PP\_2021\_2911 Proposed Cyprus Club Redevelopment

# 58-76 Stanmore Road, 2-20 Tupper Street & 3-9 Alma Street, Stanmore

TRAFFIC AND PARKING ASSESSMENT REPORT

28 March 2022

Ref 21513



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# 1. INTRODUCTION

This report has been prepared to accompany an amended Planning Proposal for the proposed redevelopment of the Cyprus Club, located at 58-76 Stanmore Road, 2-20 Tupper Street & 3-9 Alma Street, Stanmore (Figures 1 and 2).

On 25 September 2018, PP\_2021\_2911 was originally lodged with the Department of Planning, Industry & Environment (DPIE) seeking to amend the *Marrickville LEP 2011* by:

- rezoning the site to B4 Mixed Use and R1 General Residential
- identify the land on the key site map to introduce an additional permitted use for a residential flat building associated with a mixed-use development on the *B4* zoned land
- increase the building height to range from 11m to 23m
- increase the FSR to range from 1:1 to 1.8:1
- widen the road on the Alma Avenue frontage, as per the Land Reservation Acquisition Map

As a result of the above proposed changes to the *Marrickville LEP 2011*, the original Planning Proposal envisaged the construction of up to 160 dwellings in addition of commercial/retail and club floor space across three sites. In particular, Site A (Buildings A & B) comprised the club and commercial/retail space, Site B (Buildings C & D) comprised residential apartments and Site C (Building E) comprised residential townhouses.

Two new through-site links were also proposed, running east-west through the site, known as Lane A (12m wide reserve, separating Sites B & C and lining up with Harrington Street) and Lane B (8m wide reserve, separating Sites A & B).

Off-street parking was proposed for each site in separate basement parking areas. Vehicular access to Site A was proposed to be provided via Lane B, vehicular access to Site B was proposed to be provided via Lane A and vehicular access to Site C was proposed to be provided directly off Tupper Street.

In order to mitigate the projected increase in vehicular movements, the original Planning Proposal proposed measures to assist through:

- the widening of Alma Avenue
- the provision of two through-site laneways between Alma Avenue & Tupper Street, offering continuation of Harrington Street

The original Planning Proposal was lodged with Council in 2016 a *draft* Traffic & Parking Impact Assessment (by *Traffix*, dated December 2016) was prepared in support of the Planning Proposal. The *Traffix* report acknowledged the site's suitable location near public transport for future residents and visitors, also describing the existing and proposed road intersection performance, impact on surrounding road network and the proposed car parking requirements.

In terms of associated traffic movements, the 2016 *Traffix* report estimated that the Planning Proposal would generate in the order of 46 and 77 vehicles/hour (vph) during the weekday AM and PM road network peak periods, respectively, which represented a *net increase* of approximately 40 and 52 vph, respectively, when factoring in the existing traffic generation of the site.

Traffix Forecasted Traffic Generation Assessment						
Use Floor area/yie		AM peak trips	PM peak trips			
Club	966m <sup>2</sup>	0	10 (8 in & 2 out)			
Commercial/retail	467m <sup>2</sup>	0	26 (13 in & 13 out)			
Residential	160 dwellings	46 (9 in & 37 out)	41 (33 in & 8 out)			
Sub total		46 (9 in & 37 out)	77 (54 in & 23 out)			
Less existing		-6 (1 in & 5 out)	-25 (20 in & 5 out)			
Nett total		40 (8 in & 32 out)	52 (34 in & 18 out)			

As part of the *Traffix* report, a SIDRA capacity analysis of the surrounding road network was undertaken at the following intersections:

- Stanmore Road, Enmore Road & Edgeware Road
- Stanmore Road & Liberty Street
- Stanmore Road & Tupper Street

The *Traffix* report ultimately concluded that the Planning Proposal scheme resulted in a *"negligible increase in traffic delays across the network"*.

Off-street parking requirements were also assessed in the *Traffix* report, based on the rates specified in the *Marrickville DCP 2011* and the RMS *Guidelines*.

Based on the original Planning Proposal scheme, *Traffix* concluded that the development would require a total of 166 off-street car parking spaces for the residential and commercial/retail uses *plus* parking for the club.

DPIE have since undertaken a detailed review of the planning proposal, including the *Traffix* report, and noted that the report "does not adequately assess the suitability of the existing road network to accommodate the proposal, the impact of the proposal and measures to address this". "There are some matters which are unclear or have not been adequately addressed and remain unresolved until addressed by Gateway Conditions (as follows)":

<ul> <li>The anticipated number of parking spaces does not reflect the updated Urban Design Report (apartment mix and dwelling numbers), the current DCP parking provisions which are listed by Areas 1, 2 and 3, and the number of spaces expected for the proposed club premises (based on the expected patronage and staffing number).</li> <li>The traffic surveys (2009 and 2016) used to determine existing in-bound and out-bound traffic flows are out of date, and limited to a survey of the Alma Avenue-Stanmore Road intersection, and not the Tupper Street-Stanmore Road intersection.</li> </ul>
<ul> <li>Details of the vehicle entry and exit movements onto Tupper Street and Alma Avenue.</li> </ul>
<ul> <li>Lack of clarity as to whether the existing road network can support the proposed development, or recommendations of the updates required to accommodate the proposed development and manage traffic movements and delays including:         <ul> <li>upgrades to Tupper Street-Stanmore Road intersection to address the anticipated vehicle delays and level of service capacity. It is noted that this intersection will require either traffic signal upgrades or an accident report to be prepared if the existing give-way intersection is retained.</li> </ul> </li> </ul>
<ul> <li>how the proposed widening of Alma Avenue will operate with regards to the operation of the intersection with Stanmore Road and whether one- way or bi-directional traffic movements will be accommodated.</li> </ul>
<ul> <li>the implications for kerbside parking on Tupper Street which currently limits bi-directional traffic flows.</li> </ul>
<ul> <li>options for reduced on-site parking provision to minimise trip generation and private vehicle usage, and maximise public transport patronage.</li> </ul>
A new traffic impact assessment will need to address the above uncertainties and investigate the potential widening of the street to support the proposed development, the impact that the proposed development will have on the existing street network and make recommendations on how to address this. A <b>Gateway</b> <b>Condition</b> is recommended accordingly

As noted above, DPIE have requested that a new traffic and parking impact assessment report is prepared in order to assess the abovementioned unresolved matters. Furthermore, in a report to Council in September 2018, referenced in Gateway, the following was also noted:

Council should note that the report to the Local Planning Panel recommended there should be additional studies carried out post-Gateway Determination for the following

- a study dealing with the existing narrow Alma Avenue and narrow Tupper Street capacity, the need to service the development and so identify the necessary accommodating street widths
- a local traffic study dealing with traffic impacts on the existing nearby narrow local street network and making recommendations on how to address this.

Accordingly, Varga Traffic Planning (VTP) have been engaged to undertake the new study.

Notwithstanding, the original 2018 Planning Proposal scheme submitted to DPIE, the March 2022 Planning Proposal scheme has been amended for a reduced MFSR of 1.75:1. This will accommodate 116 dwellings (106 apartments & 10 terrace houses) and approximately 2,500m<sup>2</sup> GFA of commercial/retail and club floor space across three sites.

Off-street parking is again proposed for each site in separate basement parking areas, however the two vehicular through-site links, Lane A & Lane B, have been deleted, as the ownership of the entire site will remain with The Cyprus Club as opposed to being divested. There will, however, remain pedestrian pathways between Tupper Street and Alma Avenue where the laneways previously were present.

Vehicular access to Site A (the club and commercial/retail space) is now proposed to be provided via the southern end of Site A's Tupper Street site frontage, whilst vehicular access to Site B (the residential apartments) is now proposed to be provided midway along the (widened) Alma Avenue site frontage. Vehicular access to Site C (the residential townhouse) is now proposed to be provided via Site B's Alma Avenue driveway, with an internal through-site link.

It is noted that based on the proposed land use and parking yields within the revised Planning Proposal, and the proposed driveways being located within 90m of a classified road (Stanmore Road), referral is required to Transport for NSW (TfNSW) under Clause 104 and Schedule 3 of the *State Environmental Planning Policy (Infrastructure)* 2007.

The purpose of this report is to assess the traffic and parking implications of the amended Planning Proposal, and to that end this report:

- describes the site and provides details of the amended Planning Proposal
- reviews the road network in the vicinity of the site, and the traffic conditions on that road network
- reviews the existing public transport and essential services available in the vicinity of the site
- estimates the traffic generation potential of the amended Planning Proposal, and assigns that traffic generation to the road network serving the site
- assesses the traffic implications of the amended Planning Proposal in terms of road network capacity and any mitigation measures required
- reviews the geometric design features of the proposed amended concept car parking and loading facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street car parking and loading provided on the site.
- Undertake a preliminary assessment of car parking requirements which will be included in a future site specific DCP
- Recommendations of next steps for measures to reduce private vehicle trip generation and demand, and maximise public transport patronage.



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# 2. PROPOSED DEVELOPMENT

## **Existing Site**

The subject site is located on the southern side of Stanmore Road, extending between Alma Avenue and Tupper Street. The site has street frontages of approximately 67m in length to Stanmore Road and approximately 140m in length to both Alma Avenue and Tupper Street. The site occupies an area of approximately 9,129m<sup>2</sup>.

The subject site is currently occupied by the Cyprus Club which is a part three/part four- storey building located in the north-eastern corner of the site. The club building comprises bars, a restaurant and function rooms, and has a Gross Floor Area (GFA) of approximately 1,765m<sup>2</sup> and an internal *Public Floor Area (PFA)* of approximately 900m<sup>2</sup>.



The term *Public Floor Area (PFA)* is used to define those areas of the club which are readily accessible to patrons and therefore provides the most accurate basis for determining club patronage levels, and the traffic and parking demands expected to be generated by those patronage levels. Generally speaking, it includes indoor bars, lounges, gaming rooms, bistro and dining areas, however excludes uncovered outdoor areas, loading docks, storage areas, office/administration areas, staff amenities, kitchens and other "back-of-house" facilities which are inaccessible to club patrons.

The existing club currently employees a total of 19 staff, including up to 10 staff at any given time on busy days during food service times. Those staff numbers do not include contractors such as cleaners. Notwithstanding, contractors such as cleaners are typically on site *outside* of the club's busy periods.

Off-street parking for the Cyprus Club is currently provided for approximately 173 cars in an outdoor, at-grade parking area located on the western and southern portions of the site, as indicated in the aerial image below. The western parking area comprises formal, linemarked parking spaces whilst the southern portion provides informal overflow parking. Vehicular access to the club's car parking area is provided via 4 separate driveways located off the Alma Street site frontage. No existing vehicular access to the club's car park is provided off the Stanmore Road or Tupper Street site frontages.



Existing Cyprus Club parking provision

Loading/servicing for the existing club is currently undertaken by a variety of commercial vehicles from vans, wagons and utilities up to and including medium rigid trucks. A service area is provided at the rear of the existing club, accessed via a single driveway located off the Tupper Street site frontage.

In addition to the club, the site also contains 6 free-standing residential dwelling houses to the south of the club building, fronting Tupper Street. No.10 & No.14 Tupper Street residences have an off-street parking space, however the remaining 4 residences to not.

A series of *Streetview* images of the site frontages are reproduced below and on the following page.



**Stanmore Road & Tupper Street intersection** 



**Tupper Street (facing north towards Stanmore Road)** 

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Stanmore Road & Alma Avenue intersection



Alma Avenue (facing north towards Stanmore Road)

### **Original Planning Proposal**

As noted in the foregoing, the original Planning Proposal PP\_2021\_2911 was lodged which sought to rezone the abovementioned site and amend the *Marrickville LEP 2011*'s development standards to enable residential flat buildings and mixed-use development, commercial and club floor space across three sites, as per the figure on the following page.

A summary of the original proposal for each site is reproduced on the following page which has been taken from Inner West Council's meeting on 11 September 2018.



**Original Planning Proposal Site Plan** 

	0.4		
PROPOSED	Site A	Site B	Site C
Land Use zone (proposed)	B4 Mixed Use	R1 General Residential	R1 General Residential
Üses	Building A – club and residential Building B – commercial and residential	Residential (residential flat buildings)	Residential (terraces)
Height of Building (maximum)	21 metres	28 metres	14 metres
Height in storeys (maximum)	Building A – 5 storeys Building B – 5 storeys	Building C –8 storeys Building D –5 storeys	4 storeys
Site Area	2.425m <sup>2</sup>	4,675m <sup>2</sup>	1,450m <sup>2</sup>
Gross Floor Area	4,250m <sup>2</sup>	9,350m <sup>2</sup>	2,100m <sup>2</sup>
Floor Space Ratio (excluding car parking)	1.75:1	2.0:1	1.84;1

**Summary of Original Planning Proposal** 

Off-street parking was proposed for each site in separate basement parking areas, comprising 50-100 spaces for Site A, 150-200 spaces for Site B and 10-15 spaces for Site C. Vehicular access to Site A was proposed to be provided via Lane B, vehicular access to Site B was proposed to be provided via Lane A and vehicular access to Site C was proposed to be provided directly off Tupper Street.

In order to mitigate the projected increase in vehicular movements, the original Planning Proposal proposed measures to assist through:

- the widening of Alma Avenue
- the provision of two through-site laneways between Alma Avenue & Tupper Street, offering continuation of Harrington Street

### **Revised Planning Proposal – March 2022**

The original Planning Proposal scheme has been amended to propose MFSR 1.75:1, accommodating up to 116 dwellings (106 apartments & 10 terrace houses) and approximately 2,500m<sup>2</sup> GFA of commercial/retail and club floor space across three sites. A comparison table of the original and revised PP schemes is reproduced below whilst the ground floor and lower ground floor plan extracts of the revised Planning Proposal are reproduced on the following page.

Use	Original PP – 2016 <i>Traffix</i> Report	Revised PP – 2022	
Club floor area	966m <sup>2</sup> GFA (~500m <sup>2</sup> PFA)	~1,800m <sup>2</sup> GFA (~900m <sup>2</sup> PFA)	
Retail/commercial floor area	$467m^{2}$	676m <sup>2</sup>	
Residential	160 dwellings	116 dwellings	
Parking	166 spaces + club	260-270 spaces inc. club	

Off-street parking is again proposed for each site in separate basement parking areas, however the two vehicular through-site links, Lane A & Lane B, have been deleted, as the ownership of the entire site will remain with The Cyprus Club as opposed to being divested. There will, however, remain pedestrian pathways between Tupper Street and Alma Avenue where the laneways previously were present.

Vehicular access to Site A (the club and retail/commercial space) is now proposed to be provided via the southern end of Site A's Tupper Street site frontage, whilst vehicular access to Site B (the residential apartments) is now proposed to be provided midway along the (widened) Alma Avenue site frontage. Vehicular access to Site C (the residential townhouse) is now proposed to be provided via Site B's Alma Avenue driveway, with an internal through-site link.

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**Revised Planning Proposal 2022 – Ground Floor** 



**Revised Planning Proposal 2022 – Lower Ground Floor** 

The revised traffic modelling indicates that under normal operating conditions, queue lengths into and out of the club/retail parking area off Tupper Street will be minimal and will not impact traffic flow along Stanmore Road. At this stage, it is not yet known what type of "control point" will be implemented at the club/retail car park entry - e.g., boom gate, number plate recognition, etc. This level of design will be further explored at DA stage.

Loading/servicing for the proposed development is expected to continue to be undertaken by a variety of commercial vehicles from vans, wagons and utilities up to and including 8.8m long medium rigid trucks. In this regard, a dedicated loading bay is proposed to be provided within the lower ground floor level, underneath the club building. Due to the topography of the site and the longer ramp lengths required for trucks due to shallower permissible ramp grades, vehicular access for service vehicles is to be provided via the abovementioned entry/exit driveway located towards the northern end of the Tupper Street site frontage.

Architectural concept plans of the revised Planning Proposal have been prepared by *PA Studio* and are reproduced in Appendix A.

### **Proposed Road Network Changes**

As noted in the foregoing, in order to mitigate the projected increase in vehicular movements, the original Planning Proposal proposed measures to assist through:

- the widening of Alma Avenue
- the provision of two through-site laneways between Alma Avenue & Tupper Street, offering continuation of Harrington Street

Whilst the two through-site vehicular laneways have been deleted from the revised Planning Proposal, the widening of Alma Avenue is still proposed. In this regard, plan extracts of the proposed Alma Avenue road widening are provided on the following page, indicating that the existing 4.85m wide road reserve will be increased to 10.0m - i.e., a land dedication of 5.15m. This will allow the provision of a 1.7m wide footpath along the western side of Alma Road, a 6.5m wide road carriageway and a 1.8m wide footpath along the eastern side of Alma Avenue, along the site frontage.

It is also worth noting that the design of the building fronting Stanmore Road will be set back from the northern boundary such that the available footpath width for the public will extend within the site boundary. The official boundary will not change however the usable footpath width for pedestrians walking along the southern side of Stanmore Road will be wider than the official/legal Council verge width. This may comprise a right-of-footway easement strip within the site, or similar, which is commonplace. These works will not affect the retained trees shown on landscape drawings.

The proposed 6.5m wide Alma Avenue carriageway width, between Stanmore Road and Harrington Street, will be wide enough to accommodate two lanes. This could comprise either retaining the existing one-way southbound traffic flow with on-street parking introduced *or* converting Alma Avenue to two-way traffic flow, north of Harrington Street. Both options are discussed later in this report.



Proposed Alma Avenue Road Widening

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Proposed Alma Avenue Road Widening



**Proposed Traffic Circulation** 

The existing width of Tupper Street is approximately 7.3m wide, with kerbside parking permitted along both sides of the road. Whilst two-way traffic flow is permitted, the road width and kerbside parking essentially reduces traffic to a single lane flow, with drivers having to wait where they can until an opposing driver(s) passes.

Residents of the existing flat buildings opposite the site in Tupper Street also currently experience difficulty turning into/out of their respective property's driveway, particularly when cars are parked close to the edge of their driveway and/or when cars are parked opposite their driveway.

As such, it is also now proposed to install No Stopping/No Parking restrictions along the western side of Tupper Street, in between Stanmore Road and the proposed new site access driveway, in order to improve traffic flow. In addition, it is also proposed to install No Stopping/No Parking restrictions along the western side of Tupper Street, opposite No.7-9 & No.11's driveways as well as opposite No.11A & No.19's driveways. Restricting parking along these two sections of Tupper Street will make it easier for those residents to access their properties whilst also further improving traffic flow along Tupper Street by providing passing opportunities for local road users.

Whilst a number of on-street kerbside parking spaces will be removed as a result of the changes, it is considered that the public benefit in improved traffic flow and safety along the northern section of Tupper Street will outweigh the loss of these spaces. It is also noted that any changes to on-street parking and signage requires approval from Council's Local Traffic Committee.

A series of architectural concept plans of the existing and proposed traffic arrangements have been prepared by *PA Studio* and are also reproduced in Appendix A.

# 3. TRAFFIC ASSESSMENT

### **Road Hierarchy**

The road hierarchy allocated to the road network in the vicinity of the site by Transport for NSW (TfNSW) is illustrated on Figure 3.

Stanmore Road and Enmore Road (north of Stanmore Road) are classified by TfNSW as *State Roads* which provide the key east-west road link in the area, linking Enmore Road to King Street. They typically carry two traffic lanes in each direction in the vicinity of the site, with kerbside parking permitted at selected locations, outside of road network peak periods.

Enmore Road (south of Stanmore Road) and Victoria Road are classified by TfNSW as *Regional Roads* which provide a key north-south road link in the local area, linking Sydenham Road and Stanmore Road. They also typically carry two traffic lanes in each direction in the vicinity of the site, with kerbside parking permitted at selected locations, outside of road network peak periods.

Edgeware Road and Liberty Street are also classified by TfNSW as *Regional Roads* which perform the function of a north-south *collector route* through the local area. They typically carry one traffic lane in each direction in the vicinity of the site, with additional lanes/turning bays provided at key locations. Kerbside parking is generally permitted.

Tupper Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. Two-way traffic flow is permitted, whilst kerbside parking is generally permitted on both sides of the road.

Alma Avenue is also a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. It is restricted to one-way southbound traffic flow only. Due to the existing road reservation width, footpaths are not provided along either side of the road, nor is kerbside parking permitted.



# **Existing Traffic Controls**

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to Stanmore Road
- a 50 km/h SPEED LIMIT which applies to all other local roads in the area
- a 40 km/h SCHOOL ZONE SPEED LIMIT which applies to all roads in the vicinity of Newington College
- TRAFFIC SIGNALS in Stanmore Road where it intersects with Merchant Street, Liberty Street and also Enmore Road/Edgeware Road
- a NO RIGHT TURN restriction in Stanmore Road for westbound traffic turning onto Merchant Street
- a ONE WAY southbound restriction in Alma Avenue and also Fotheringham Street
- a ONE WAY eastbound restriction in Newington Road, between Fotheringham Street and Enmore Road
- SPEED HUMPS located along Tupper Street Newington Road and also Wemyss Street
- a 3T LOAD LIMIT in Tupper Street

# **Existing Public Transport Services**

The existing bus services available in the area are illustrated on Figure 5. There are currently 7 bus routes travelling within approximately 400m radius of the site along Enmore Road and Stanmore Road, comprising the 355, 423/423X, 426, 428/428X & 430 services.

