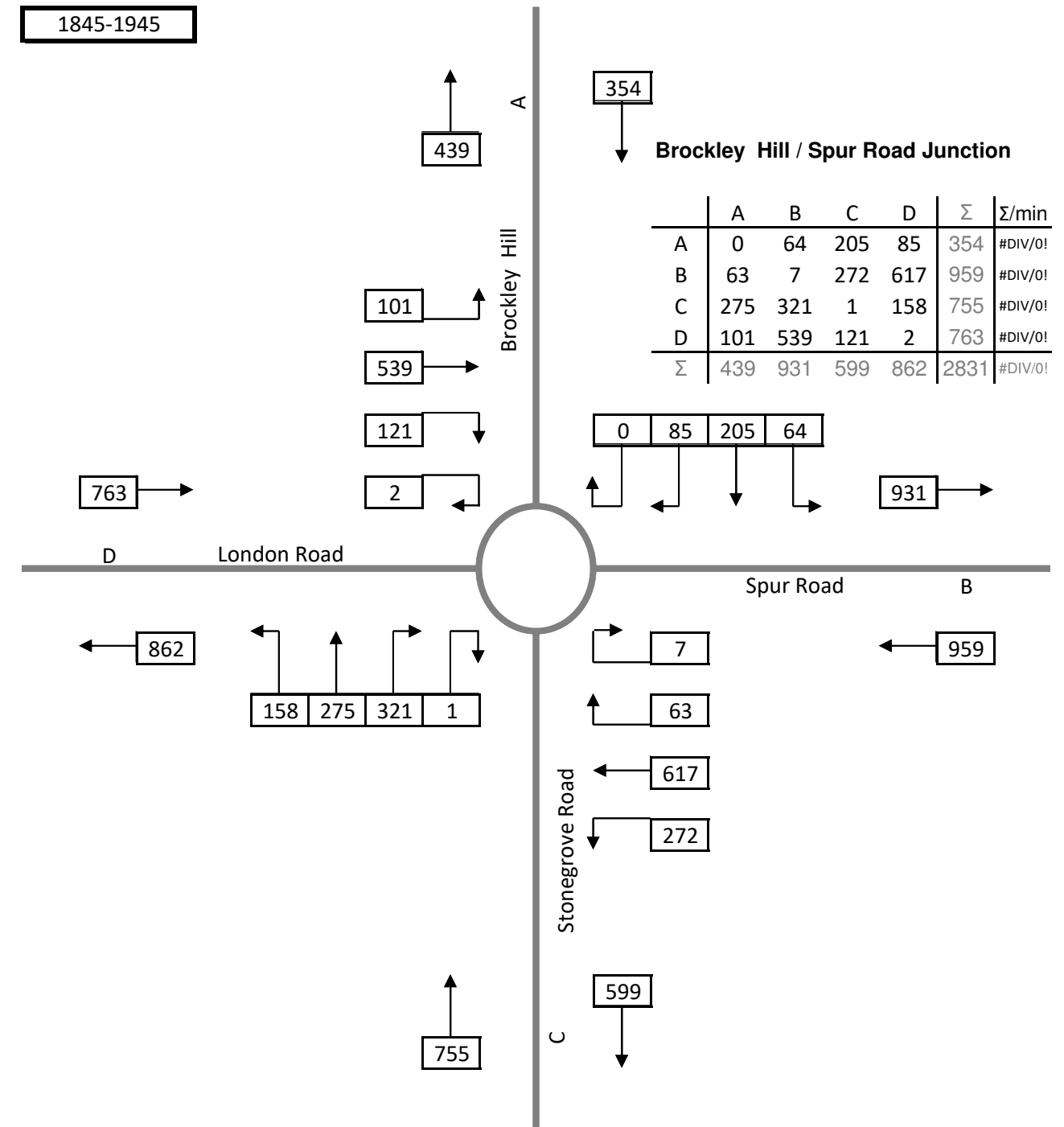
Weekday Base Distribution



Weekday Development Flows



Weekend Base + Development Flows



Appendix T – RNOH Traffic Data Flow Diagrams