The abovementioned bus services also connect with train services at numerous suburban railway stations including Bondi Junction, Erskineville, Newtown, Martin Place, St James, Central, Canterbury and Sydenham.

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400m radius map

In addition, Stanmore and Newtown railway stations are also located approximately 800m and 1.1km walking distance, respectively, to/from the site.



Walking route to/from Stanmore railway station



Walking route to/from Newtown railway station

In addition, the site is located within close proximity to a wide variety of shops and services including licenced clubs, banks, supermarkets, gymnasiums, restaurants and specialty stores along Stanmore Road and Enmore Road. The site is therefore considered to be highly accessible to essential services and public transport options.

# **Local Bicycle Routes**

The existing bicycle routes located in the vicinity of the site are illustrated on the following page. The bicycle routes are readily accessible from the subject site and provide a number of on-road bicycle routes linking the local area, including the following routes to employment centres:

- Redfern via Wilson Street & Church Street
- Broadway via Shephard Street, Wilson Street & Church Street
- Camperdown via Church Street
- Newtown via Mary Street
- Redfern via Wilson Street & Church Street

- University of Sydney via Prospect Street & Church Street
- Stanmore & Petersham via Salisbury Road & Church Street



# **Existing Traffic Conditions**

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by *updated* peak period traffic surveys which were undertaken on Friday 26<sup>th</sup> November 2021 as part of this traffic study. In this regard, the *updated* traffic surveys were undertaken at the following intersections:

- Stanmore Road & Merchant Street
- Stanmore Road & Alma Avenue
- Stanmore Road & Tupper Street
- Stanmore Road & Liberty Street
- Stanmore Road, Enmore Road & Edgeware Road
- Newington Road & Alma Avenue
- Newington Road & Tupper Street

- Newington Road & Enmore Road
- Alma Avenue and the club car park's access driveways

The results of the traffic surveys are reproduced in full in Appendix B and summarised on the figure below. It is also pertinent to note that the existing Cyprus Club car park is also used as a Covid-19 drive-through testing facility, such that those traffic movements were captured in the survey results.



Existing road network weekday peak traffic volumes

## **Projected Traffic Generation**

The traffic implications of development proposals primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network, particularly during the morning and afternoon weekday road network peak periods.

An indication of the traffic generation potential of the Planning Proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)* and the updated traffic generation rates in the RMS's *Technical Direction* (TDT 2013/04a) document.

The RMS *Guidelines* and TDT 2013/04a are based on extensive surveys of a wide range of land uses and nominates the following traffic generation rates which are applicable to the Planning Proposal:

#### **Commercial Premises**

2.0 peak hour vehicle trips per 100m<sup>2</sup>GFA

#### Medium Density Residential Flat Buildings (2-20 dwellings)

1 & 2 bedroom apartments:	0.4-0.5 peak hour vehicle trips per dwelling
3 or more bedroom apartments:	0.5-0.65 peak hour vehicle trips per dwelling

#### High Density Residential Flat Buildings in Sub-Regional Centres (20+ dwellings)

0.29 peak hour vehicle trips per dwelling

With respect to the club component, the RMS Guidelines notes the following.

#### 3.7.3 Clubs.

#### Overview.

Surveys of licensed clubs conducted by the RTA in 1978 indicate that it is difficult to generalise on their traffic generation because of the diversified nature of clubs. Traffic generation is affected by such factors as the provision of live entertainment, gambling facilities, number of members and club location. Behavioural changes since 1978, such as the introduction of random breath testing, also make such generalisations more difficult.

The 1978 surveys of clubs found an evening peak period traffic generation of 10 veh/hr/100 m<sup>2</sup> licensed floor area, and a total vehicle generation over the 4.00 pm to 1.00 am period of 90 veh/100 m<sup>2</sup> licensed floor area.

A traffic generation assessment of new clubs should be based on recent surveys of similar clubs. For extensions to an existing club, the assessment should be based on the relevant club.

If a club is located in or is adjacent to a residential area, late-night traffic generation must also be assessed in order to determine noise effects.

In this regard, *VTP* have been involved in a number of club projects over the years, and in our experience, the key driver of club traffic is the number of patrons, therefore adopting a *Public Floor Area* approach, rather than a GFA approach, often provides a more accurate representation. As a general rule, a club's *PFA* is typically in the order of 50% of the GFA.

As noted in the foregoing, the term *Public Floor Area (PFA)* is used to define those areas of a club which are readily accessible to patrons and therefore provides the most accurate basis for determining club patronage levels, and the traffic and parking demands expected to be generated by those patronage levels.

Generally speaking, PFA includes indoor bars, lounges, gaming rooms, bistro and dining areas, but excludes uncovered outdoor areas, loading docks, storage areas, office/administration areas, staff amenities, kitchens and other "back-of-house" facilities which are inaccessible to club patrons.

The floor area of the club in the revised Planning Proposal is approximately 1,829m<sup>2</sup> GFA, such that the *Public Floor Area* is in the order of 900m<sup>2</sup> PFA.

In terms of a suitable traffic generation of which to apply to the club, reference is made to the Waverley Bowling Club redevelopment, that *VTP* were involved in. The original bowling club had a floor area of approximately 600m<sup>2</sup> PFA, and therefore is considered a good comparison for the revised Planning proposal. Traffic surveys undertaken at the Waverley Bowling Club in 2018 (i.e. pre-Covid-19), indicated that the club generated in the order of *1.0 peak vehicle trips per 100m<sup>2</sup> PFA* during the weekday AM peak period and *8.5 peak vehicle trips per 100m<sup>2</sup> PFA* during the weekday PM peak period.

Application of the above traffic generation rates to the various components outlined in the revised Planning Proposal yields a traffic generation potential in the order of 52 and 142 vph during the weekday AM and PM road network peak periods, respectively. A table of the traffic volumes and the various uses, including in/out splits (based on industry standard and experience) is reproduced below.

<b>Revised Planning Proposal Forecasted Traffic Generation Assessment</b>						
Use	Floor area/yield	AM peak trips (veh/hr)	PM peak trips (veh/hr)			
Club	1,800m <sup>2</sup> GFA (~900m <sup>2</sup> PFA)	9 (7 in & 2 out)	77 (54 in & 23 out)			
Retail/commercial	676m <sup>2</sup>	13 (10 in & 3 out)	38 (19 in & 19 out)			
Residential	116 dwellings	30 (6 in & 24 out)	27 (22 in & 5 out)			
Total		52 (23 in & 29 out)	142 (95 in & 47 out)			

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the existing uses of the site, in order to determine the *net increase (or decrease)* in traffic generation potential expected to occur as a consequence of the Planning Proposal.

Notwithstanding the above, for the purposes of providing a rigorous assessment, it has been assumed that *all* of the projected future traffic flows of 52 AM vph and 142 PM vph will be new or *additional* to the existing traffic flows currently using the adjacent road network – i.e. no offset, or *discount*, of traffic associated with the existing club has been applied.

With respect to where existing Cyprus Club members reside, discussions with the club indicates that the vast majority live to the south and south-west of the site, as indicated in the map below.



Map of where existing Cyprus Club members reside

Accordingly, the distribution of the projected future additional traffic volumes is illustrated on the diagrams on the following page, with both Alma Avenue options presented.



Projected additional traffic volumes peak trip distribution (retaining one-way Alma Avenue)



Projected additional traffic volumes peak trip distribution (two-way Alma Avenue north of Harrington St)

Those projected traffic flows as a consequence of the Planning Proposal will not have any unacceptable traffic implications in terms of road network capacity, nor will any road upgrades/improvements/widening be required beyond the proposed widening of Alma Avenue, as is demonstrated by the following section of this report.

#### **Traffic Implications - Road Network Capacity**

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network. Those effects can be assessed using the SIDRA NETWORK program which is widely used by TfNSW and many LGA's for this purpose. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages. The individual movement summaries are reproduced in Appendix C (whereby one-way traffic flow is retained in Alma Avenue) and Appendix D (whereby two-way traffic flow is introduced to Alma Avenue, north of Harrington Street).

The results of the revised SIDRA NETWORK capacity analysis of the surrounding intersections are summarised in the table on the following page, revealing that:

- all surrounding intersections currently operate at an overall average *Level of Service "A"*, "*B"* or "*C*"
- under the projected *nett increase* in projected future traffic demands expected to be generated by the Planning Proposal, all surrounding intersections will continue to operate at existing overall *Levels of Service*, with minimal increases in average vehicle delays (irrespective of whether Alma Avenue remains one-way or is converted to two- way).

In essence, the rigorous capacity analysis confirms that the traffic generation potential of the revised Planning Proposal on the subject site, even *without discounting* any traffic associated with the existing club, will not have any appreciable effect on the performance of nearby intersections (with minimal increases in delays on all approaches, if any), and that no further upgrades will be required beyond the proposed widening of Alma Avenue.

SUMMARY RESULTS OF SIDRA NETWORK ANALYSIS OF SURROUNDING ROAD NETWORK						
Key Indicators	Existing Traffic Demand		Projected Development Traffic Demand (One Way Alma Ave)		Projected Development Traffic Demand (Two Way Alma Ave)	
	AM	PM	AM	PM	AM	PM
Stanmore Rd & Merchant St						
LOS	А	А	А	А	А	А
DOS	0.508	0.463	0.521	0.500	0.521	0.500
AVD (Sec/Veh)	10.5	7.5	10.2	7.3	10.2	7.3
Stanmore Rd & Alma Ave (one-way)						
LOS	A(A)	A(B)	A(A)	A(B)	A(C)	A(C)
DOS	0.366	0.514	0.368	0.557	0.368	0.559
AVD (Sec/Veh)	0.7 (12.0)	0.4 (14.9)	0.8 (12.3)	0.7 (15.8)	0.9 (39.7)	0.7 (29.1)
Stanmore Rd & Tupper St						
LOS	A(C)	A(C)	A(D)	A(D)	A(D)	A(D)
DOS	0.343	0.302	0.361	0.470	0.365	0.471
AVD (Sec/Veh)	1.0 (41.8)	0.8 (38.5)	1.1 (44.0)	1.8 (49.3)	1.1 (44.6)	1.8 (49.5)
Stanmore Rd & Liberty St						
LOS	В	В	В	В	В	В
DOS	0.715	0.719	0.716	0.772	0.708	0.724
AVD (Sec/Veh)	23.7	25.5	23.6	26.4	23.5	26.6
Stanmore Rd, Enmore Rd & Edgeware Rd						
LOS	С	С	С	С	С	С
DOS	0.847	0.844	0.863	0.875	0.854	0.872
AVD (Sec/Veh)	40.2	38.3	40.7	40.2	40.4	40.1
Newington Rd & Alma Ave						
LOS	A(A)	A(A)	A(A)	A(A)	A(A)	A(A)
DOS	0.043	0.034	0.049	0.034	0.044	0.034
AVD (Sec/Veh)	1.2 (4.3)	1.1 (4.2)	1.4 (4.3)	1.2 (4.2)	1.3 (4.3)	1.1 (4.2)
Newington Rd & Tupper St						
LOS	A(A)	A(A)	A(A)	A(A)	A(A)	A(A)
DOS	0.057	0.046	0.066	0.048	0.062	0.047
AVD (Sec/Veh)	1.8 (5.0)	2.3 (4.9)	1.7 (5.1)	2.5 (5.0)	1.8 (5.1)	2.5 (5.0)
Newington Rd & Enmore Rd						
LOS	A(B)	A(B)	A(B)	A(B)	A(B)	A(B)
DOS	0.163	0.208	0.172	0.235	0.205	0.242
AVD (Sec/Veh)	1.1 (15.7)	1.1 (15.6)	1.3 (16.1)	1.5 (17.4)	1.4 (16.6)	1.5 (17.6)
Alma Ave & Residential Driveway						
LOS	-	-	A(A)	A(A)	A(A)	A(A)
DOS	-	-	0.036	0.042	0.036	0.042
AVD (Sec/Veh)	-	-	1.1 (3.6)	1.1 (3.6)	1.2 (3.7)	1.2 (5.7)
Tupper St & Club/Retail Driveway						
LOS	-	-	A(A)	A(A)	A(A)	A(A)
DOS	-	-	0.025	0.069	0.025	0.069
AVD (Sec/Veh)	-	-	0.9 (3.8)	2.1 (4.1)	0.9 (3.8)	2.1 (4.1)

LOS – Level of Service; DOS – Degree of Saturation; AVD – Average Vehicle Delays Worst turning movements and respective delays indicated in brackets (sign-controlled intersections)

# **Criteria for Interpreting Results of Sidra Analysis**

### 1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
Έ'	At capacity; at signals incidents will cause excessive	At capacity and requires other control mode.
	delays. Roundabouts require other control mode.	
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

# 2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (i.e., inner city conditions) and on some roads (i.e., minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
А	less than 14	Good operation.	Good operation.
В	15 to 28	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
С	29 to 42	Satisfactory.	Satisfactory but accident study required.
D	43 to 56	Operating near capacity.	Near capacity and accident study required.
Е	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.

### 3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals<sup>1</sup> both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

1

The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.
# 4. PARKING IMPLICATIONS

# **Existing Kerbside Parking Restrictions**

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6 and comprise:

- CLEARWAY restrictions along the northern side of Stanmore Road during the weekday morning peak period
- CLEARWAY restrictions along the southern side of Stanmore Road during the weekday afternoon peak period, including along the site frontage
- NO STOPPING/NO PARKING restrictions along both sides of Stanmore Road at all other times, between Enmore Road and Tupper Street
- generally UNRESTRICTED kerbside parking along both sides of Stanmore Road in the vicinity of the site outside of weekday Clearway times, including along the western portion of the site frontage
- NO STOPPING/NO PARKING restrictions along Alma Avenue, including along the site frontage
- generally UNRESTRICTED kerbside parking along both sides of Tupper Street, including along the site frontage, and elsewhere throughout the local area.



### Club Car-Parking – Site Specific DCP

Based on the proposed club's floor area, the club has the potential to accommodate up to say, 40 staff and 915 patrons.

By way of comparison, the existing club has a floor area of approximately  $1,765m^2$  GFA, with approximately 173 car parking spaces, equating to an effective parking rate of *1 space per 10m<sup>2</sup> GFA*.

Applying the existing effective parking rate of *1 space per 10m^2 GFA* to the proposed club's floor area of 1,829m<sup>2</sup> GFA, yields an off-street parking requirement of 183 spaces.

It is pertinent to note however, that the original club approval was granted at a time when car driver rates at clubs and licensed venues tended to be much higher. Behavioral changes since that time, such as the introduction of random breath testing and the proliferation of Uber and the like, has meant that the car driver rates have reduced.

Based on detailed club member consultations and feedback, approximately 100 car spaces (including staff) are required. Furthermore, by way of comparison, the Waverley Bowling Club redevelopment was ultimately approved with a club floor area of approximately  $660m^2$  PFA and 77 dedicated off-street parking spaces, thereby equating to a parking rate of *1 space per* 8.5m<sup>2</sup> PFA. Application of that parking rate to the Cyprus Club's proposed redeveloped floor area of approximately 900m<sup>2</sup> PFA, yields a parking requirement of 105 spaces.

On this basis, the indicative concept scheme submitted with the revised Planning Proposal includes the provision of approximately 100 club parking spaces, which is a significant reduction to the *existing* parking provision and consistent with an equivalent venue (Waverley Bowling Club), and will therefore ensures the viability of the club moving forward. However, the exact parking rates will be established through the site-specific DCP to be prepared

With respect to the parking for the residential and retail/commercial components, it is expected that parking will be provided broadly in accordance with the *MDCP 2011* rates, which equates to a total of approximately 260-270 parking spaces across the entire site. Again, these exact rates will be established through the site-specific DCP.

The geometric design layout of the proposed car parking facilities will ultimately be designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1* in respect of parking bay dimensions, ramp gradients and aisle widths for the various user classes.

The below table demonstrates how car parking provision was calculated for the purposes of the indicative scheme, noting that actual car parking rates will be determined through the only informs the site specific DCP.

	Car Park Summa	ary - Indio	cative Sch	neme <sup>1</sup>				Sch	eme Provide
Site	Building	Units / SQM	Council Parking Rates	RMS Parking Rates	Club (Outlined Traffic Report)	Council Parking Rates	RMS Parking Rates	PP	403 - PP406
Site A	Building A - Residential - 1 Bed	16	0.5	0.6		8	9.6		
	Building A - Residential - 2 Bed	8	1.0	0.9		8	7.2		
	Building A - Residential - 3 Bed	4	1.2	1.4		4.8	5.6		
	Total Apartments / Visitor	28	0.1	0.2		2.8	5.6		
	Club @ 1,800	1,800	22.5		100	100	100		
	Retail / Commercial @ 700sqm	700	7+1per 45sqm > 500sqm			11	11		
Total - S	Site A					135	139		150
i otai t						100	100		100
Site B	Building C - Residential - 1 Bed	15	0.5	0.6		8	9		
	Building C - Residential - 2 Bed	22	1.0	0.9		22	20		
	Building C - Residential - 3 Bed	11	1.2	1.4		13	15		
	Building D - Residential - 1 Bed	6	0.5	0.6		3	4		
	Building D - Residential - 2 Bed	20	1.0	0.9		20	18		
	Building D - Residential - 3 Bed	4	1.2	1.4		5	6		
	Total Apartments / Visitor	78	0.1	0.2		8	16		
Total - Site B			0.11	0.2		78	87		90
Site C	Townhouses / Terrace Housing - 2 Bed	2	1			2	2		
	Townhouses / Terrace Housing - 3 Bed	8	1			8	8		
	Total Dwellings	116							
Total - Site C						10	10		19
Total Cars Required						223	236		259
1. The s	cheme provided in the urban design repor	t is indica	tive only v	vith the fu	ture DCP	controlling	the even	tual sch	ieme

As noted in the foregoing, at this stage it is not yet known what type of "control point" will be implemented at the club/retail car park entry – e.g., boom gate, number plate recognition, etc. Appendix D of *AS2890.1:2004* provides detail on the capacity of entry and exits at large car parks, with boom gates capable of allowing in the order of 300 vehicles/hour/lane, whilst number plate recognition (or "free flow") capable of allowing in the order of 600 vehicles/hour/lane.

Based on a more restrictive/conservative boom gate control point design within the club/retail car park, and the estimated peak vehicle trips detailed in Chapter 3 of this report, a high-level queuing analysis indicates that the 98<sup>th</sup> percentile queue lengths at the entry and exit control points will be in the order of 3 cars.

Along with the proposed removal of kerbside parking along the northern end of the western side of Tupper Street, drivers exiting the club/retail parking area will be able to turn left back onto Stanmore Road in an orderly fashion.

Whilst minimising any impact to neighbouring residential streets is always a priority, such as Tupper Street and Harrington Street to the south of the site, it is difficult to "discourage" drivers to avoid those roads without physical or legal restrictions.

Furthermore, restricting the development's residential traffic to right-out only (and avoiding Harrington Street) and club/retail traffic to left-out only (and avoiding Tupper Street to the south), would add additional traffic load to the Stanmore Road/Alma Street and Stanmore Road/Tupper Street intersections.

Introducing measures to "discourage" development traffic to avoid Harrington Street and Tupper Street to the south can be further explored at DA stage, however the traffic analysis determined that this was not required and that development traffic using these roads will be minimal.

# **Loading/Servicing Provisions**

Loading/servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles from vans, wagons and utilities up to and including 8.8m long medium rigid trucks. In this regard, a dedicated loading bay is proposed to be provided within the lower ground floor level, underneath the club building.

The manoeuvring area will ultimately be designed to accommodate the swept turning path requirements of these MRV trucks, allowing them to enter and exit the site in a forward direction at all times via the Tupper Street access ramp.

The geometric design layout of the proposed loading facilities will also ultimately be designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2* in respect of loading dock dimensions, overhead clearances, ramp gradients and service area requirements for 8.8m MRV trucks.

# Recommendations of next steps for measures to reduce private vehicle trip generation and demand, and maximise public transport patronage:

It is recommended than any development application, is conditioned to include a Green Travel Plan (GTP) to bring about better transport arrangements to manage travel demands, particularly promoting more sustainable modes of travel, modes which have a low environmental impact such as walking, cycling, public transport and better management of car use.

As part of a GTP, a number of policies and procedures would be put in place at the site to encourage transport choice to and within the site, namely public transport, walking and cycling. These measures would effectively assist in managing the use of private vehicle trips and parking within the area to reduce congestion and cumulative impacts of vehicle emissions upon air quality.

A GTP is a package of coordinated strategies and measures to promote and encourage sustainable travel, such as walking, cycling and public transport etc. Such plans aim to influence the way people move to/from a business, residential complex or any other organisation to deliver better environmental outcomes and a range of travel choices, whilst also reducing the reliance on private car usage, particularly single occupancy car trips.

The planning of the new development would need to accommodate innovative ideas to better manage the transport demand of the project. It would be necessary to introduce new measures to ensure that trips generated by the proposed development are not solely private car based, particularly single occupancy trips. An example of a successful GTP is the one implemented at Harold Park. The green travel plan incorporates concepts to reduce reliance on cars, by facilitating a modal shift towards public transport usage as opposed to car usage, particularly for single-occupancy car trips.

As such, it is proposed to provide a green travel plan as part of the CCC proposed development, with green travel plan initiatives intended to be provided prior to the occupation of the site.

This travel plan would aim to achieve a lower car driver mode upon occupation compared with comparable sites. These green travel plan initiatives would promote the use of more sustainable modes of travel (i.e., walking, cycling, car share and public transport) and subsequently, reduce vehicle trips to/from the area. Such measures would include (but not limited to):

- Appointment of a Travel Plan Co-ordinator to ensure the ongoing monitoring and evaluation of the plan.
- The Cyprus Club providing a bus service to transport multiple patrons to and from the club
- Providing information and ensuring the development ties in with the sustainable active travel initiatives outside of the site.
- Provision of a Transport Access Guide (TAG) given to every new occupant of the dwelling
- Creation of high-quality pedestrian/shared environments and cycling facilities to encourage cycling and walking
- Provide car sharing facilities and promote the availability of such car sharing pods to reduce private car ownership
- Provide free opal cards to all residents upon occupation with pre-loaded credit so that travel patterns can be influenced from Day 1 and or club patron with their new or renewed membership
- Provision of public transport noticeboards to notify all residents/occupants of the alternate transport options available and a transport access guide for all new occupants
- Provision of high-quality telecommunication points to reduce the need for travel off-site
- A half yearly newsletter for every resident after occupation to outline the latest news on sustainable travel initiatives in the area.
- Provision of free yearly GoOccasional, car share membership for the initial occupation of dwellings to allow two drivers registered per membership
- Provision of bicycle parking spaces for both residents and visitors in accordance with council requirements.

Thus, it is envisaged that the implementation of a green travel plan could reduce trips generated by the development, particularly to target residents and staff within the proposed development site.

# Conclusion

The foregoing has found that all surrounding intersections are expected to continue to operate at existing *Levels of Service* under the revised Planning Proposal scenario (with minimal increases in delays on all approaches), and that no infrastructure upgrades will be required, beyond the proposed widening of Alma Avenue. Whether Alma Avenue remains as one-way or is converted to two-way makes little difference to the network, however it does remove a portion of the development's residential traffic off the local road network.

Furthermore, the proposed development will also ultimately satisfy Council's off-street parking requirements for the residential and retail/commercial components whilst also providing sufficient parking for the club to ensure its viability into the future.

It is therefore reasonable to conclude that the proposed development will not have any unacceptable implications in terms of road network capacity or off-street parking/loading requirements.

# **APPENDIX A**

# **ARCHITECTURAL CONCEPT PLANS**

# SITE DATA

### **Current Proposal**

### Site:

56-78 Stanmore Road, Stanmore 2-20 Tupper Street, Stanmore 1-9 Alma Avenue, Stanmore

### Site Area:

9129 m2 (original site area) 8438 m2 (after road widening to Alma Avenue)

### Site Dimensions:

66.5 m to Stanmore Road 139.5 m to Alma Avenue 140 m to Tupper Street

### **Proposal Summary**

#### Zoning

Part Mixed Use (B4) and part General Residential (R1)

### Massing:

Perimeter block massing consisting of buildings facing Stanmore Road, Tupper Street and Alma Avenue highly articulated building forms in both plan and elevation buildings step to reflect site falls

#### Use

Approx. 1600 - 2000 m2 of club building over 2 levels

Approx. 500-700 m2 of commercial /retail space at ground level facing Stanmore Road

Approx. 106 residential units + 10 Terrace Houses

#### Road Widening

 approx. 700 m2 of land dedicated for road widening along Alma Avenue (5.m) wide)

#### **Public Open Space:**

- approx. 400 m2 public plaza located at the northern end of the site facing Stanmore Road
- approx. 600 m2 of a public park off Alma street as shown

#### **Communal Open Space:**

- approx. 2215 m2 of communal open space at ground levels, as per ADG guidelines. Roof level areas removed

#### **Through Site Link:**

- Lane A: Publicly accessible shared pedestrian zone & thru site link extending Harrington Street. Potential for dedication to Council (subject to Council consideration)
- Lane B: Publicly accessible shared vehicular / pedestrian zone & thru site link connecting Alma Avenue and Tupper Street

#### Parking:

- Site A: approx. 150 spaces over three levels
- Site B: approx. 90 spaces over two levels
- Site C: approx. 20 spaces

#### Height:

- 5 Storey Stanmore Road (upper two levels set back)
- 4 Storey Alma Avenue (upper level set back)
- 5/6 Storey Tupper Street (upper level set back)
- Townhouses (Site C)

#### **Setbacks**

2 - 6 m (in addition to upper level setbacks on building on site A and B)

#### **Recommendations**

- side of Alma avenue as per diagram PP403
- dedication to Council LANE A (PP404)
- LANE B (PP404)
- Cyprus Club
- 4. Setbacks to Stanmore Road of min 4.5 m

The centrepiece of the Urban Pocket Park will be a large existing tree (not previously proposed to be retained) and confirmed by our Arborist consultant as worthy of retention

- Stanmore Road
- Site B
- B + Site C)
- 9. Maximum building heights of: - SITE A - 21 m
  - SITE B 17-21 m
  - SITE C 11 m

Half storey removed

10. Maximum AHD building heights as setout in PP412 11. Permissible

Floor Space Ratio of - SITE A & SITE B COMBINED - 1.75 : 1 - SITE C - 1.0 : 1

# **INTRODUCTION / INFORMATION 9**

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

## 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

1. Approx 5m wide / 700 m2 of land dedicated for road widening along Alma Avenue, in addition to new footpath of 1.8 m adjoining the site and 1.7 m on the opposite

2. i) publicly accessible thru site link extending Harrington Street with potential for

ii) publicly accessible through site link connecting Alma Avenue and Tupper Street -

3. Site is not subdivided - Land remains owned into perpetuity by the

Setbacks to Tupper Street of between 2 m and 5 m Setbacks to Alma Avenue between 2 m and 3 m, excluding road dedication

5. Approx. 600 m<sup>2</sup> Common Open Space (Urban Pocket Park) adjacent to Alma St. Landscaping, children's playground, public seating area provided.

6. Approx. 400 m<sup>2</sup> of public plaza at the northern end of the site facing

7. Nom. 1000 m2 internal residential courtyard extending the length of the

8. Mixed Use (B4) Zoning to upper portion of site (Site A) and General Residential (R1) Zoning to the middle and lower portions of the site (Site

6. i) building heights of 4-5 storeys fronting Stanmore Road with the upper most storey setback 3 m on all sides from the external wall of the floor below

ii) building heights of 4 storeys fronting Alma Avenue with the upper most storey setback 3 m from the Alma Avenue external wall of the floor below

iii) building heights of 4 - 6 storeys fronting Tupper Street with the upper storey (small area) setback 9 m from the Tupper Street external wall of the floor below and 6 m from the lane A external wall of the floor below.



58-76 Stanmore Road Stanmore NSW





source : kennedy associates architects

# ZONING

location	zoning	proposed use
SITE A	B4 - mixed use	BLD A registered club (ground + first floors)
	note: Site A to be inlculded on MLEP schedule 1 with additional permitted use of a 'residential flat building' as part of a mixed use development	residential apartments above (upper floors) retail / commercial (basement + ground floo
SITE B	R1 - General Residential	BLD A + B residential flat buildings
SITE C	R1 - General Residentiall	BLD E towhnhouses / terrace housings

### LEP ZONING

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

## 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE





oors)

stanmore road

**B4** 

SITE A



# **BUILDING HEIGHT IN STOREYS**

location		no. storeys
SITE A	building A	5 storeys
SITE B	building C	6 storeys
	building D	4 storeys
SITE C	building E	3 storeys

# **BUILDING HEIGHT - STOREYS**

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

### 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL 220 YOUNGSTNEUTRALBAY, NSW 2089

### NOTE :

number of storeys excluded basement carparkig including where parts of basement is raised more than 1m above ground level due to site falls.

storeys are counted above ground level for street frontages and above podium level for the interior portion of buildings C+D.



PRESENTLY, TUPPER STREET IS DESIGNATED AS A TWO-WAY ROAD, HOWEVER TWO VEHICLES CANNOT PASS ONE ANOTHER AND VEHICULAR ACCESS IS DIFFICULT TO ENTRIES TO EXISTING APARTMENT BUILDINGS BECAUSE OF PARKED CARS

# 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 R E V E



WILL BE INCREASED TO 10.0M

6.5M WIDE ROAD CARRIAGEWAY : THE PROPOSED CARRIAGEWAY, BETWEEN STANMORE ROAD AND .

HARRINGTON STREET, WILL BE WIDE ENOUGH TO ACCOMMODATE TWO LANES AND TWO WAY TRAFFIC

EXISTING 4.85M WIDE ROAD RESERVE BY RETAINING THE EXISTING ONE-WAY SOUTHBOUND TRAFFIC FLOW FROM SOUTH OF THE RESIDENTIAL CAR-ENTRY EXIT THE EXISTING TRAFFIC FLOW IN HARRINGTON STREET AND ALMA AVENUE SOUTH OF HARRINGTON STREET WILL ENSURE THERE IS MINIMAL CHANGE TO EXISTING TRAFFIC IN HARRINGTON STREET OR ALMA AVENUE. ALMOST ALL OF PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE



ALMA AVENUE VIEW FACING NORTH



source : kennedy associates architects **ROAD WIDENING** \*

location	width	area (m²)		
ALMA AVENUE	5.15m	697		

\*see diagram PP314 for road widening details

Alma avenue is currently a one-way traffic. By expending it, we will allow a two-way street along our site.

# ALMA AVENUE WIDENING

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

## 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

K: 8968 1999 A C N

A C N : 603 389 288



PLAN 1:75



**SECTION 1:75** 



PLAN 1:75

# ALMA AVENUE WIDENING DETAILS

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

### 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954 T E L : 8968 1900 F A X : 8968 1999 A C N : 603 389 288

M A R C H 2022 REVE



TUPPER STREET VIEW FACING SOUTH



## PARKING CHANGE \*see diagram PP316 for details

Tupper street is very narrow. It is only 7.5 metres wide and two cars cannot pass each other without pulling into driveways or reverse manoeuvring.

Tupper Street will be 2 way allowing vehicles to easily enter and exit the car-park, reduce any likelihood of queuing onto Stanmore Road.

Parking on the west side of Tupper Street traffic will be partially removed.

Entry to the basement car-park will be close to Stanmore Road.

# **TUPPER STREET PARKING CHANGE**

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

## 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

9 A C N : 603 389 288





# 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL 220 YOUNGSTNEUTRALBAY, NSW 2089







LANES

name	width	domain		
LANE A	4m	private lane with public right of way (potential of council ownership)		
LANE B	2m	private lane with public right of way (potential of council ownership)		

## THROUGH SITE LINKS

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

## 58-76 Stanmore Road Stanmore NSW

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954







SITE PLAN

		scale 1:	.500		
58-76 Stanmore Road Stanmore NSW	T E L : 8968 1900 F A X : 8968 1999	A C N : 603 389 288	N O M I N A T E D A R C H I T E C T - G E O R G E R E V A Y R E G . N O . 3954	M A R C H 2022	REVE



PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE



# LOWER GROUND FLOOR 4 PLAN

URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 R E V E





LOWER GROUND FLOOR 3 PLAN





T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022

REVE

0 M	5 M	10 M	20 M	30 M
			PP 405	



URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

NO. 3954 MARCH 2022

REVE



PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE




PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE

# PP 408



URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE

# PP 409



SECTION 01 (FROM CENTRE OF SITE TO WEST)



URBANDESIGNSTUDY/INDICATIVESCHEMEFORPLANNINGPROPOSALAT:

1:500

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE

# PP 415



1:500

PASTUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089

T E L : 8968 1900 F A X : 8968 1999

A C N : 603 389 288

NOMINATEDARCHITECT-GEORGEREVAYREG.NO.3954

M A R C H 2022 REVE

# PP 416



		JNDARY			JNDARY
		BO			BO
58-76 Stanmore Road Stanmore NSW					
<b>PA</b> STUDIOLEVEL220YOUNGSTNEUTRALBAY, NSW 2089	T E L : 8968 1900 F A X : 8968 1999	A C N : 603 389 288	N O M I N A T E D A R C H I T E C T - G E O R G E R E V A Y R E G . N O . 3954	M A R C H 2022	REVE

# PP 417

## **APPENDIX B**

## TRAFFIC SURVEY DATA

GPS	-33.897711,151.16639	1					
Date:	Fri 26/11/21		North:	Merchant St	Survey		7:30 AM-9:30 AM
Weather:	Fine		East:	Stanmore Rd	Period		4:30 PM-6:30 PM
Suburban:	Stanmore		South:	N/A	Traffic Peak		7:30 AM-8:30 AM 5:15 PM-6:15 PM
Customer:	VTP		West:	Stanmore Rd	Реак	PM:	5:15 PM-6:15 PM

			proach Me	erchant S						anmore R	Hourly To	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:30	7:45	0	8	6	0	0	178	0	271	13	1892	Peak
7:45	8:00	0	19	13	0	1	208	0	228	17	1873	
8:00	8:15	0	27	15	0	3	207	0	187	13	1831	
8:15	8:30	0	25	17	0	1	216	0	208	11	1751	
8:30	8:45	0	7	12	0	0	216	0	195	27	1662	
8:45	9:00	0	24	19	0	0	206	0	160	35		
9:00	9:15	0	14	5	0	0	184	0	154	15		
9:15	9:30	0	7	7	0	0	176	0	188	11		
16:30	16:45	0	12	5	0	0	209	0	163	9	1683	
16:45	17:00	0	17	4	0	0	218	0	192	12	1713	
17:00	17:15	0	16	8	0	0	199	0	172	11	1693	
17:15	17:30	0	10	5	0	2	235	0	181	3	1727	Peak
17:30	17:45	0	16	7	0	0	228	0	173	4	1696	
17:45	18:00	0	18	6	0	0	201	0	184	14		
18:00	18:15	0	10	6	0	1	228	0	188	7		
18:15	18:30	0	7	7	0	0	215	0	165	11		

Period Start	Period End	Eastbound Westbound		Northbound	Southbound	Northbound	Southbound	Hourly Total
7:30	7:45	0	0	1	2	2	4	40
7:45	8:00	0	0	0	0	3	1	61
8:00	8:15	1	0	2	1	1	1	83
8:15	8:30	0	2	6	0	11	2	83
8:30	8:45	0	1	3 2		19	5	66
8:45	9:00	1	0	2	5	15	3	
9:00	9:15	0	1	1	0	2	2	
9:15	9:30	0	1	2	0	1	0	
16:30	16:45	0	0	0	1	3	1	33
16:45	17:00	0	1	1	1	4	4	34
17:00	17:15	0	0	1	3	5	1	31
17:15	17:30	1	0	0	2	4	0	30
17:30	17:45	0	0	2	3	0	1	40
17:45	18:00	0	0	0	3	2	3	
18:00	18:15	2	0	4	0	2	1	
18:15	18:30	1	0	0	0	6	10	
Peak	Time	North Approa	ch Merchant St	East Approac	h Stanmore Rd	West Approac	h Stanmore Rd	Dealstate
Period Start	Period End	Eastbound	Westbound	Northbound	Southbound	Northbound	Southbound	Peak total
7:30	8:30	1	2	9	3	17	8	40
17:15	18:15	3	0	6	8	8	5	30

ction is indicative only, drawing is not to scale and not an exact streets config ting traffic flows. Dir ation

nt S

51 24

Peak T Period Start P 7:30 17:15

Peak total 1892 1727

EB 894 726 

0

54 28





Pedestrians Crossing

	me		proach Me								
riod Start	Period End	U	R	L	U	R	WB	U	EB	L	
7:30	7:45	0	7	6	0	0	171	0	255	13	
7:45	8:00	0	16	13	0	1	198	0	214	17	
8:00	8:15	0	27	15	0	3	197	0	177	13	
8:15	8:30	0	25	17	0	1	206	0	194	11	
8:30	8:45	0	7	12	0	0	210	0	183	27	
8:45	9:00	0	23	19	0	0	191	0	153	35	
9:00	9:15	0	14	5	0	0	173	0	146	15	
9:15	9:30	0	7	6	0	0	162	0	171	11	
16:30	16:45	0	12	5	0	0	204	0	160	9	
16:45	17:00	0	17	4	0	0	213	0	188	12	
17:00	17:15	0	16	8	0	0	192	0	169	11	
17:15	17:30	0	10	5	0	2	231	0	180	3	
17:30	17:45	0	16	7	0	0	224	0	173	4	
17:45	18:00	0	18	6	0	0	197	0	184	14	
18:00	18:15	0	9	6	0	1	225	0	187	7	
18:15	18:30	0	7	6	0	0	213	0	164	11	
	Time Period End	North Ap	proach Me R	erchant S	East App U	roach Sta R	nmore Ro WB	West App U	EB	anmore R	
7:30	8:30	0	к 75	51	0	к 5	772	0	EB 840	54	total 1797
17:15	18:15	0	53	24	ő	3	877	0	724	28	1709
avy Vehic	cles	North An	proach M	archant S	Eact Ann	roach Sta	nmore Pr	Noet Apr	woach St	anmore P	
Ti	cles me Period End	North Ap	proach Me	erchant S	East App U	roach Sta R	nmore Rd WB	West App	roach Sta	anmore R	Ì
Ti	me										
Ti eriod Start	me Period End	U	R	L	U	R	WB	U	EB	L	
Ti eriod Start 7:30	me Period End 7:45	0	R 1	L 0	0	R 0	WB 7	0	EB 16	L 0	
Ti eriod Start 7:30 7:45	me Period End 7:45 8:00	0	R 1 3	0 0	0	R 0 0	WB 7 10	0	EB 16 14	0 0	
Ti eriod Start 7:30 7:45 8:00	me Period End 7:45 8:00 8:15	0	R 1 3 0	0 0 0	0	R 0 0	WB 7 10 10	0	EB 16 14 10	0 0 0	
Ti eriod Start 7:30 7:45 8:00 8:15	me Period End 7:45 8:00 8:15 8:30	0 0 0 0 0	R 1 3 0 0	0 0 0 0	0 0 0 0 0 0	R 0 0 0	WB 7 10 10 10	0 0 0 0 0	EB 16 14 10 14	0 0 0	
Ti eriod Start 7:30 7:45 8:00 8:15 8:30	Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0	R 1 3 0 0 0	0 0 0 0 0	0 0 0 0 0 0 0 0 0	R 0 0 0 0	WB 7 10 10 10 6	0 0 0 0	EB 16 14 10 14 12	0 0 0 0 0	ł
Ti eriod Start 7:30 7:45 8:00 8:15 8:30 8:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00	0 0 0 0 0	R 1 3 0 0 0 1	0 0 0 0 0	0 0 0 0 0	R 0 0 0 0 0	WB 7 10 10 10 6 15	0 0 0 0 0	EB 16 14 10 14 12 7	L 0 0 0 0 0	l
Ti eriod Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15		R 1 3 0 0 0 1 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	R 0 0 0 0 0 0	WB 7 10 10 10 6 15 11		EB 16 14 10 14 12 7 8	0 0 0 0 0 0 0	1
Ti eriod Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30	0 0 0 0 0 0 0 0 0	R 1 3 0 0 0 1 0 0	L 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0	WB 7 10 10 10 6 15 11 11 14	0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17	C 0 0 0 0 0 0 0 0	
Ti eriod Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 0 1 0 0 0 0	L 0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 10 6 15 11 14 5	0 0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17 3	L 0 0 0 0 0 0 0 0 0 0	
Ti           feriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 0 1 0 0 0 0 0 0	L 0 0 0 0 0 0 0 1 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 10 6 15 11 14 5 5	0 0 0 0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17 3 4	L 0 0 0 0 0 0 0 0 0 0 0	
Ti           feriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15	0 0 0 0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 0 1 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 10 6 15 11 14 5 5 7		EB 16 14 10 14 12 7 8 17 3 4 3	L 0 0 0 0 0 0 0 0 0 0 0 0	
Ti           eriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30		R 1 3 0 0 1 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 1 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 10 6 15 11 14 5 5 7 4		EB 16 14 10 14 12 7 8 17 3 4 3 1	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ł
Ti           Veriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15           17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45		R 1 3 0 0 0 1 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB           7           10           10           10           10           10           11           14           5           7           4           4		EB 16 14 10 14 12 7 8 17 3 4 3 1 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ł
Ti           feriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15           17:30           17:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00		R 1 3 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB           7           10           10           10           10           10           10           11           14           5           7           4           4		EB 16 14 10 14 12 7 8 17 3 4 3 1 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Ti           feriod Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           18:45           17:00           17:15           17:30           17:45           18:00           18:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 6 15 11 14 5 7 7 4 4 4 3 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17 3 4 3 4 3 1 0 0 1 1 1	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	i Peak
Ti eriod Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 Peak	Period End 7:45 8:00 8:15 8:30 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 6 15 11 14 5 7 7 4 4 4 3 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17 3 4 3 4 3 1 0 0 1 1 1	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 Peak
Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:45 17:00 17:45 17:30 17:45 18:00 18:15 Peak	Period End 7:45 8:00 8:15 8:30 9:00 9:15 9:30 9:15 9:30 9:15 9:30 16:45 17:00 17:15 17:00 17:45 18:00 18:15 18:30 18:30 18:35 18:30 18:35 18:30 18:35 18:30 18:35 18:30 18:35 18:30 18:35 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 1 3 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 7 10 10 6 15 11 14 5 5 7 4 4 4 3 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 16 14 10 14 12 7 8 17 3 4 3 1 0 0 1 1 5 5 5 5 5 5 5 5 5 5 5 5 5	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

TURNING MOVEMENT SURVEY

## 

GF3	*33.090307,131.10013	· ·						
Date:	Fri 26/11/21		North:	N/A		Survey		7:30 AM-9:30 AM
Weather:	Fine		East:	Stanmore Rd	1	Period		4:30 PM-6:30 PM
Suburban:	Stanmore		South:	Alma Ave		Traffic		7:45 AM-8:45 AM
Customer:	VTP		West:	Stanmore Rd		Peak	PM:	4:45 PM-5:45 PM

											Hourly To	
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	Hour	Peak
7:30	7:45	0	166	7	0	0	0	0	8	238	1727	
7:45	8:00	0	189	6	0	0	0	0	5	245	1729	Peak
8:00	8:15	0	200	10	0	0	0	0	5	213	1652	
8:15	8:30	0	204	3	0	0	0	0	5	223	1618	
8:30	8:45	0	203	14	0	0	0	0	15	189	1599	
8:45	9:00	0	187	13	0	0	0	0	12	156		
9:00	9:15	0	191	7	0	0	0	0	10	186		
9:15	9:30	0	195	3	0	0	0	0	7	211		
16:30	16:45	0	236	11	0	0	0	0	7	159	1699	
16:45	17:00	0	209	8	0	0	1	0	4	200	1723	Peak
17:00	17:15	0	222	17	0	0	0	0	3	179	1685	
17:15	17:30	0	245	11	0	0	0	0	2	185	1687	
17:30	17:45	0	243	10	0	0	0	0	3	181	1659	
17:45	18:00	0	201	4	0	0	1	0	6	172		
18:00	18:15	0	222	5	0	0	0	0	4	192		
18:15	18:30	0	210	4	0	0	0	0	5	196		
Peak	Time	East App	roach Sta	nmore Rd	South A	pproach /	Alma Ave	West Apr	roach Sta	anmore R	d Peak	1
	Period End		WB	L	U	R	L	U	R	EB	total	



Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Stan more Rd

819 870

**\*\*** 

Ŕ

0 Alma Ave



<u>د ۲</u>



North

Ti				nmore Rd			Alma Ave	West Approach Stanmore R			
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	
7:30	7:45	0	159	7	0	0	0	0	8	225	
7:45	8:00	0	179	6	0	0	0	0	5	229	
8:00	8:15	0	190	10	0	0	0	0	5	203	
8:15	8:30	0	193	3	0	0	0	0	5	210	
8:30	8:45	0	195	14	0	0	0	0	15	177	
8:45	9:00	0	170	13	0	0	0	0	12	147	
9:00	9:15	0	181	7	0	0	0	0	10	178	
9:15	9:30	0	178	3	0	0	0	0	7	191	
16:30	16:45	0	231	11	0	0	0	0	7	156	
16:45	17:00	0	204	8	0	0	1	0	4	196	
17:00	17:15	0	216	16	0	0	0	0	3	177	
17:15	17:30	0	240	11	0	0	0	0	2	184	
17:30	17:45	0	239	10	0	0	0	0	3	181	
17:45	18:00	0	197	4	0	0	1	0	6	172	
18:00	18:15	0	219	5	0	0	0	0	4	191	
18:15	18:30	0	208	4	0	0	0	0	5	195	

### Peak total 1639 rt Period End 8:45 WB 757

			roach Sta							
eriod Start	Period End	U	WB	L	U	R	L	U	R	EB
7:30	7:45	0	7	0	0	0	0	0	0	13
7:45	8:00	0	10	0	0	0	0	0	0	16
8:00	8:15	0	10	0	0	0	0	0	0	10
8:15	8:30	0	11	0	0	0	0	0	0	13
8:30	8:45	0	8	0	0	0	0	0	0	12
8:45	9:00	0	17	0	0	0	0	0	0	9
9:00	9:15	0	10	0	0	0	0	0	0	8
9:15	9:30	0	17	0	0	0	0	0	0	20
16:30	16:45	0	5	0	0	0	0	0	0	3
16:45	17:00	0	5	0	0	0	0	0	0	4
17:00	17:15	0	6	1	0	0	0	0	0	2
17:15	17:30	0	5	0	0	0	0	0	0	1
17:30	17:45	0	4	0	0	0	0	0	0	0
17:45	18:00	0	4	0	0	0	0	0	0	0
18:00	18:15	0	3	0	0	0	0	0	0	1
18:15	18:30	0	2	0	0	0	0	0	0	1
Peak	Time	East App	roach Sta	nmore Ro	South A	pproach /	Alma Ave	West Apr	roach Sta	anmore F
	Period End	U	WB	L	U	R	L	U	R	EB
7:45	8:45	0	39	0	0	0	0	0	0	51
16:45	17:45	0	20	1	0	0	0	0	0	7

	me		h Stanmore Rd		ach Alma Ave		h Stanmore Rd	Hourly Total
Period Start	Period End	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	nouny rotai
7:30	7:45	0	0	4	2	0	0	20
7:45	8:00	0	0	0	2	0	0	18
8:00	8:15	0	0	4	3	0	0	22
8:15	8:30	0	0	0	5	0	0	24
8:30	8:45	0	0	3	1	0	0	22
8:45	9:00	0	0	0	6	0	0	
9:00	9:15	0	0	2	7	0	0	
9:15	9:30	0	0	1	2	0	0	
16:30	16:45	0	0	0	1	0	0	16
16:45	17:00	0	0	4	2	0	0	17
17:00	17:15	0	0	2	2	0	0	15
17:15	17:30	0	0	3	2	0	0	19
17:30	17:45	0	0	0	2	0	0	16
17:45	18:00	0	0	4	0	0	0	
18:00	18:15	0	0	3	5	0	0	
18:15	18:30	0	0	1	1	0	0	
Peak	Time	East Approac	h Stanmore Rd	South Appro	ach Alma Ave	West Approac	h Stanmore Rd	
Period Start	Period End	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Peak total
7:45	8:45	0	0	7	11	0	0	18
16:45	17:45	0	0	9	8	0	0	17





Pedestrians Crossing

TURNING MOVEMENT SURVEY

## 

GPS	-33.696079,151.106668	1					
Date:	Fri 26/11/21		North:	N/A	Survey		7:30 AM-9:30 AM
Weather:	Fine		East:	Stanmore Rd	Period		4:30 PM-6:30 PM
Suburban:	Stanmore		South:	Tupper St	Traffic		7:30 AM-8:30 AM
Customer:	VTP		West:	Stanmore Rd	Peak	PM:	4:45 PM-5:45 PM

											Hourly To	
Period Start	Period End	U	WB	L	U	R	L	U	R	EB	Hour	Peak
7:30	7:45	0	166	1	0	10	7	0	0	238	1747	Peak
7:45	8:00	0	190	2	0	2	5	0	1	244	1704	
8:00	8:15	0	204	7	0	8	6	0	4	209	1624	
8:15	8:30	0	204	5	0	8	3	0	0	223	1588	
8:30	8:45	0	175	8	0	5	2	0	3	186	1570	
8:45	9:00	0	196	4	0	5	3	1	2	153		
9:00	9:15	0	195	13	0	5	3	0	3	183		
9:15	9:30	0	196	8	0	8	2	0	2	209		
16:30	16:45	0	242	12	0	6	5	0	4	155	1747	
16:45	17:00	0	215	11	0	5	2	0	2	198	1773	Peak
17:00	17:15	0	232	10	0	3	7	0	4	175	1736	
17:15	17:30	0	246	12	0	6	10	0	2	183	1750	
17:30	17:45	0	251	9	0	7	2	0	1	180	1721	
17:45	18:00	0	199	10	0	9	6	0	3	169		
18:00	18:15	0	223	12	0	14	4	0	2	190		
18:15	18:30	0	207	13	0	7	7	0	5	191		



Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Period End						rupper St			
	U	WB	L	U	R	L	U	R	EB
7:45	0	159	1	0	10	7	0	0	225
8:00	0	180	2	0	2	5	0	1	228
8:15	0	194	7	0	7	6	0	4	199
8:30	0	193	5	0	8	3	0	0	210
8:45	0	167	8	0	5	2	0	3	174
9:00	0	179	4	0	5	3	1	1	145
9:15	0	185	13	0	5	3	0	3	175
9:30	0	179	8	0	8	2	0	2	189
16:45	0	237	11	0	6	5	0	4	152
17:00	0	210	11	0	5	2	0	2	194
17:15	0	225	10	0	3	7	0	4	173
17:30	0	241	12	0	6	10	0	2	182
17:45	0	247	9	0	7	2	0	1	180
18:00	0	195	10	0	9	6	0	3	169
18:15	0	220	12	0	14	4	0	2	189
18:30	0	205	13	0	7	7	0	5	190
Time	East Apr	roach Sta	nmore Rd	South A	pproach	Fupper St	West Apr	proach St	anmore F
	0	WB	L	U	R	L	U	R	EB
	8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	8:15         0           8:30         0           8:45         0           9:00         0           9:15         0           9:30         0           16:45         0           17:00         0           17:15         0           17:45         0           18:00         0           18:30         0           CTIME         EastApp	8:15         0         194           8:30         0         193           8:45         0         167           9:00         0         179           9:15         0         185           9:30         0         179           16:45         0         237           17:00         0         210           17:45         0         241           17:45         0         247           18:00         0         195           18:15         0         205           18:30         0         205           CIME         ESEApproach Sta	8:15         0         194         7           8:30         0         193         5           8:45         0         167         8           9:00         0         179         4           9:15         0         185         13           9:30         0         179         8           16:45         0         237         11           17:00         0         210         11           17:30         0         241         12           17:45         0         241         12           17:45         0         220         10           18:00         0         195         10           18:00         0         205         13           18:00         0         205         13           18:00         0         205         13           18:00         0         205         13           18:00         0         205         13           18:00         0         205         13           19:5         0         205         13	8:15         0         194         7         0           8:30         0         193         5         0           8:45         0         167         8         0           9:00         0         179         4         0           9:15         0         185         13         0           9:30         0         179         4         0           9:30         0         179         4         0           9:30         0         179         4         0           9:30         0         179         8         0           16:45         0         237         11         0           17:00         0         210         11         0           17:30         0         247         9         0           17:45         0         247         9         0           18:00         0         195         10         0           18:00         0         205         13         0           18:30         0         205         13         0	1         0         12         1         0         7           8:15         0         194         7         0         7           8:30         0         193         5         0         8           8:45         0         167         8         0         5           9:00         0         179         4         0         5           9:30         0         179         8         0         8           16:45         0         237         11         0         6           17:00         0         210         11         0         5           17:15         0         225         10         0         3           17:45         0         241         12         0         6           17:45         0         247         9         0         7           18:00         0         195         10         0         9           18:00         0         195         10         0         9           18:30         0         205         13         0         7           18:30         0         205         13         <	1.10         1.10 <th< td=""><td>Image: Constraint of the sector of</td><td>11         1         1         1         1         1         1           8:15         0         193         5         0         8         3         0         0           8:45         0         193         5         0         8         3         0         0           8:45         0         117         8         0         5         2         0         3           9:00         0         179         4         0         5         3         1         1           9:15         0         185         13         0         5         3         0         3           9:30         0         179         8         0         8         2         0         2           16:45         0         237         11         0         6         5         0         4           17:00         0         210         11         0         5         2         0         2           17:30         0         225         10         0         3         7         0         4           17:45         0         247         9         0         7</td></th<>	Image: Constraint of the sector of	11         1         1         1         1         1         1           8:15         0         193         5         0         8         3         0         0           8:45         0         193         5         0         8         3         0         0           8:45         0         117         8         0         5         2         0         3           9:00         0         179         4         0         5         3         1         1           9:15         0         185         13         0         5         3         0         3           9:30         0         179         8         0         8         2         0         2           16:45         0         237         11         0         6         5         0         4           17:00         0         210         11         0         5         2         0         2           17:30         0         225         10         0         3         7         0         4           17:45         0         247         9         0         7

	Period End		WB	L	U	R	L	U	R	EB	total
7:30	8:30	0	726	15	0	27	21	0	5	862	1656
16:45	17:45	0	923	42	0	21	21	0	9	729	1745
Heavy Vehic	ne	East Ann	roach Sta	nmore Pr	South A	nnroach T	upper St	Noet Ann	roach St	anmora P	
	Period End		WB	L	U	R	L	U	R	EB	
7:30	7:45	0	7	0	0	0	0	0	0	13	
7:45	8:00	0	10	0	0	0	0	0	0	16	
8:00	8:15	0	10	0	0	1	0	0	0	10	
8:15	8:30	0	11	0	0	0	0	0	0	13	
8:30	8:45	0	8	0	0	0	0	0	0	12	
8:45	9:00	0	17	0	0	0	0	0	1	8	
9:00	9:15	0	10	0	0	0	0	0	0	8	
9:15	9:30	0	17	0	0	0	0	0	0	20	
16:30	16:45	0	5	1	0	0	0	0	0	3	
16:45	17:00	0	5	0	0	0	0	0	0	4	
17:00	17:15	0	7	0	0	0	0	0	0	2	
17:15	17:30	0	5	0	0	0	0	0	0	1	
17:30	17:45	0	4	0	0	0	0	0	0	0	
17:45	18:00	0	4	0	0	0	0	0	0	0	
18:00	18:15	0	3	0	0	0	0	0	0	1	
18:15	18:30	0	2	0	0	0	0	0	0	1	
Peak	Time	Fast Ann	roach Sta	nmore Ro	South A	nnroach 1	rupper St	West Anr	roach St	anmore R	d Peak
	Period End	U	WB	L	U	R	L	U	R	EB	total
7:30	8:30	0	38	0	0	1	0	0	0	52	91
16:45	17:45	0	21	0	0	0	0	0	0	7	28

Ti	ne	East Approac	h Stanmore Rd	South Appro	ach Tupper St	West Approac	h Stanmore Rd	Hourly Tota
Period Start	Period End	Southbound	Northbound	Eastbound	Westbound	Southbound	Northbound	Houriy Tota
7:30	7:45	0	0	7	1	0	0	20
7:45	8:00	0	0	0	5	1	0	20
8:00	8:15	0	0	4	1	0	0	24
8:15	8:30	0	0	0	1	0	0	31
8:30	8:45	0	0	2	5	1	0	32
8:45	9:00	0	0	0	7	1	2	
9:00	9:15	2	1	4	4	0	1	
9:15	9:30	0	0	1	1	0	0	
16:30	16:45	0	0	1	3	0	0	24
16:45	17:00	0	0	6	4	0	0	21
17:00	17:15	0	0	8	1	0	0	16
17:15	17:30	0	0	1	0	0	0	12
17:30	17:45	0	0	0	1	0	0	16
17:45	18:00	0	0	4	1	0	0	
18:00	18:15	0	0	2	3	0	0	
18:15	18:30	0	0	1	4	0	0	
Peak	Time	East Approac	h Stanmore Rd	South Appro	ach Tupper St	West Approac	h Stanmore Rd	
Period Start	Period End	Southbound	Northbound	Eastbound	Westbound	Southbound	Northbound	Peak tota
7:30	8:30	0	0	11	8	1	0	20
16:45	17:45	0	0	15	6	0	0	21





GPS	-33.898899,151.169476	5					
Date:	Fri 26/11/21	N	lorth:	Liberty St	Survey		7:30 AM-9:30 AM
Weather:	Fine	E	ast:	Stanmore Rd	Period		4:30 PM-6:30 PM
Suburban:	Stanmore	S	outh:	N/A	Traffic		7:45 AM-8:45 AM
Customer:	VTP	и	Vest:	Stanmore Rd	Peak	PM:	4:45 PM-5:45 PM

	me			.iberty St						anmore R	Hourly To	
Period Start	Period End	U	R	L	υ	R	WB	U	EB	L	Hour	Peak
7:30	7:45	0	35	71	0	71	132	0	222	26	2292	
7:45	8:00	0	45	58	0	69	147	0	228	18	2311	Peak
8:00	8:15	0	54	77	0	62	157	0	195	22	2284	
8:15	8:30	0	60	82	0	81	149	0	209	22	2283	
8:30	8:45	0	30	93	0	109	153	0	161	30	2243	
8:45	9:00	0	56	86	0	93	145	0	145	13		
9:00	9:15	0	37	89	0	81	171	0	175	13		
9:15	9:30	0	43	72	0	70	161	0	203	14		
16:30	16:45	0	72	109	0	102	182	0	140	21	2496	
16:45	17:00	0	57	88	0	111	169	0	188	15	2508	Peak
17:00	17:15	0	65	98	0	97	177	0	158	20	2470	
17:15	17:30	0	64	90	0	90	194	0	170	19	2473	
17:30	17:45	0	58	99	0	92	202	0	162	25	2457	
17:45	18:00	0	52	109	0	94	157	0	156	22		
18:00	18:15	0	57	93	0	86	178	0	175	29		
18:15	18:30	0	46	100	0	93	174	0	184	14		

### Peak total 2311 2508 ty S Peak T Period Start P 7:45 16:45 ime eriod Enc 8:45 17:45 EB 793 678 0

ction is indicative only, drawing is not to scale and not an exact streets configuration ting traffic flows. Dir



Tir	ne		ach Liberty St		h Stanmore Rd		ch Stanmore Rd	Hourly Tota
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	Hourry Tota
7:30	7:45	0	0	1	2	0	0	17
7:45	8:00	0	1	3	1	0	0	26
8:00	8:15	1	1	4	2	0	0	34
8:15	8:30	0	0	1	0	0	0	33
8:30	8:45	1	0	9	2	0	0	35
8:45	9:00	0	2	2	9	0	0	
9:00	9:15	1	1	2	3	0	0	
9:15	9:30	0	0	1	2	0	0	
16:30	16:45	0	3	3	1	0	0	22
16:45	17:00	1	2	2	3	0	0	24
17:00	17:15	0	1	0	1	0	0	23
17:15	17:30	0	2	1	2	0	0	37
17:30	17:45	2	4	0	3	0	0	40
17:45	18:00	1	0	5	1	0	0	
18:00	18:15	4	2	5	5	0	0	
18:15	18:30	1	2	3	2	0	0	
Peak	Time	North Appro	ach Liberty St	East Approac	h Stanmore Rd	West Approac	h Stanmore Rd	Peak total
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	
7:45	8:45	2	2	17	5	0	0	26
16:45	17:45	3	9	3	9	0	0	24



Pedestrians Crossing

Tii	me	North A	pproach L	liberty St	East App	roach Sta	nmore Rd	west App	roach Sta	anmore R	
Period Start	Period End	U	R	Ľ	U	R	WB	U	EB	L	
7:30	7:45	0	34	69	0	64	126	0	209	26	
7:45	8:00	0	44	55	0	63	138	0	213	17	
8:00	8:15	0	52	74	0	57	149	0	185	21	
8:15	8:30	0	60	80	0	78	138	0	196	22	
8:30	8:45	0	29	88	0	107	146	0	150	29	
8:45	9:00	0	55	82	0	90	129	0	137	13	
9:00	9:15	0	37	87	0	80	161	0	168	12	
9:15	9:30	0	42	68	0	68	145	0	183	14	
16:30	16:45	0	71	108	0	101	177	0	137	21	
16:45	17:00	0	57	84	0	110	164	0	184	15	
17:00	17:15	0	65	96	0	97	170	0	156	20	
17:15	17:30	0	63	89	0	89	190	0	169	19	
17:30	17:45	0	58	98	0	91	198	0	162	25	
17:45	18:00	0	51	108	0	94	154	0	156	22	
18:00	18:15	0	57	93	0	86	175	0	174	29	
18:15	18:30	0	46	98	0	93	172	0	183	14	
Book	Time	North A	nnraaahl	lb orby Ct	East Ann	rooch Cto	nmoro Ba	Nect App	reach St	anmore R	Peak
	Period End	U	R	Liberty St	East App U	R	WB	U	EB		total
7:45	8:45	0	185	297	0	305	571	0	744	89	2191
16:45	17:45	0	243	367	0	387	722	0	671	79	2469
Heavy Vehic Tin Period Start	me	North A	pproach L R	iberty St	East App	roach Sta R	nmore Ro WB	West App U	roach Sta	anmore R	
				_							
7:30	7:45	0	1	2	0	7	6	0	13	0	
7:45 8:00	8:00 8:15	0	1	3	U	6	9	U	15	1	
8:15	8:30	0				E	0		10	4	
8:30		0		3	0	5	8	0	10	1	
		0	0	2	0	3	11	0	13	0	
0.45	8:45	0	0	2 5	0	3	11 7	0	13 11	0	
8:45	8:45 9:00	0	0 1 1	2 5 4	0 0	3 2 3	11 7 16	0 0	13 11 8	0 1 0	
9:00	8:45 9:00 9:15	0 0 0	0 1 1 0	2 5 4 2	0 0 0	3 2 3 1	11 7 16 10	0 0 0	13 11 8 7	0 1 0 1	
9:00 9:15	8:45 9:00 9:15 9:30	0 0 0 0	0 1 1 0 1	2 5 4 2 4	0 0 0 0	3 2 3 1 2	11 7 16 10 16	0 0 0 0	13 11 8 7 20	0 1 0 1 0	
9:00	8:45 9:00 9:15	0 0 0	0 1 1 0	2 5 4 2	0 0 0	3 2 3 1	11 7 16 10	0 0 0	13 11 8 7	0 1 0 1	
9:00 9:15 16:30 16:45	8:45 9:00 9:15 9:30 16:45 17:00	0 0 0 0 0 0 0	0 1 1 0 1 1	2 5 4 2 4 1	0 0 0 0 0	3 2 3 1 2 1	11 7 16 10 16 5	0 0 0 0 0	13 11 8 7 20 3	0 1 0 1 0 0	
9:00 9:15 16:30	8:45 9:00 9:15 9:30 16:45	0 0 0 0 0	0 1 1 0 1 1 0	2 5 4 2 4 1 4	0 0 0 0 0 0	3 2 3 1 2 1 1	11 7 16 10 16 5 5	0 0 0 0 0 0	13 11 8 7 20 3 4	0 1 0 1 0 0 0	
9:00 9:15 16:30 16:45 17:00	8:45 9:00 9:15 9:30 16:45 17:00 17:15		0 1 1 0 1 1 0 0	2 5 4 2 4 1 4 2	0 0 0 0 0 0 0	3 2 3 1 2 1 1 0	11 7 16 10 16 5 5 7	0 0 0 0 0 0 0	13 11 8 7 20 3 4 2	0 1 0 1 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15 17:30	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45	0 0 0 0 0 0 0 0 0	0 1 1 0 1 1 0 0 0 1 0	2 5 4 2 4 1 4 2 1 2 1 1	0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 1 0 1	11 7 16 10 16 5 5 7 4 4 4	0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 0	0 1 0 1 0 0 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30		0 1 1 0 1 1 0 0 0	2 5 4 2 4 1 4 2 1 4 2 1	0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 1	11 7 16 10 16 5 5 7 4	0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1	0 1 0 0 0 0 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00	0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 0 1 1 0 0 0 1 0 1	2 5 4 2 4 1 4 2 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 0	11 7 16 10 16 5 5 7 4 4 4 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 0 0 0	0 1 0 0 0 0 0 0 0 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 1 1 0 0 0 1 0 1 0 0 0	2 5 4 1 4 2 1 4 2 1 1 1 1 0 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 0 0 0 0	11 7 16 10 16 5 5 7 4 4 3 3 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 0 0 0 1 1	0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 <b>Peak</b>	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30 <b>Time</b>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 1 1 0 0 1 1 0 1 0 1 0 0 0 9 0	2 5 4 1 4 1 4 2 1 1 1 1 0 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 0 0 0 0 0 0	11 7 16 10 16 5 5 7 4 4 4 3 3 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 2 1 0 0 0 1 1 1	0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 Peakk Period Start	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30 Time Period End	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 0 1 0 0 1 0 1 0 0 1 0 0 0 1 0 0 0 1 8	2 5 4 1 4 2 1 1 1 1 0 2 2 <b>Iberty St</b>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 0 0 0 0 0 0 0 0	111 7 16 10 16 5 7 4 4 3 3 2 mmore Rd WB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 0 0 1 1 FOR SET	0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	total
9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 Peak	8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30 <b>Time</b>	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 1 1 1 0 0 1 1 0 1 0 1 0 0 0 9 0	2 5 4 1 4 1 4 2 1 1 1 1 0 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 2 3 1 2 1 1 0 1 1 0 0 0 0 0 0	11 7 16 10 16 5 5 7 4 4 4 3 3 2 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	13 11 8 7 20 3 4 2 1 2 1 0 0 0 1 1 1	0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

Inter sec	lion of Eugewa	enu		nore nu,
	-33.899467,151.1709	40		
	Fri 26/11/21		North:	Enmore Rd
Weather:				Edgeware Ro
Suburban:			South:	Enmore Rd
Customer:	VIP		West:	Stanmore Rd

Time

 Survey
 Att:
 7:30 AM-9:30 AM

 Period
 PMC
 4:30 PM-0:30 PM

 Traffic
 Att:
 8:00 AM-9:00 AM

 Peak
 PMC
 4:45 PM-5:45 PM

	me		h Approa		re Rd		Approac		are Rd	Sou	th Approx	sch Enmor	e Rd	West	Approac	h Stanmo	ore Rd		y Total
eriod Star	Period End	U	R	SB	L	U	R	WB	L	U	ĸ	NB	L	U	к	EB	L	Hour	Pea
7:30	7:45	0	52	77	18	0	0	126	0	0	0	97	2	0	0	165	92	2791	
7:45	8:00	0	43	79	18	0	0	145	0	0	0	137	5	0	0	190	68	2934	
8:00	8:15	0	52	69	15	0	0	150	0	0	0	126	9	0	0	218	89	2951	Pea
8:15	8:30	0	56	92	17	0	0	141	1	0	0	152	24	0	0	181	85	2932	
8:30	8:45	0	82	80	18	0	0	148	0	0	0	149	41	0	0	191	63	2924	
8:45	9:00	0	63	91	25	0	0	141	2	0	0	132	30	0	0	172	46		
9:00	9:15	0	55	99	13	0	0	169	2	0	0	110	16	0	0	172	73		
9:15	9:30	0	62	107	13	0	1	171	1	0	0	107	15	0	0	185	79		
16:30	16:45	0	82	99	19	0	0	178	8	0	0	79	35	0	0	186	69	3082	
16:45	17:00	0	73	109	31	0	0	170	1	0	0	107	33	0	0	184	87	3087	Pea
17:00	17:15	0	103	98	15	0	0	160	2	0	0	108	17	0	0	182	61	3025	
17:15	17:30	0	76	94	23	0	0	174	0	0	0	115	33	0	0	188	83	3002	
17:30	17:45	0	89	80	21	0	0	188	0	0	0	88	21	0	0	192	81	2964	
17:45	18:00	0	84	90	21	0	0	153	3	0	0	105	17	0	0	194	66		
18:00	18:15	0	96	98	22	0	0	160	1	0	0	78	19	0	0	165	84		
18:15	18:30	0	66	109	22	0	0	175	2	0	0	82	22	0	0	188	82		
Peak	Time	Nort	h Approa	ch Enmo	re Rd	Fast	Approac	h Edgew:	are Rd	Sou	th Approx	sch Enmor	e Rd	West	Approac	h Stanmo	ve Rd	Peak	
	Period End	U	R	SB	L	U	R	WB	L	000	R	NB	L	U	R	EB	L	total	
8:00	9:00	0	253	332	75	0	0	580	3	0	0	559	104	0	0	762	283	2951	

	me								h Stanmore Rd	Hourly Tot
eriod Sta	Period En	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Hourry Tot
7:30	7:45	0	2	2	7	1	1	1	1	71
7:45	8:00	1	5	1	1	1	1	3	1	69
8:00	8:15	1	2	6	0	2	1	1	1	78
8:15	8:30	0	2	12	3	3	2	3	3	87
8:30	8:45	0	1	5	3	1	0	1	2	71
8:45	9:00	4	1	5	4	2	0	3	4	
9:00	9:15	2	1	4	1	0	1	12	2	
9:15	9:30	0	1	1	1	0	0	5	4	
16:30	16:45	2	3	4	9	4	7	4	13	153
16:45	17:00	3	2	2	11	4	6	6	14	144
17:00	17:15	0	4	2	2	0	2	16	9	156
17:15	17:30	0	1	0	6	1	1	6	9	163
17:30	17:45	2	5	8	3	3	1	6	9	199
17:45	18:00	0	3	12	11	7	5	12	10	
18:00	18:15	3	3	6	8	2	7	7	6	
18:15	18:30	4	5	13	6	2	2	16	12	
Heek	Time	North America	ak komere Va			Parale Approx	oh Enmore Ud	West & surress	h Stanmore Rd	
	Period En	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound	Northbound		Peak hou total
8:00	9:00	5	6	28	10	8	3	8	10	78
10:40	17:45	5	12	12	22	8	10	34	41	144

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 762
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 2857

 Note:
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 924
 3
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 416
 104
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 746
 312
 3057



			Approu					in Eugeni				CH Linnon			Approac			
Period Star	Period End	U	к	SB	L	U	к	WB	L	U	к	NB	L	U	к	EB	L	
7:30	7:45	0	50	64	18	0	0	115	0	0	0	87	2	0	0	159	85	
7:45	8:00	0	38	75	18	0	0	136	0	0	0	120	5	0	0	178	64	
8:00	8:15	0	50	63	13	0	0	142	0	0	0	112	8	0	0	206	84	
8:15	8:30	0	53	83	16	0	0	131	1	0	0	136	24	0	0	173	79	
8:30	8:45	0	79	73	17	0	0	144	0	0	0	132	39	0	0	176	62	
8:45	9:00	0	58	84	24	0	0	129	2	0	0	125	28	0	0	165	42	
9:00	9:15	0	51	90	13	0	0	164	2	0	0	100	14	0	0	163	72	
9:15	9:30	0	57	94	11	0	1	159	1	0	0	99	14	0	0	166	78	
16:30	16:45	0	82	93	19	0	0	174	8	0	0	72	35	0	0	184	68	
16:45	17:00	0	72	98	31	0	0	165	1	0	0	100	33	0	0	175	87	
17:00	17:15	0	100	93	15	0	0	155	2	0	0	101	17	0	0	180	61	
17:15	17:30	0	75	82	23	0	0	171	0	0	0	108	32	0	0	185	82	
17:30	17:45	0	87	70	21	0	0	187	0	0	0	84	21	0	0	191	81	
17:45	18:00	0	82	83	21	0	0	152	3	0	0	100	17	0	0	193	66	
18:00	18:15	0	93	90	22	0	0	160	1	0	0	73	19	0	0	164	84	
18:15	18:30	0	64	95	22	0	0	175	2	0	0	75	22	0	0	186	82	
Peak	Time	Nort	h Approa	ch Enmo	re Rd	East	Approac	h Edgewa	are Rd	Sou	th Approa	ch Enmor	e Rd	West	Approac	h Stanmo	ore Rd	Peak
Period Star	Period End	U	R	SB	L	U	ĸ	WB.	L	U	R	NB	L	U	ĸ	FR	L	total
8:00	9:00 17:45	0	240 334	303 343	70 90	0	0	546 678	3	0	0	505 393	99 103	0	0	720	267	2753 2986
10.40	17.40	v	004	040	50	v	0	0/0	5	0	Ū	555	100	0	0	701	511	2300
Heavy Vehi	icles																	
	Period End	Nort	h Approa R	Ch Enmo SB	re Rd	East	Approac R	h Edgewa WB	re Rd	U	th Approa	NB	e Rd	West	Approac	h Stanmo EB	L	
7:30	7:45	0	2	13	0	0	0	11	0	0	0	10	0	0	0	6	7	
7:45	8:00	0	5	4	0	0	0	9	0	0	0	17	0	0	0	12	4	
8:00	8:15	0	2	6	2	0	0	8	0	0	0	14	1	0	0	12	5	
8:15	8:30	0	3	9	1	0	0	10	0	0	0	16	0	0	0	8	6	
8:30	8:45	0	3	7	1	0	0	4	0	0	0	17	2	0	0	15	1	
8:45	9:00	0	5	7	1	0	0	12	0	0	0	7	2	0	0	7	4	
9:00	9:15	0	4	9	0	0	0	5	0	0	0	10	2	0	0	9	1	
9:15	9:30	0	5	13	2	0	0	12	0	0	0	8	1	0	0	19	1	
16:30	16:45	0	0	6	0	0	0	4	0	0	0	7	0	0	0	2	1	
16:45	17:00	0	1	11	0	0	0	5	0	0	0	7	0	0	0	9	0	
17:00	17:15	0	3	5	0	0	0	5	0	0	0	7	0	0	0	2	0	
17:15	17:30	0	1	12	0	0	0	3	0	0	0	7	1	0	0	3	1	
17:30	17:45	0	2	10	0	0	0	1	0	0	0	4	0	0	0	1	0	
17:30 17:45			· ·			-	0	1	0	0	0	4	0	0	0	1	0	
	17:45	0	2	10	0	0												
17:45	17:45 18:00	0	2	10 7	0	0	0	1	0	0	0	5	0	0	0	1	0	
17:45 18:00 18:15	17:45 18:00 18:15 18:30	0 0 0 0	2 2 3 2	10 7 8 14	0 0 0 0	0 0 0 0	0	1 0 0	0	0	0	5 5 7	0 0	0 0	0	1 1 2	0	
17:45 18:00 18:15 Peak	17:45 18:00 18:15 18:30	0 0 0 0	2 2 3 2 h Approa	10 7 8 14 ch Enmo	0 0 0 0	0 0 0 0 East	0 0 0 Approac	1 0 0 h Edgewa	0 0 0 are Rd	0 0 0 0 0	0 0 0 th Appros	5 5 7 ch Enmore	0 0 0 e Rd	0 0	0 0 0 Approac	1 1 2 h Stanmo	0	Peak
17:45 18:00 18:15	17:45 18:00 18:15 18:30	0 0 0 0 Nort	2 2 3 2	10 7 8 14	0 0 0 7e Rd	0 0 0 0	0	1 0 0	0	0	0	5 5 7	0 0	0 0 0 West	0	1 1 2	0 0 0	Peak total

North Approach Enmore Rd East Approach Edgeware Rd South Approach Enmore Rd West Approach Stanmore Rd



Intersee	non or neuring		and Are, oturniore			
GPS	-33.900909,151.166840	0				
Date:	Fri 26/11/21	North:	Alma Ave	Survey		7:30 AM-9:
Weather:	Fine	East:	Newington Rd	Period		4:30 PM-6
Suburban:	Stanmore	South:	N/A	Traffic		8:00 AM-9
Customer:			Newington Rd	Peak	PM:	5:15 PM-6

Ti	me	North A	pproach /	Alma Ave	East Appr	oach Nev	vington R	Vest App	roach Nev	vington R	Hourl	y Total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:30	7:45	0	2	5	0	0	6	0	12	0	136	
7:45	8:00	0	1	4	0	0	7	0	14	0	165	
8:00	8:15	0	7	6	0	0	3	0	21	0	189	Peak
8:15	8:30	0	6	5	0	0	8	0	29	0	189	Peak
8:30	8:45	0	10	11	0	0	13	0	20	0	183	
8:45	9:00	0	17	6	0	0	9	0	18	0		
9:00	9:15	0	4	12	0	0	1	0	20	0		
9:15	9:30	0	3	12	0	0	7	0	20	0		
16:30	16:45	0	5	4	0	0	17	0	19	0	147	
16:45	17:00	0	4	5	0	0	12	0	18	0	146	
17:00	17:15	0	3	6	0	0	6	0	13	0	140	
17:15	17:30	0	4	6	0	0	7	0	18	0	151	Peak
17:30	17:45	0	7	6	0	0	14	0	17	0	147	
17:45	18:00	0	2	2	0	0	10	0	19	0		
18:00	18:15	0	6	4	0	0	10	0	19	0		
18:15	18:30	0	4	4	0	0	15	0	8	0		

Peak	Time	North A	pproach A	Alma Ave	East Appr	oach New	ington R	Vest App	oach Nev	vington R	Peak
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total
8:00	9:00	0	40	28	0	0	33	0	88	0	189
17:15	18:15	0	19	18	0	0	41	0	73	0	151

ng traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configur



 U
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 Vest Approach Newington R
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vington R L 0

Light Vehicles Tim

Time eriod Start Period End 7:30 7:45 Period Sta

North Approach U R 0 2

5

	ne		ach Alma Ave		n Newington Rd		h Newington Rd	Hourly Tota
Period Start	Period End	Eastbound	Westbound	Southbound	Northbound	Southbound	Northbound	Hourly Tota
7:30	7:45	1	1	0	0	0	0	14
7:45	8:00	1	1	0	0	0	0	15
8:00	8:15	0	0	0	0	2	0	18
8:15	8:30	3	5	0	0	0	0	16
8:30	8:45	0	3	0	0	0	0	9
8:45	9:00	4	0	0	1	0	0	
9:00	9:15	0	0	0	0	0	0	
9:15	9:30	0	0	0	1	0	0	
16:30	16:45	4	0	0	0	1	0	15
16:45	17:00	0	1	0	0	0	0	11
17:00	17:15	2	0	0	0	0	0	11
17:15	17:30	3	2	1	1	0	0	10
17:30	17:45	1	0	0	0	0	0	7
17:45	18:00	1	0	0	0	0	0	
18:00	18:15	1	0	0	0	0	0	
18:15	18:30	3	0	0	1	0	0	
Peak	Time	North Appro	ach Alma Ave	East Approact	Newington Rd	West Approac	h Newington Rd	_
Period Start	Period End	Eastbound	Westbound	Southbound	Northbound	Southbound	Northbound	Peak total
8:00 17:15	9:00 18:15	7	8	0	1	2	0	18 10



7:45	8:00	0	1	4	0	0	7	0	13	0	
8:00	8:15	0	7	6	0	0	3	0	20	0	
8:15	8:30	0	6	5	0	0	8	0	29	0	
8:30	8:45	0	10	11	0	0	13	0	20	0	
8:45	9:00	0	17	6	0	0	9	0	17	0	
9:00	9:15	0	4	12	0	0	1	0	20	0	
9:15	9:30	0	3	12	0	0	7	0	19	0	
16:30	16:45	0	5	4	0	0	17	0	19	0	
16:45	17:00	0	4	5	0	0	12	0	18	0	
17:00	17:15	0	3	6	0	0	6	0	13	0	
17:15	17:30	0	4	6	0	0	7	0	18	0	
17:30	17:45	0	7	6	0	0	12	0	17	0	
17:45	18:00	0	2	2	0	0	10	0	19	0	
18:00	18:15	0	6	4	0	0	10	0	19	0	
18:15	18:30	0	4	4	0	0	15	0	8	0	
Posk	Time	North A	pproach /		East Ann	oach Nev	vington P	NeetAnn	oach Nov	vington P	Peak
	Period End	NOTULA	R			R	WB	VestApp	EB	VIIIgton K	total
8:00	9:00	0	40	28	0	0	33	0	86	0	187
17:15	18:15	0	19	18	0	0	39	0	73	0	149
	me		pproach /				vington R			vington R	
Ti Period Start	me Period End	U	R	L	U	R	WB	U	EB	L	
Ti Period Start 7:30	me Period End 7:45	0	R 0	0	0	R 0	0 WB	0	EB 0	0	
Tii Period Start 7:30 7:45	me Period End 7:45 8:00	0	R 0 0	0	0	R 0 0	0 0	0	0 1	0 0	
Tii Period Start 7:30 7:45 8:00	me Period End 7:45 8:00 8:15	0	R 0 0	0 0 0	0	R 0 0	0 0 0	0	0 1 1	0 0 0	
Tii Period Start 7:30 7:45 8:00 8:15	me Period End 7:45 8:00 8:15 8:30	0 0 0 0 0 0	R 0 0 0	0 0 0 0	0 0 0 0 0 0	R 0 0 0	0 0 0 0	0 0 0 0	EB 0 1 1 0	0 0 0 0	
Tii Period Start 7:30 7:45 8:00 8:15 8:30	me Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0	R 0 0 0 0 0	0 0 0 0	0 0 0 0	R 0 0 0 0	WB 0 0 0 0 0	0 0 0 0 0	EB 0 1 1 0 0	0 0 0 0 0	
Tii Period Start 7:30 7:45 8:00 8:15 8:30 8:45	me Period End 7:45 8:00 8:15 8:30 8:45 9:00	0 0 0 0 0	R 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	R 0 0 0 0 0	WB 0 0 0 0 0 0	0 0 0 0 0 0	EB 0 1 1 0 0 1	0 0 0 0 0 0	
Tii Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15	0 0 0 0 0 0	R 0 0 0 0 0 0 0	C 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	R 0 0 0 0 0 0	WB 0 0 0 0 0 0 0	0 0 0 0 0 0 0	EB 0 1 1 0 0 1 0	0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30	0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	EB 0 1 1 0 0 1 0 1	0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0	L 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	EB 0 1 1 0 0 1 0 1	L 0 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0	L 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Time           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15           17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Til           Period Start           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15           17:30           17:45	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:30 16:45 17:00 17:15 17:30 17:45 18:00		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		EB 0 1 1 0 1 0 1 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Til           7:30           7:45           8:00           8:15           8:00           9:15           16:30           16:45           17:05           17:30           17:45           18:00           18:15	Period End Period 2 nd 8:00 8:15 8:30 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Basi
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ection of Newington Rd and Tupper St. Stanmore

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GPS	-33.901151,151.16750	6					
Date:	Fri 26/11/21		North:	Tupper St	Survey		7:30 AM-9:30 AM
Weather:	Fine		East:	Newington Rd	Period		4:30 PM-6:30 PM
Suburban:	Stanmore		South:	N/A	Traffic		8:15 AM-9:15 AM
Customer:	VTP		West:	Newington Rd	Peak	PM:	5:15 PM-6:15 PM

	me			Fupper St						vington R		y Total
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:30	7:45	0	0	6	0	4	6	0	9	8	159	
7:45	8:00	0	1	5	0	3	6	0	16	2	187	
8:00	8:15	0	1	7	0	4	2	0	20	7	192	
8:15	8:30	0	3	6	0	4	5	0	29	5	199	Peak
8:30	8:45	1	1	12	0	4	12	0	25	6	194	
8:45	9:00	0	1	5	0	0	8	0	14	10		
9:00	9:15	0	0	14	0	1	1	0	30	2		
9:15	9:30	0	4	6	1	1	3	0	23	9		
16:30	16:45	0	3	8	0	6	14	0	19	4	181	
16:45	17:00	1	6	3	0	4	6	0	18	5	177	
17:00	17:15	0	3	8	0	3	3	0	14	5	182	
17:15	17:30	0	1	14	0	3	6	0	18	6	197	Peak
17:30	17:45	0	3	8	0	5	11	0	16	7	194	
17:45	18:00	0	3	9	0	8	7	0	13	8		
18:00	18:15	0	1	10	0	8	9	0	14	9		
18:15	18:30	0	6	12	0	6	9	0	8	4		

### Peak total 199 197 Peak Time eriod Start Period End 8:15 9:15 17:15 18:15 WB 26 EB 98

ing is not to scale and not an exact streets config



 Increase North Approach Tupper StEast Approach Newington R NestApproach Newington R

 ard Period End
 U
 R
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 7:45
 0
 0
 6
 0
 4
 6
 0
 9
 8

Light Vehicles Time

Period Sta 7:30

Tir	me		ach Tupper St		n Newington Rd		h Newington Rd	Hourly Tota
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	Hourry Tota
7:30	7:45	1	1	1	1	0	0	13
7:45	8:00	1	1	0	1	0	0	17
8:00	8:15	1	0	1	0	0	0	21
8:15	8:30	3	1	0	0	0	0	25
8:30	8:45	3	0	0	0	3	2	23
8:45	9:00	1	2	2	0	0	2	
9:00	9:15	1	3	0	0	0	2	
9:15	9:30	0	1	1	0	0	0	
16:30	16:45	1	4	0	0	0	0	16
16:45	17:00	0	1	0	0	0	0	14
17:00	17:15	0	3	0	1	0	0	16
17:15	17:30	2	0	0	0	1	3	15
17:30	17:45	1	2	0	0	0	0	13
17:45	18:00	2	0	0	0	0	1	
18:00	18:15	0	2	1	0	0	0	
18:15	18:30	0	1	0	3	0	0	
Peak	Time		ach Tupper St		n Newington Rd		h Newington Rd	Peak tota
Period Start	Period End	Westbound	Eastbound	Northbound	Southbound	Northbound	Southbound	
8:15	9:15	8	6	2	0	3	6	25
17:15	18:15	5	4	1	0	1	4	15



Pedestrians Cros

7:45											
	8:00	0	1	5	0	3	6	0	15	2	
8:00	8:15	0	1	7	0	4	2	0	20	6	
8:15	8:30	0	3	6	0	4	5	0	29	5	
8:30	8:45	1	1	12	0	4	12	0	25	6	
8:45	9:00	0	1	5	0	0	8	0	13	10	
9:00	9:15	0	0	14	0	1	1	0	30	2	
9:15	9:30	0	4	6	1	1	3	0	22	9	
16:30	16:45	0	3	7	0	6	14	0	19	4	
16:45	17:00	1	6	3	0	4	6	0	18	5	
17:00	17:15	0	3	8	0	3	3	0	14	5	
17:15	17:30	0	1	14	0	3	6	0	18	6	
17:30	17:45	0	3	8	0	5	9	0	16	7	
17:45	18:00	0	3	9	0	8	7	0	13	8	
18:00	18:15	0	1	10	0	8	9	0	14	9	
18:15	18:30	0	6	12	0	6	9	0	8	4	
	Time Period End	North A	pproach 1 R	L L	East Appr U	roach Nev R	wington R WB	Vest App U	roach Nev EB	vington R	Peak total
8:15	9:15	1	к 5	37	0	к 9	26	0	97 97	23	198
17:15	18:15	0	8	41	ő	24	31	ő	61	30	195
Ti	me						vington R WB			vington R	
Ti Period Start	me Period End	U	R	L	U	R	WB	U	EB	L	
Ti Period Start 7:30	me Period End 7:45	0	R 0	0	0	R 0	WB 0	0	EB 0	0	
Ti Period Start 7:30 7:45	me Period End 7:45 8:00	0	R 0 0	0	0	R 0 0	0 0	0	EB 0 1	0	
Ti Period Start 7:30 7:45 8:00	me Period End 7:45 8:00 8:15	0	R 0	0	0	R 0	WB 0	0	EB 0	0	
Ti Period Start 7:30 7:45	me Period End 7:45 8:00	0	R 0 0	0 0 0	0	R 0 0	0 0 0	0	EB 0 1 0	0 0 1	
Tii Period Start 7:30 7:45 8:00 8:15	me Period End 7:45 8:00 8:15 8:30	0 0 0 0	R 0 0 0	0 0 0	0 0 0 0	R 0 0 0	0 0 0 0	0 0 0 0 0 0	EB 0 1 0	0 0 1 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30	Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0	R 0 0 0 0 0	0 0 0 0	0 0 0 0 0 0 0 0 0	R 0 0 0 0	WB 0 0 0 0 0	0 0 0 0 0 0 0 0	EB 0 1 0 0 0	0 0 1 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:30 8:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00	0 0 0 0 0	R 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	R 0 0 0 0 0	WB 0 0 0 0 0 0	0 0 0 0 0	EB 0 1 0 0 0 1	0 0 1 0 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15		R 0 0 0 0 0 0 0	0 0 0 0 0 0		R 0 0 0 0 0 0	WB           0           0           0           0           0           0           0           0           0           0           0           0           0           0	0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0	0 0 1 0 0 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30	0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0	WB           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0           0	0 0 0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0 1 0	0 0 1 0 0 0 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 1	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0 1 0 1	L 0 1 0 0 0 0 0 0 0	
Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0 1 0 0 0	L 0 1 0 0 0 0 0 0 0 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 1 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0 0 0 0 0 0	L 0 1 0 0 0 0 0 0 0 0 0 0	
Ti Period Start 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0	L 0 1 0 0 0 0 0 0 0 0 0 0 0 0	
Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 0 1 0 1 0 0 0 0 0 0 0	L 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	
Ti Priod Start 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 16:45 17:00 17:15 17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		EB 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0	L 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Ti           7:30           7:45           8:00           8:15           8:00           9:15           16:30           16:45           17:00           17:15           17:30           17:45           18:00           18:15	Period End 7:45 8:00 8:15 8:30 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Part
Ti 7:30 7:45 8:00 8:15 8:30 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:30 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Peak
Ti 7:30 7:45 8:00 8:15 8:30 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	Period End 7:45 8:00 8:15 8:30 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EB 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Peak total

ion of Newington Rd and Enmore Rd. Stanmore

GPS	-33.901954,151.169566						
Date:	Fri 26/11/21	North	Enmore Rd		Survey		7:30 AM-9:30 AM
Weather:	Fine	East:	N/A		Period		4:30 PM-6:30 PM
Suburban:	Stanmore	South	h: Enmore Rd		Traffic		8:00 AM-9:00 AM
Customer:	VTP	West	: Newington Rd		Peak	PM:	4:45 PM-5:45 PM
				-			

										vington R		y Total
Period Star	Period End	U	R	SB	U	NB	L	U	R	L	Hour	Peak
7:30	7:45	0	0	58	0	116	0	0	9	15	989	
7:45	8:00	0	0	78	0	128	0	0	6	21	1068	
8:00	8:15	0	0	86	0	156	0	0	10	13	1077	Peak
8:15	8:30	0	0	99	0	159	0	0	6	29	1032	
8:30	8:45	0	0	89	0	149	0	0	17	22	961	
8:45	9:00	0	0	84	0	135	0	0	17	6		
9:00	9:15	0	0	90	0	108	0	0	11	11		
9:15	9:30	0	0	75	0	120	0	0	8	19		
16:30	16:45	0	0	106	0	97	0	0	15	19	1030	
16:45	17:00	0	0	129	1	114	0	0	12	13	1043	Peak
17:00	17:15	0	0	115	0	109	0	0	16	18	1015	
17:15	17:30	0	0	122	0	119	0	0	8	17	990	
17:30	17:45	0	0	102	0	123	0	0	11	14	939	
17:45	18:00	0	0	123	0	96	0	0	11	11		
18:00	18:15	0	0	106	0	93	0	0	17	17		
18:15	18:30	0	0	101	0	92	0	0	11	11		

	Peak	Time	North Ap	proach E	nmore Ro	South Ap	proach E	nmore RV	est Appr	oach Nev	vington R	
Pe	eriod Star	Period End	U	R	SB	U	NB	L	U	R	L	total
	8:00	9:00	0	0	358	0	599	0	0	50	70	1077
	16:45	17:45	0	0	468	1	465	0	0	47	62	1043

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configurati Graphic



Light Vehicles

Image         North Approach Emmore RFS outh Approach Emmore RF set Approach         Approach Z approach         New Igen R         <	Ті	me	North An	proach F	nmore Rd	South ∆r	proach F	nmore RV	est Appr	oach Nev	vinaton R		
7.30         7.45         0         0         53         0         107         0         0         9         15           7.45         8.00         0         0         71         0         110         0         0         53         19           8.00         8.15         0         0         79         0         142         0         0         13           8.15         8.30         0         0         73         0         138         0         0         6         29           8.30         8.45         0         0         76         0         125         0         0         17         6           9.00         2.15         0         0         77         0         96         0         0         71         19           16.30         16.45         0         0         96         0         92         0         0         16         18           17.00         0         0         113         0         114         0         0         11         11           18.00         0         93         0         83         0         0         11											lington it		
8:00         8:15         0         0         79         0         142         0         0         13           8:15         8:30         0         0         93         0         138         0         0         6         29           8:30         8:45         0         0         82         0         138         0         0         17         22           8:45         9:00         9:15         0         0         77         0         96         0         0         111         111           9:15         9:30         0         0         65         0         102         0         0         115         19           16:30         16:45         0         0         118         1         105         0         0         16         18           17:15         17:30         0         0         113         0         114         0         0         11         11           17:45         18:30         0         0         15         0         91         0         10         11         11           17:45         18:30         0         0         16			-			-		0	-		15		
8:15         8:30         0         0         93         0         138         0         0         6         29           8:30         8:45         0         0         82         0         136         0         0         17         22           8:45         9:00         0         0         76         0         125         0         0         17         6           9:00         9:15         0         0         76         0         125         0         0         11         11           9:15         9:30         0         0         0         16:8         1         00         0         15         19           16:45         17:00         0         0         113         0         114         0         0         11         11           17:35         17:30         0         0         113         0         114         0         0         11         11           17:45         18:30         0         0         15         0         9         0         0         17         11           17:45         18:30         0         0         17         12	7:45	8:00	0	0	71	0	110	0	0	5	19		
8:30         8:45         0         0         82         0         136         0         0         17         22           8:45         9:00         0         0         76         0         125         0         0         17         6           9:00         9:15         0         0         6         0         100         0         0         11         11           9:15         9:30         0         0         66         0         100         10         0         15         19           16:45         17:00         0         0         113         10         105         0         116         18           17:15         17:30         0         0         113         0         114         0         0         11         11           17:15         17:30         0         0         113         0         114         0         11         11           18:16         18:30         0         0         18         0         0         11         11           18:16         18:30         0         0         18         0         0         17	8:00	8:15	0	0	79	0	142	0	0	10	13		
8.45         9.00         0         0         76         0         125         0         0         17         6           9.00         9.15         0         0         79         0         96         0         0         11         11           9.15         9.30         0         0         65         0         09         0         0         11         11           9.15         9.30         0         0         65         0         09         0         0         11         11           16.30         16.45         0         0         118         1         105         0         0         12         13           17.00         17.15         0         0         113         0         114         0         0         8         16           17.30         17.45         0         0         94         0         114         0         0         11         11           18.00         18.00         0         0         93         0         88         0         0         11         11           18.00         18.30         0         0         18         0 </td <td>8:15</td> <td>8:30</td> <td>0</td> <td>0</td> <td>93</td> <td>0</td> <td>138</td> <td>0</td> <td>0</td> <td>6</td> <td>29</td> <td></td>	8:15	8:30	0	0	93	0	138	0	0	6	29		
9.00         9.15         0         0         79         0         96         0         0         11         11           9.15         9.30         0         0         65         0         109         0         0         7         19           16.30         16.45         0         0         96         0         92         0         0         15         19           16.45         17.00         0         0         118         1         105         0         0         16         18           17.15         17.30         0         0         113         0         114         0         0         11         11           17.45         0         0         94         0         114         0         0         11         11           17.45         18.30         0         0         95         0         84         0         0         17         11           18.15         18.30         0         0         70         18         10         0         11         11           18.15         0         0         25         1         433         0         0 </td <td>8:30</td> <td>8:45</td> <td>0</td> <td>0</td> <td>82</td> <td>0</td> <td>136</td> <td>0</td> <td>0</td> <td>17</td> <td>22</td> <td></td>	8:30	8:45	0	0	82	0	136	0	0	17	22		
9:15         9:30         0         0         65         0         109         0         0         7         19           16:45         0         0         96         0         92         0         0         15         19           16:45         17:00         0         0         118         1         105         0         0         15         19           16:45         17:00         0         0         113         0         114         0         0         16         18           17:15         17:30         0         0         113         0         114         0         0         11         11           18:00         16:15         0         94         0         114         0         0         11         11           18:00         16:3         0         0         95         0         85         0         0         11         11           18:00         90         0         0         93         0         85         0         0         11         11           18:15         18:30         0         0         0         0         0         0 </td <td>8:45</td> <td>9:00</td> <td>0</td> <td>0</td> <td>76</td> <td>0</td> <td>125</td> <td>0</td> <td>0</td> <td>17</td> <td>6</td> <td></td>	8:45	9:00	0	0	76	0	125	0	0	17	6		
16:30         16:45         0         0         96         0         92         0         0         15         19           16:45         17:00         0         0         118         1         105         0         0         12         13           17:00         17:15         0         0         113         0         100         0         0         114         10         0         0         114         14           17:15         17:30         0         0         113         0         114         0         0         11         11           17:45         16:00         0         95         0         83         0         0         11         11           18:00         10         0         95         0         83         0         0         11         11           18:00         16         0         0         83         0         0         143         0         0         143         0         0         14         14           17:45         0         0         233         0         84         0         143         0         0         14         14	9:00	9:15	0	0	79	0	96	0	0	11	11		
16:45         17:00         0         0         118         1         105         0         0         12         13           17:00         17:15         0         0         103         0         100         0         0         16         18           17:15         17:30         0         0         113         0         114         0         0         8         16           17:30         17:45         0         0         94         0         114         0         0         11         14           17:30         17:45         0         0         95         0         83         0         0         11         11           18:00         16:15         0         0         95         0         83         0         0         11         11           18:00         16:15         0         0         93         0         8         0         0         11         11           18:00         10         0         80         0         11         13         0         0         11         11           16:45         17:45         0         0         25	9:15	9:30	0	0	65	0	109	0	0	7	19		
17.00         17.15         0         0         103         0         100         0         0         16         18           17.15         17.30         0         0         113         0         114         0         0         8         16           17.30         17.45         0         0         94         0         114         0         0         11         14           17.45         18:00         0         0         115         0         91         0         0         11         11           18:15         18:30         0         0         93         0         88         0         0         11         11           18:15         18:30         0         0         93         0         88         0         0         11         11           Protect fand         Var         Noth Approach Emmere Reform Approach Emmere	16:30	16:45	0	0	96	0	92	0	0	15	19		
17:15         17:30         0         0         113         0         114         0         0         8         16           17:30         17:45         0         0         94         0         114         0         0         11         14           17:45         18:00         0         0         115         0         91         0         0         111         11           18:00         18:15         0         0         95         0         83         0         0         111         11           18:00         18:30         0         0         95         0         83         0         0         111         11           Peak         Ime         North Approach Ennore Reform Reform Proach Ennore Reform Pr	16:45	17:00	0	0	118	1	105	0	0	12	13		
17:30         17:45         0         0         94         0         114         0         0         11         14           17:45         16:00         0         0         115         0         91         0         0         11         11           18:00         18:15         0         0         95         0         83         0         0         11         11           18:00         18:15         0         0         95         0         83         0         0         11         11           18:00         18:30         0         0         18         0         0         11         11           18:00         18:30         0         0         18         1         0         0         14         16           18:00         10         0         23:0         0         24         14         35         0         0         70         191           16:45         17:45         0         0         25         0         9         0         0         0         0         0         0         0         0         0         0         0         0         0	17:00	17:15	0	0	103	0	100	0	0	16	18		
17.45         18.00         0         0         115         0         91         0         0         11         11           18.00         18.15         0         0         95         0         83         0         0         17         17           18.15         18.30         0         0         93         0         88         0         0         11         11           Peek Time Orth Approach Ennore R45 outh	17:15	17:30	0	0	113	0	114	0	0	8	16		
18:00         18:15         0         0         95         0         83         0         0         17         17           18:15         18:30         0         0         93         0         88         0         0         11         11           Peak Time         North Approach Emmore R45 outh Approach Emmore R4 set Approach Newington R         Peak Time         North Approach Emmore R45 outh Approach Emmore R4 set Approach Newington R         Peak Time         North Approach Emmore R45 outh Approach Emmore R4 set Approach Newington R         Peak Time         North Approach Emmore R45 outh Approac	17:30	17:45	0	0	94	0	114	0	0	11	14		
18:15         18:30         0         93         0         88         0         0         11         11           Peak Time         North Approach Emmore RCS outh Approach Emmore RV est Approach Newington R         Peak Time           Peak Time         North Approach Emmore RCS outh Approach Emmore RV est Approach Newington R         Peak         Classical         Peak		18:00	0		-	0		0	0				
Peak Time         North Approach Enmore R/South Approach         Peak										17	17		
Period Star Period End         U         R         SB         U         NB         L         U         R         C         total           800         900         0         0         330         0         541         0         0         50         70         991           16:45         17:45         0         0         428         1         433         0         0         47         61         970           Heavy Meh/Les         Time         North Approach Enmore R45outh Approach Enmore R49 est Approach Newington R           Period Star Period End         U         R         SB         U         NB         L         U         R         L           7:30         7:45         0         0         5         0         9         0         0         0         0           7:45         8:30         0         0         7         0         18         0	18:15	18:30	0	0	93	0	88	0	0	11	11		
8:00         9:00         0         0         3:30         0         5:11         0         0         7:0         991           16:45         17:45         0         0         4:28         1         4:33         0         0         4:7         6:1         970           Harvy Vehicles         North Approach Enmore RCS outh Approach Enmore RV ext Approach Newligton R           Priod Star Period End         N         Newligton R           Priod Star Period End         0         9         0         0         Newligton R           Priod Star Period End         0         N         1           7.45         0         0         N         N           Priod Star Period Star Period Star         N         0         0         0         0         0           8.0         0         0         0         0         0         0           0         0 <th colsp<="" th=""><th>Peak</th><th>Time</th><th>North Ap</th><th>proach E</th><th>nmore Rd</th><th>South Ap</th><th>proach E</th><th>nmore RV</th><th>l est Appr</th><th>oach Nev</th><th>vington R</th><th>Peak</th></th>	<th>Peak</th> <th>Time</th> <th>North Ap</th> <th>proach E</th> <th>nmore Rd</th> <th>South Ap</th> <th>proach E</th> <th>nmore RV</th> <th>l est Appr</th> <th>oach Nev</th> <th>vington R</th> <th>Peak</th>	Peak	Time	North Ap	proach E	nmore Rd	South Ap	proach E	nmore RV	l est Appr	oach Nev	vington R	Peak
16:45         17:45         0         0         428         1         433         0         0         47         61         970           Havy Veb/cles         Time         North Approach Enmore RdSouth Approach	Period Star	Period End	U	R	SB	U	NB	L	U	R	L	total	
Heavy Velicles           Time         North Approach Ennore R(South Approach Enn	8:00	9:00	0	0	330	0	541	0	0	50	70	991	
7.30         7.45         0         0         5         0         9         0         0         0         0           7.45         8.00         0         0         7         0         18         0         0         1         2           8.00         8.15         0         0         7         0         18         0         0         1         2           8.00         8.15         0         0         7         0         14         0         0         0         0           8.15         8.30         0         0         6         21         0	Hoavy Vohi	clos											
7.45         8.00         0         0         7         0         18         0         0         1         2           8:00         8:15         0         0         7         0         14         0         0         0         0           8:15         0         0         7         0         14         0         0         0         0           8:15         8:30         0         0         6         0         21         0         0         0         0           8:30         8:45         9:00         0         7         0         13         0         0         0         0           9:00         9:15         0         0         11         0         12         0         0         0         0           9:15         9:30         0         0         10         11         0         1         0	Ti	me											
8:00         8:15         0         0         7         0         14         0         0         0         0           8:15         8:30         0         0         6         0         21         0         0         0         0           8:30         8:45         0         0         7         0         13         0         0         0         0           8:45         9:00         0         0         11         0         12         0         0         0         0           9:15         9:30         0         0         11         0         12         0         0         0         0           9:15         9:30         0         0         10         0         11         0         0         0         0         0           9:15         9:30         0         0         11         0         12         0	Ti	me											
8:15         8:30         0         0         6         0         21         0         0         0         0           8:30         8:45         0         0         7         0         13         0         0         0         0           8:45         9:00         0         0         8         0         10         12         0         0         0         0           9:00         9:15         0         0         11         0         12         0         0         0         0           9:01         9:30         0         0         11         0         12         0         0         1         0           16:30         16:45         0         0         11         0         9         0         0         0         0           17:45         17:00         0         0         12         0         9         0         0         0         0           17:30         17:45         0         0         12         0         9         0         0         0         0           18:00         18:00         0         8         0         9     <	Ti Period Star	me Period End	U	R	SB	U	NB	L	U	R	L		
8:30         8:45         0         0         7         0         13         0         0         0         0           8:45         9:00         0         0         8         0         10         0         0         0         0         0           9:00         9:15         0         0         11         0         12         0         0         0         0         0           9:15         9:30         0         0         11         0         12         0         0         0         0         0           9:15         9:30         0         0         11         0         12         0         0         0         0         0         0           16:30         16:45         0         0         11         0         9         0         0         0         0           17:00         17:15         17:30         0         0         12         0         9         0         0         0         0           17:30         17:45         18:00         0         8         0         5         0         0         0         0         0	Ti Period Star 7:30	me Period End 7:45	0	R 0	SB 5	0	NB 9	0	0	R 0	0		
845         9:00         0         0         8         0         10         0         0         0         0           9:00         9:15         0         0         11         0         12         0         0         0         0           9:15         9:30         0         0         10         0         11         0         12         0         0         1         0           16:30         16:45         10         0         11         0         0         1         0         0         1         0           16:30         16:45         10         0         11         0         9         0         0         0         0           17:00         17:15         17:30         0         0         12         0         9         0         0         0         0           17:15         17:30         0         0         12         0         9         0         0         0         0         0           17:15         17:30         0         0         8         0         5         0         0         0         0         0         0	Tir Period Star 7:30 7:45	me Period End 7:45 8:00	0	R 0 0	5 7	0	NB 9 18	0 0	0	R 0 1	0 2		
9:00         9:15         0         0         11         0         12         0         0         0         0           9:15         9:30         0         0         10         0         11         0         0         1         0           16:30         16:45         0         0         11         0         5         0         0         0         0           16:45         17:00         0         11         0         9         0         0         0         0           16:45         17:00         0         12         0         9         0         0         0         0           17:30         17:35         0         0         12         0         9         0         0         0         0           17:15         17:30         0         0         8         0         9         0         0         0         0           17:45         18:00         0         8         0         5         0         0         0         0           18:00         18:30         0         8         0         4         0         0         0         0	Til Period Star 7:30 7:45 8:00	me Period End 7:45 8:00 8:15	0	R 0 0	5 7 7	0	NB 9 18 14	0 0 0	0	R 0 1 0	0 2 0		
9:15         9:30         0         10         10         0         11         0         0         1         0           16:30         16:45         0         0         10         0         5         0         0         0         0           16:45         17:00         0         0         11         0         9         0         0         0         0           17:45         17:30         0         0         12         0         9         0         0         0         0           17:30         17:45         18:00         0         8         0         5         0         0         0         0           17:30         17:45         0         0         8         0         5         0         0         0         0           18:00         18:00         0         8         0         5         0         0         0         0           18:00         18:15         0         0         8         0         1         0         0         0         0         0         0         0         0         0         0         0         0         0	Til Period Star 7:30 7:45 8:00 8:15	me Period End 7:45 8:00 8:15 8:30	0 0 0 0 0 0	R 0 0 0	5 7 7 6	0 0 0 0	NB 9 18 14 21	0 0 0	0 0 0 0 0 0	R 0 1 0 0	0 2 0 0		
16:30         16:45         0         0         10         0         5         0         0         0         0           16:45         17:00         0         11         0         9         0         0         0         0           17:00         17:15         0         0         12         0         9         0         0         0         0           17:15         17:30         0         9         0         5         0         0         0         1           17:30         17:45         0         0         8         0         9         0         0         0         0         0           18:00         18:15         0         0         8         0         5         0         0         0         0           18:15         18:30         0         8         0         10         0	Tii Period Star 7:30 7:45 8:00 8:15 8:30	me Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0	R 0 0 0 0 0	SB 5 7 7 6 7	0 0 0 0 0 0 0 0	NB           9           18           14           21           13	0 0 0 0	0 0 0 0 0 0 0 0	R 0 1 0 0 0	0 2 0 0 0 0		
16:45         17:00         0         0         11         0         9         0         0         0         0           17:00         17:15         0         0         12         0         9         0         0         0         0           17:15         17:30         0         0         9         0         5         0         0         0         1           17:30         17:45         0         0         8         0         9         0         0         0         0         1           17:45         18:00         0         0         8         0         5         0         0         0         0         0           18:00         18:15         0         0         11         0         10         0	Til Period Star 7:30 7:45 8:00 8:15 8:30 8:45 9:00	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15	0 0 0 0 0 0	R 0 0 0 0 0 0 0	SB 5 7 7 6 7 8		NB           9           18           14           21           13           10	0 0 0 0 0	0 0 0 0 0 0	R 0 1 0 0 0	0 2 0 0 0 0		
17:00         17:15         0         0         12         0         9         0         0         0         0           17:15         17:30         0         0         9         0         5         0         0         0         1           17:30         17:45         0         0         8         0         9         0         0         0         0         1           17:45         18:00         0         0         8         0         5         0         0         0         0           18:00         18:15         0         0         11         0         10         0         0         0         0           18:15         18:30         0         8         0         4         0         0         0         0           Peast Ime         North Approach Enmore Report Approach Enmore Rep	Til Period Star 7:30 7:45 8:00 8:15 8:30 8:45 9:00	me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15	0 0 0 0 0 0 0	R 0 0 0 0 0 0 0	SB           5           7           6           7           8           11		NB           9           18           14           21           13           10           12	0 0 0 0 0 0	0 0 0 0 0 0	R 0 1 0 0 0 0	0 2 0 0 0 0 0		
17:15         17:30         0         0         9         0         5         0         0         1           17:30         17:45         0         0         8         0         9         0         0         0         0           17:45         18:00         0         0         8         0         5         0         0         0         0           18:00         18:15         0         0         11         0         10         0         0         0           18:01         18:30         0         8         0         4         0         0         0         0           Peact time         North Approach Enmore Reformance Ensore Reformance Reformance Ensore Reformance Reformanc	Til Period Star 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           10	0 0 0 0 0 0 0 0 0	NB         9           18         14           21         13           10         12           11         5	L 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	R 0 1 0 0 0 0 0 1 0	0 2 0 0 0 0 0 0 0 0 0		
17:30         17:45         0         0         8         0         9         0         0         0         0           17:45         18:00         0         0         8         0         5         0         0         0         0           18:00         18:15         0         0         11         0         10         0         0         0           18:15         18:30         0         8         0         4         0         0         0         0           Period Ing IPeriod Eng U         K         SB         V         NB         L         U         R         L total         0         0         0         0         8         0	Ti           Period Star           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0	SB 5 7 7 6 7 8 11 10 10 11	0 0 0 0 0 0 0 0 0 0 0	NB           9           18           14           21           13           10           12           11           5           9	L 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0	R 0 1 0 0 0 0 0 1 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0		
17:45         18:00         0         0         8         0         5         0         0         0         0           18:00         18:15         0         0         11         0         10         0         0         0         0           18:15         18:30         0         0         8         0         4         0         0         0         0           Peak Time         North Approach E-more Kd5-outh Approach E-more KH est Approach         Newington R         Peak total         No         0         0         0         8         0         18         0         R         L         U         R         L         L         L         C         No         0         0         0         0         0         3         8         0         NS         L         U         R         L <td>Ti           Period Star           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00</td> <td>Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15</td> <td></td> <td>R 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>SB           5           7           6           7           8           11           10           11           12</td> <td></td> <td>NB           9           18           14           21           13           10           12           11           5           9           9           9</td> <td>L 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>R 0 1 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td></td>	Ti           Period Star           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15		R 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12		NB           9           18           14           21           13           10           12           11           5           9           9           9	L 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 1 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0		
18:00         18:15         0         0         11         0         10         0         0         0         0           18:15         18:30         0         0         8         0         4         0         0         0         0           Peak Time         North Approach Enmore RdSouth Approach Enmore RVFest Approach Newington R         Peak total         0         0         0         0         8         0         18         0	Ti           Period Star           7:30           7:45           8:00           8:15           8:30           8:45           9:00           9:15           16:30           16:45           17:00           17:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9		NB           9           18           14           21           13           10           12           11           5           9           9           5           5	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 1 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 1		
18:15         18:30         0         8         0         4         0         0         0         0           Peak Time         North Approach Enmore RdSouth Approach Enmore RVIest Approach Newington R         Peak total         Peak total         No         0         0         0         8         0         10         No         Peak total         No         0         0         0         0         8         0         10         No         Peak total         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0         0         8         0         0	Ti Period Star 7:30 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8		NB           9           18           14           21           13           10           12           11           5           9           5           9           9	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Peak         North Approach Enmore R4South Approach Enmore R4Fext Approach Enmore R4Fext Approach Enmore R4Fext Approach Newington R         Peak           Period Star [Period End]         U         R         S8         U         NB         L         U         R         L         total           8:00         9:00         0         28         0         S8         0         0         0         0         8	Ti Period Star 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 16:45 17:00 17:15 17:30	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8           8           8		NB           9           18           14           21           13           10           12           11           5           9           5           9           5           5           5           5	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Period Star         Period End         U         R         SB         U         NB         L         U         R         L         total           8:00         9:00         0         0         28         0         58         0         0         0         0         86	Til Period Star 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:30 9:30 9:30 9:15 17:30 17:15 17:30 17:45 18:00 18:15		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8           8           11		NB           9           18           14           21           13           10           12           11           5           9           5           9           5           10           5           9           5           10	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
Period Star         Period End         U         R         SB         U         NB         L         U         R         L         total           8:00         9:00         0         0         28         0         58         0         0         0         0         86	Til Period Star 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:30 9:30 9:30 9:15 17:30 17:15 17:30 17:45 18:00 18:15		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8           8           11		NB           9           18           14           21           13           10           12           11           5           9           5           9           5           10           5           9           5           10	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
8:00 9:00 0 0 28 0 58 0 0 0 0 86	Til           7:30           7:45           8:00           8:15           8:00           8:45           9:00           9:15           16:30           16:45           17:00           17:15           17:30           17:45           18:00           18:15	Period End 7:45 8:00 8:15 8:30 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30		R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           10           11           12           9           8           11           8           8           11           8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NB           9           18           14           21           13           10           12           11           5           9           5           9           5           10           4	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Dask	
	Til Period Star 7:30 7:45 8:00 8:15 8:30 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15	Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8           11           8           11           8           11           9           8           11           8           11           8           11           8           11           8           11           8           11           8           11           8           11           8           11           8           11           10	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NB           9           18           14           21           13           10           12           11           5           9           5           9           5           10           4           pproach E	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
	Til Period Star 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 16:45 17:00 17:15 17:30 17:45 18:00 18:15 9:00 9:15 17:45 18:00 18:15 9:00 17:45 1	Period End 7:45 8:00 8:15 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:30 Time Period End	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SB           5           7           6           7           8           11           10           11           12           9           8           11           8           8           11           8           8           8           SB	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NB           9           18           14           21           13           10           12           11           5           9           5           9           5           10           4           proach E	L 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	R 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0	L 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	total	

Time Period Start Period End			ich Enmore Rd		ich Enmore Rd		h Newington Rd	Hourly Tota
Period Start	Period End	Westbound	Eastbound	Westbound	Eastbound	Southbound	Northbound	Houriy Tota
7:30	7:45	0	0	0	0	4	1	33
7:45	8:00	0	0	1	1	3	1	35
8:00	8:15	0	0	0	0	5	4	32
8:15	8:30	0	0	1	1	9	2	28
8:30	8:45	0	0	2	0	2	3	19
8:45	9:00	0	0	1	0	1	1	
9:00	9:15	0	0	0	0	1	4	
9:15	9:30	0	0	0	0	1	3	
16:30	16:45	0	1	0	0	6	6	47
16:45	17:00	0	0	0	0	8	1	53
17:00	17:15	0	0	0	0	9	4	61
17:15	17:30	0	0	0	0	6	6	66
17:30	17:45	0	0	0	1	5	13	68
17:45	18:00	0	0	0	1	6	10	
18:00	18:15	0	0	0	0	13	5	
18:15	18:30	0	0	0	1	9	4	
Peak	Time	North Approa	ch Enmore Rd	South Approx	ich Enmore Rd	West Approac	h Newington Rd	
	Period End		Eastbound		Eastbound		Northbound	Peak tota

Pedestrians Crossing

8:00 16:45 9:00 17:45 0

Enmore Rd



ion of Alma Ave and Access 1 (Most Southern),

GPS	-33.898503, 151.168098	
Date:	Fri 26/11/21	
Weather:	Fine	
Suburban:	Stanmore	
Customer:	VTP	

 
 North:
 Alma Ave

 East:
 Access 1 (Most Southern)

 South:
 Alma Ave

 West:
 N/A
 S P T I

Survey	AM:	7:30 AM-9:30 AM
Period	PW:	4:30 PM-6:30 PM
Traffic	AM:	8:30 AM-9:30 AM
Peak	PM:	4:30 PM-5:30 PM

	me			lma Ave			(Most So		pproach /		Hourly	
eriod Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak
7:30	7:45	0	7	8	0	0	0	0	0	0	49	
7:45	8:00	0	4	7	0	0	0	0	0	0	63	
8:00	8:15	0	7	8	0	0	0	0	0	0	77	
8:15	8:30	0	5	3	0	0	0	0	0	0	79	
8:30	8:45	0	19	10	0	0	0	0	0	0	81	Peak
8:45	9:00	0	16	9	0	0	0	0	0	0		
9:00	9:15	0	11	6	0	0	0	0	0	0		
9:15	9:30	0	6	4	0	0	0	0	0	0		
16:30	16:45	0	12	6	0	0	0	0	0	0	65	Peak
16:45	17:00	0	5	7	0	1	1	0	0	0	60	
17:00	17:15	0	9	11	0	0	0	0	0	0	57	
17:15	17:30	0	6	7	0	0	0	0	0	0	46	
17:30	17:45	0	7	6	0	0	0	0	0	0	43	
17:45	18:00	0	5	5	0	0	1	0	0	0		
18:00	18:15	0	6	3	0	0	0	0	0	0		
18:15	18:30	0	6	3	0	0	1	0	0	0		

8:30 0 81 0 65 9:30 17:30 0 0

ng is not to scale and not an exact streets config



ignt venici Ti	me	North A	pproach A	lma Ave	pproach a	Access 1	(Most So	South A	pproach /	Nia         Nia           R         Nia           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB		
7:30	7:45	0	7	8	0	0	0	0	0	0		
7:45	8:00	0	4	7	0	0	0	0	0	0		
8:00	8:15	0	7	8	0	0	0	0	0	0		
8:15	8:30	0	5	3	0	0	0	0	0	0		
8:30	8:45	0	19	10	0	0	0	0	0	0		
8:45	9:00	0	16	9	0	0	0	0	0	0		
9:00	9:15	0	11	6	0	0	0	0	0	0		
9:15	9:30	0	6	4	0	0	0	0	0	0		
16:30	16:45	0	12	6	0	0	0	0	0	0		
16:45	17:00	0	5	7	0	1	1	0	0	0		
17:00	17:15	0	9	10	0	0	0	0	0	0		
17:15	17:30	0	6	7	0	0	0	0	0	0		
17:30	17:45	0	7	6	0	0	0	0	0	0		
17:45	18:00	0	5	5	0	0	1	0	0	0		
18:00	18:15	0	6	3	0	0	0	0	0	0		
18:15	18:30	0	6	3	0	0	1	0	0	0		
Peak	Time	North A	pproach A	Ima Ave	pproach .	Access 1	Most So	South A	pproach /	Ima Ave		
Pariod Start	Period End		SB			P	i		P	NB		

 
 Period Start Period End
 U
 SB

 8:30
 9:30
 0
 52

 16:30
 17:30
 0
 32
 U R L U R 0 0 0 0 0 29 20

Ti	me	North A	pproach A	lma Ave	pproach a	Access 1	(Most So	South A	Alma Ave		
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	
7:30	7:45	0	0	0	0	0	0	0	0	0	
7:45	8:00	0	0	0	0	0	0	0	0	0	
8:00	8:15	0	0	0	0	0	0	0	0	0	
8:15	8:30	0	0	0	0	0	0	0	0	0	
8:30	8:45	0	0	0	0	0	0	0	0	0	
8:45	9:00	0	0	0	0	0	0	0	0	0	
9:00	9:15	0	0	0	0	0	0	0	0	0	
9:15	9:30	0	0	0	0	0	0	0	0	0	
16:30	16:45	0	0	0	0	0	0	0	0	0	
16:45	17:00	0	0	0	0	0	0	0	0	0	
17:00	17:15	0	0	1	0	0	0	0	0	0	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	0	0	0	0	0	0	0	0	
17:45	18:00	0	0	0	0	0	0	0	0	0	
18:00	18:15	0	0	0	0	0	0	0	0	0	
18:15	18:30	0	0	0	0	0	0	0	0	0	
Peak	Time	North A	pproach A	Ima Ave	pproach	Access 1	(Most So	South A	pproach A	Alma Ave	Peal
Period Start	Period End		SB	L	U	R	L	U	R	NB	tota
8:30	9:30	0	0	0	0	0	0	0	0	0	0
16:30	17:30	0	0	1	0	0	0	0	0	0	1

<b>TRANS TRAFFIC</b>	S	URVEY	DNV-GL	DNY-GL	DNV.GL	
	- 14	trafficsurvey.com.au				

TURNING MOVEMENT SUR가는 \*\* trafficsurvey.com.au Intersection of Alma Ave and Access 2 (S of Harrington),

BPS	-33.899167, 151.16776	7	
Date:	Fri 26/11/21		1
Neather:	Fine		l
Suburban:	Stanmore		
Customer:	VTP		1

S S C

North: Alma Ave East: Access 2 (S of Harrington) South: Alma Ave West: N/A Su Pe Tri Pi

urvey	AM:	7:30 AM-9:30 AM
eriod	PW:	4:30 PM-6:30 PM
raffic	AM:	8:30 AM-9:30 AM
Peak	PM:	4:30 PM-5:30 PM

Tir					pproach A		S of Harr		pproach A			Hourly Total	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak	
7:30	7:45	0	7	0	0	0	0	0	0	0	23		
7:45	8:00	0	4	0	0	0	0	0	0	0	35		
8:00	8:15	0	7	0	0	0	0	0	0	0	47		
8:15	8:30	0	5	0	0	0	0	0	0	0	51		
8:30	8:45	0	19	0	0	0	0	0	0	0	52	Peak	
8:45	9:00	0	16	0	0	0	0	0	0	0			
9:00	9:15	0	11	0	0	0	0	0	0	0			
9:15	9:30	0	6	0	0	0	0	0	0	0			
16:30	16:45	0	12	0	0	0	0	0	0	0	33	Peak	
16:45	17:00	0	6	0	0	0	0	0	0	0	28		
17:00	17:15	0	9	0	0	0	0	0	0	0	28		
17:15	17:30	0	6	0	0	0	0	0	0	0	25		
17:30	17:45	0	7	0	0	0	0	0	0	0	26		
17:45	18:00	0	6	0	0	0	0	0	0	0			
18:00	18:15	0	6	0	0	0	0	0	0	0			
18:15	18:30	0	7	0	0	0	0	0	0	0			
Peak	Time	North A	pproach A	lma Ave	pproach /	Access 2	S of Harr	South A	pproach A	Alma Ave	Peak	1	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	total		

0 52 33

d not an exact streets config



	me			lma Ave			S of Harr			lma Ave
eriod Start	Period End	U	SB	L	U	R	L	U	R	NB
7:30	7:45	0	7	0	0	0	0	0	0	0
7:45	8:00	0	4	0	0	0	0	0	0	0
8:00	8:15	0	7	0	0	0	0	0	0	0
8:15	8:30	0	5	0	0	0	0	0	0	0
8:30	8:45	0	19	0	0	0	0	0	0	0
8:45	9:00	0	16	0	0	0	0	0	0	0
9:00	9:15	0	11	0	0	0	0	0	0	0
9:15	9:30	0	6	0	0	0	0	0	0	0
16:30	16:45	0	12	0	0	0	0	0	0	0
16:45	17:00	0	6	0	0	0	0	0	0	0
17:00	17:15	0	9	0	0	0	0	0	0	0
17:15	17:30	0	6	0	0	0	0	0	0	0
17:30	17:45	0	7	0	0	0	0	0	0	0
17:45	18:00	0	6	0	0	0	0	0	0	0
18:00	18:15	0	6	0	0	0	0	0	0	0
18:15	18:30	0	7	0	0	0	0	0	0	0
Peak	Time	North A	nnroach /	Ima Ave	oproach /	ccess 2	S of Harr	South A	nnroach /	Ima Ave
	Deried End									

	FUAK	TIME	NOITH A	pproach A	unia Ave	pproach A	(CC855 Z (	3 UI Hall	South A	pproacny	unia Ave	
1	Period Start	Period End	0	SB	L	U	R	L	U	R	NB	total
1	8:30	9:30	0	52	0	0	0	0	0	0	0	52
1	16:30	17:30	0	33	0	0	0	0	0	0	0	33

Ti					pproach A				pproach A	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:30	7:45	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	0	0	0
8:00	8:15	0	0	0	0	0	0	0	0	0
8:15	8:30	0	0	0	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	0	0	0
8:45	9:00	0	0	0	0	0	0	0	0	0
9:00	9:15	0	0	0	0	0	0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
Peak	Time	North A	nnroach A	Ima Ave	oproach /	cress 2 (	S of Harr	South A	oproach /	Ima Ave
	Period End		SB	L	U	R	L	U	R	NB
8:30	9:30	0	0	0	0	0	0	0	0	0
16:30	17:30	0	0	0	0	0	0	0	0	0

GPS	-33.899425, 151.167628		
Date:	Fri 26/11/21	North:	Alma Ave
Weather:	Fine	East:	Access 3
Suburban:	Stanmore	South:	Alma Ave
Customer:	VTP	West:	Harrington St

Survey         AM:         7:30 AM-9:30 AM           Period         PM:         4:30 PM-6:30 PM           Traffic         AM:         8:15 AM-9:15 AM			
Traffic AM: 8:15 AM-9:15 AM	Survey	AM:	7:30 AM-9:30 AM
	Period	PM:	4:30 PM-6:30 PM
	Traffic	AM:	8:15 AM-9:15 AM
Peak PM: 4:30 PM-5:30 PM	Peak	PM:	4:30 PM-5:30 PM

Tir	me	Nor	th Approa	ach Alma	Ave	Ea	st Approa	ich Acces	s 3	Sc	outh Appro	ach Alma A	ve	West	Approach	n Harringt	on St	Hourly	/ Total
Period Start	Period End	U	R	SB	L	U	R	WB	L	U	R	NB	L	U	R	EB	L	Hour	Peak
7:30	7:45	0	0	7	0	0	0	3	3	0	0	0	0	0	0	0	0	55	
7:45	8:00	0	1	2	1	0	0	9	2	0	0	0	0	0	1	0	0	71	
8:00	8:15	0	0	7	0	0	0	2	4	0	0	0	0	0	0	0	0	84	
8:15	8:30	0	0	5	0	0	0	3	3	0	0	0	0	0	2	0	0	93	Peak
8:30	8:45	0	3	16	0	0	0	5	4	0	0	0	0	0	0	1	0	91	
8:45	9:00	0	0	15	1	0	0	3	7	0	0	0	0	0	2	1	0		
9:00	9:15	0	1	10	0	0	0	3	5	0	0	0	0	0	2	1	0		
9:15	9:30	0	0	6	0	0	0	2	2	0	0	0	0	0	1	0	0		
16:30	16:45	0	0	11	1	0	0	8	3	0	0	0	0	0	0	0	0	78	Peak
16:45	17:00	0	1	4	1	0	0	7	5	0	0	0	0	0	0	0	0	67	
17:00	17:15	0	2	7	0	0	0	4	4	0	0	0	0	0	0	1	0	62	
17:15	17:30	0	0	5	1	0	0	10	1	0	0	0	0	1	1	0	0	61	
17:30	17:45	0	0	7	0	0	0	2	3	0	0	0	0	0	0	0	0	50	
17:45	18:00	0	0	5	1	0	0	6	0	0	0	0	0	0	1	0	0		
18:00	18:15	0	2	4	0	0	0	6	0	0	0	0	0	0	4	1	0		
18:15	18:30	0	1	6	0	0	0	0	1	0	0	0	0	0	0	0	0		
Peak	Time	Nor	th Appro:	ach Alma	Ave	Ea	st Approa	ich Acces	\$3	Sc	outh Appro	ach Alma A	Ve	West	Approact	Harringt	on St	Peak	1
	Period End	U	R	SB	L	0 20	R	WB	L	U	R	NB		U	R	EB		total	

16:30 17:30 0 3 27 3 0 0 29 13 0 0 0 0 1 1 1 0	8:15	9:15	0	4	46	1	0	0	14	19	0	0	0	0	0	6	3	0	93
	16:30	17:30	0	3	27	3	0	0	29		0	0	0	0	1	1	1	0	78

tch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Light Vehicles

	me Period End	Nor	th Appro R	ach Alma SB	Ave L	Ea	st Approa	ch Acces WB	s 3	Sc	outh Appro R	ach Alma A NB	ve L	West	Approact R	Harringt EB	on St
7:30	7:45	0	0	7	0	0	0	3	3	0	0	0	0	0	0	0	0
7:45	8:00	0	1	2	1	0	0	9	2	0	0	0	0	0	1	0	0
		0	0					2							0	0	0
8:00	8:15			7	0	0	0		4	0	0	0	0	0			-
8:15	8:30	0	0	5	0	0	0	3	3	ů	0	0	0	0	2	0	0
8:30	8:45	0	3	16	0	0	0	5	4	0	0	0	0	0	0	1	0
8:45	9:00	0	0	15	1	0	0	3	7	0	0	0	0	0	2	1	0
9:00	9:15	0	1	10	0	0	0	3	5	0	0	0	0	0	2	1	0
9:15	9:30	0	0	6	0	0	0	2	2	0	0	0	0	0	1	0	0
16:30	16:45	0	0	11	1	0	0	8	3	0	0	0	0	0	0	0	0
16:45	17:00	0	1	4	1	0	0	7	5	0	0	0	0	0	0	0	0
17:00	17:15	0	2	7	0	0	0	4	4	0	0	0	0	0	0	1	0
17:15	17:30	0	0	5	1	0	0	10	0	0	0	0	0	1	1	0	0
17:30	17:45	0	0	7	0	0	0	2	3	0	0	0	0	0	0	0	0
17:45	18:00	0	0	5	1	0	0	6	0	0	0	0	0	0	1	0	0
18:00	18:15	0	2	4	0	0	0	6	0	0	0	0	0	0	4	1	0
18:15	18:30	0	1	6	0	0	0	0	1	0	0	0	0	0	0	0	0
Book	Time	Nor	th Approx	ach Alma	A.v.o.	Ea	st Approa		• 3		outh Appro-	ach Alma A		Weet	Approact	Horringt	on Ct
			ui Appio			U	R	WB	5 J	U 30	R	NB	L	U	R	EB	L
	Period End	U	R	SB	L												
Period Start 8:15 16:30	9:15 17:30	U 0 0	R 4 3	SB 46 27	1 3	0	0	14 29	19 12	0	0	0	0	0	6 1	3 1	0
Period Start 8:15 16:30 Heavy Vehic Ti	Period End 9:15 17:30	0 0 Nor	4 3 th Approa	46 27 ach Alma	1 3 Ave	0 0 Ea	0 0 st Approa	14 29 ch Acces	12 s 3	0 <b>So</b>	0 outh Approx	0 ach Alma A	0 ve	1 West	1 Approact	1 Harringt	0 on St
Period Start 8:15 16:30 Heavy Vehic Ti Period Start	Period End 9:15 17:30 cles me Period End	0 0 0 0	4 3 th Appro- R	46 27 ach Alma SB	1 3 Ave	0 0 Ea	0 0 st Approa	14 29 ch Acces WB	12 s 3 L	0 Sc	0 outh Approx	0 ach Alma A NB	0 ve	1 West U	1 Approact	1 Harringt EB	0 on St
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30	Period End 9:15 17:30 cles me Period End 7:45	0 0 0 0	4 3 th Approx R 0	46 27 ach Alma SB 0	1 3 Ave L 0	0 0 Ea U 0	0 0 st Approa R 0	14 29 ch Acces WB 0	12 s 3 L 0	0 50 0	0 outh Approx R 0	0 ach Alma A NB 0	0 ve L 0	1 West U 0	1 Approact R 0	1 Harringt EB 0	0 on St L 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 7:45	Period End 9:15 17:30 Cles me Period End 7:45 8:00	0 0 0 0	4 3 th Approx R 0 0	46 27 ach Alma SB 0 0	Ave 0	0 0 Ea U 0	0 0 st Approa R 0 0	14 29 ch Acces WB 0 0	12 s 3 0 0	0 0 0 0	0 Puth Approx R 0 0	0 ach Alma A NB 0 0	0 Ve 0 0	1 West U 0	1 Approact R 0 0	1 Harringt EB 0 0	0 on St 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30	Period End 9:15 17:30 cles me Period End 7:45	0 0 0 0 0 0	4 3 th Approx R 0 0 0	46 27 ach Alma SB 0	1 3 Ave L 0	0 0 Ea 0 0	0 0 st Approa R 0 0 0	14 29 ch Acces WB 0 0 0	12 s 3 0 0	0 50 0	0 outh Approx R 0	0 ach Alma A NB 0	0 ve L 0	1 West U 0	Approact R 0 0	1 Harringt EB 0	0 on St 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 7:45 8:00 8:15	Period End 9:15 17:30 2/es me Period End 7:45 8:00 8:15 8:30	0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0	46 27 ach Alma SB 0 0 0 0	1           3           Ave           0           0           0           0           0           0	0 0 0 0 0 0	0 0 st Approa R 0 0 0	14 29 ch Access WB 0 0 0 0	12 s 3 0 0 0 0	0 50 0 0 0	0 R 0 0 0 0	0 ach Alma A NB 0 0 0 0	0 Ve 0 0 0 0	1 West 0 0 0 0	Approacl R 0 0 0	Harringt EB 0 0 0 0	0 on St 0 0 0
Period Start 8:15 16:30 Heavy Vehic The Period Start 7:30 7:45 8:00 8:15 8:30	Period End 9:15 17:30 2/05 Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0 0 0	46 27 ach Alma SB 0 0 0 0 0 0 0	Ave 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 st Approz R 0 0 0 0 0 0	14 29 ch Acces WB 0 0 0 0 0 0 0	12 s 3 0 0 0 0 0 0	0 0 0 0 0 0	0 R 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0	1 West 0 0 0 0 0 0	1 Approact R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Harringt EB 0 0 0 0 0 0	0 on St 0 0 0 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 7:45 8:00 8:15	Period End 9:15 17:30 2/es me Period End 7:45 8:00 8:15 8:30	0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0	46 27 ach Alma SB 0 0 0 0	1           3           Ave           0           0           0           0           0           0	0 0 0 0 0 0	0 0 st Approa R 0 0 0	14 29 ch Access WB 0 0 0 0	12 s 3 0 0 0 0	0 50 0 0 0	0 R 0 0 0 0	0 ach Alma A NB 0 0 0 0	0 Ve 0 0 0 0	1 West 0 0 0 0	Approacl R 0 0 0	Harringt EB 0 0 0 0	0 on St 0 0 0
Period Start 8:15 16:30 Heavy Vehic The Period Start 7:30 7:45 8:00 8:15 8:30	Period End 9:15 17:30 2/05 Period End 7:45 8:00 8:15 8:30 8:45	0 0 0 0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0 0 0	46 27 ach Alma SB 0 0 0 0 0 0 0	Ave 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 st Approz R 0 0 0 0 0 0	14 29 ch Acces WB 0 0 0 0 0 0 0	12 s 3 0 0 0 0 0 0	0 0 0 0 0 0	0 R 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0	1 West 0 0 0 0 0 0	1 Approact R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Harringt EB 0 0 0 0 0	0 on St 0 0 0 0
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Period Start 8:15 16:30 Heavy Vehic Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00	Period End 9:15 17:30 2/es me Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0 0 0 0 0 0 0	46 27 30 0 0 0 0 0 0 0 0 0 0 0 0	1         3           Ave         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 8t Approz 0 0 0 0 0 0 0 0	14 29 WB 0 0 0 0 0 0 0 0 0 0	12 <b>s 3</b> 0 0 0 0 0 0 0 0 0	0 5 0 0 0 0 0 0 0 0 0	0 outh Approx 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0
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Period Start 8:15 Heavy Vehic Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30	Period End 9:15 17:30 Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	46 27 ach Alma 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1         3           Ave         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 8 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 wB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 <b>s 3</b> 0 0 0 0 0 0 0 0 0 0 0 0 0	0 50 0 0 0 0 0 0 0 0 0 0 0 0	0 R 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0 0 0 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45	Period End 9:15 17:30 Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 th Approv 0 0 0 0 0 0 0 0 0 0 0 0 0	46 27 38 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1         3           Ave         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 8 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 <b>s 3</b> 0 0 0 0 0 0 0 0 0 0 0 0 0	0 50 0 0 0 0 0 0 0 0 0 0 0 0 0	0 R 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 8:15 8:30 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00	Period End 9:15 17:30 17:30 17:30 17:30 17:30 17:45 8:00 8:15 8:30 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 th Approc R 0 0 0 0 0 0 0 0 0 0 0 0 0	46 27 ach Alma 58 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1           3           Ave           0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 wWB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 <b>s 3</b> 0 0 0 0 0 0 0 0 0 0 0 0 0	0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 R 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Period Start 8:15 16:30 Heavy Vehicits Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15	Period End 9:15 17:30 Period End 7:45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 9:64 9:64 9:64 9:70 9:15 17:00 17:16	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 th Appro- R 0 0 0 0 0 0 0 0 0 0 0 0 0	46 27 ach Alma SB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1           3           Ave           0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 ch Access 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 s 3 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0 0 0 0 0
Period Start 8:15 16:30 Heavy Vehic Ti Period Start 7:30 7:45 8:00 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30	Period End 9-15 17:30 Ses Period End 7-45 8:00 8:15 8:30 8:45 9:00 9:15 9:30 16:45 17:00 17:15 17:30	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 3 th Approx 0 0 0 0 0 0 0 0 0 0 0 0 0	48 27 ach Alma SB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1           3           Ave           0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 ch Access WB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 s 3 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Ve 0 0 0 0 0 0 0 0 0 0 0 0 0	1 West 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approacl R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Harringt EB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 on St 0 0 0 0 0 0 0 0 0 0 0 0 0
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Period Start 8/15 16:30 Heavy Veria Period Start 7:30 8:15 8:30 8:15 8:30 8:45 9:00 9:15 16:30 16:45 17:00 17:15 17:30 17:30 17:45 18:00 18:15	Period End 9:15 17:30 Pes me Period End 7:45 8:00 8:15 8:30 8:45 9:30 9:15 9:30 16:45 17:00 17:15 17:30 17:45 18:00 18:15 18:00	0           0	4 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	46 27 30 30 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	I           3           Ave           0	0           Ea           0	0 0 st Approz 0 0 0 0 0 0 0 0 0 0 0 0 0	14 29 wB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 <b>53</b> 0 0 0 0 0 0 0 0 0 0 0 0 0	0 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 Suth Approx R 0 0 0 0 0 0 0 0 0 0 0 0 0	0 ach Alma A NB 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ve           L         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0           0         0	1 WestS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Approace R 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1           Harringt           EB           0	0
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		and	and the second	1 and	
TRANS TRAFFIC	CIID\/EV	1	1	2 2	
IKANS IKAFFIC	JUILVEI	DNV-GL	DNV-GL	DNY GL	
TUDNING MOVEMENT OUDVEN	trafficsurvey.com.au		and and	San and	

GPS	-33.899579, 151.167564
Date:	Fri 26/11/21
Weather:	Fine
Suburban:	Stanmore
Customer:	VTP
Customer:	VTP

 North:
 Alma Ave

 East:
 Access 4 (N of Harrington)

 South:
 Alma Ave

 West:
 N/A

Survey	AM:	7:30 AM-9:30 AM
Period	PM:	4:30 PM-6:30 PM
Traffic	AM:	8:15 AM-9:15 AM
Peak	PM:	4:30 PM-5:30 PM

	me		pproach A	lma Ave			N of Harr		pproach A		Hourly	
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	Hour	Peak
7:30	7:45	0	10	0	0	0	0	0	0	0	36	
7:45	8:00	0	5	0	0	0	0	0	0	0	46	
8:00	8:15	0	11	0	0	0	0	0	0	0	65	
8:15	8:30	0	10	0	0	0	0	0	0	0	72	Peak
8:30	8:45	0	20	0	0	0	0	0	0	0	72	Peak
8:45	9:00	0	24	0	0	0	0	0	0	0		
9:00	9:15	0	17	0	0	0	1	0	0	0		
9:15	9:30	0	9	0	0	0	1	0	0	0		
16:30	16:45	0	12	2	0	0	0	0	0	0	41	Peak
16:45	17:00	0	9	0	0	0	0	0	0	0	38	
17:00	17:15	0	11	0	0	0	0	0	0	0	36	
17:15	17:30	0	6	1	0	0	0	0	0	0	34	
17:30	17:45	0	10	0	0	0	1	0	0	0	36	
17:45	18:00	0	6	0	0	0	1	0	0	0		
18:00	18:15	0	7	1	0	0	1	0	0	0		
18:15	18:30	0	7	0	0	0	2	0	0	0		

ak Time art Period End 9:15 17:30 Peak priod Start 8:15

not to scale and not an exact streets configuration.



Light Vehicl Ti	me	North A	pproach A	Ima Ave	oproach /	Access 4 (	N of Harr	South A	pproach A	Alma Ave
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:30	7:45	0	10	0	0	0	0	0	0	0
7:45	8:00	0	5	0	0	0	0	0	0	0
8:00	8:15	0	11	0	0	0	0	0	0	0
8:15	8:30	0	10	0	0	0	0	0	0	0
8:30	8:45	0	20	0	0	0	0	0	0	0
8:45	9:00	0	24	0	0	0	0	0	0	0
9:00	9:15	0	17	0	0	0	1	0	0	0
9:15	9:30	0	9	0	0	0	1	0	0	0
16:30	16:45	0	12	2	0	0	0	0	0	0
16:45	17:00	0	9	0	0	0	0	0	0	0
17:00	17:15	0	11	0	0	0	0	0	0	0
17:15	17:30	0	5	1	0	0	0	0	0	0
17:30	17:45	0	10	0	0	0	1	0	0	0
17:45	18:00	0	6	0	0	0	1	0	0	0
18:00	18:15	0	7	1	0	0	1	0	0	0
18:15	18:30	0	7	0	0	0	2	0	0	0
Doak	Time	North A	oproach A	Ima Avo	oproach /	CCOPE A	N of Harr	South A	nnroach /	uma Avo
Feak	11110	Hortin A	pproduit A		ppi oach i	100035 4 (	n or han	Joddin A	ppi oach A	Anna Ave

Peak	Time	North Ap	oproach A	lma Ave	oproach A	Access 4 (	N of Harr	South A	pproach A	Alma Ave	Peak
Period Start	Period End	U	SB	L	U	R	L	U	R	NB	total
8:15	9:15	0	71	0	0	0	1	0	0	0	72
16:30	17:30	0	37	3	0	0	0	0	0	0	40

Tir	me	North A	oproach A	Ima Ave	pproach A	Access 4 (	N of Harr	South A	pproach A	Ima Ave
Period Start	Period End	U	SB	L	U	R	L	U	R	NB
7:30	7:45	0	0	0	0	0	0	0	0	0
7:45	8:00	0	0	0	0	0	0	0	0	0
8:00	8:15	0	0	0	0	0	0	0	0	0
8:15	8:30	0	0	0	0	0	0	0	0	0
8:30	8:45	0	0	0	0	0	0	0	0	0
8:45	9:00	0	0	0	0	0	0	0	0	0
9:00	9:15	0	0	0	0	0	0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0	0	0
17:15	17:30	0	1	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0
Peak	Time	North A	oproach 4	Ima Ave	hnroach /	Access 4	N of Harr	South A	pproach A	Ima Ave
	Period End		SB	L	U	R	L	U	R	NB
8:15	9:15	0	0	0	0	0	0	0	0	0
16:30	17:30	0	1	0	0	0	0	0	0	0

0

## **APPENDIX C**

## SIDRA MOVEMENT SUMMARIES ONE WAY ALMA AVENUE

## **NETWORK LAYOUT**

# ■□ Network: N101 [Existing Network AM 2021 (Network Folder: General)]

Existing Network AM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	)											
5	T1	847	4.3	847	4.3	* 0.508	8.5	LOS A	15.7	113.6	0.40	0.58	0.40	38.3
Appro	oach	847	4.3	847	4.3	0.508	8.5	LOS A	15.7	113.6	0.40	0.58	0.40	38.3
North	: Merch	nant St (N	1)											
7	L2	57	0.0	57	0.0	0.492	56.1	LOS D	7.4	53.0	0.97	0.80	0.97	19.9
9	R2	78	3.8	78	3.8	*0.492	56.2	LOS D	7.4	53.0	0.97	0.80	0.97	26.4
Appro	oach	135	2.2	135	2.2	0.492	56.2	LOS D	7.4	53.0	0.97	0.80	0.97	24.3
West	: Stanm	ore Rd (	W)											
10	L2	68	0.0	68	0.0	0.315	8.6	LOS A	8.3	60.5	0.35	0.36	0.35	41.2
11	T1	818	6.1	818	6.1	0.315	5.2	LOS A	8.3	61.1	0.35	0.34	0.35	35.8
Appro	oach	886	5.6	886	5.6	0.315	5.4	LOS A	8.3	61.1	0.35	0.34	0.35	36.5
All Ve	ehicles	1868	4.8	1868	4.8	0.508	10.5	LOS A	15.7	113.6	0.42	0.48	0.42	35.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mc	vement	Perform	nance							
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m		. tato	sec	m	m/sec
East: Stanmore	Rd (E)									
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
North: Merchant	St (N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
West: Stanmore	Rd (W)									
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### MOVEMENT SUMMARY V Site: 101 [STA\_ALMX AM 2021 (Site Folder: General)]

Stanmore Rd & Alma St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	ormand	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	E)											
4	L2	33	0.0	33	0.0	0.073	4.9	LOS A	0.0	0.0	0.00	0.14	0.00	48.5
5	T1	796	4.9	796	4.9	0.366	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	58.0
Appro	oach	829	4.7	829	4.7	0.366	0.4	NA	0.0	0.0	0.00	0.02	0.00	57.5
West	: Stanm	ore Rd (	W)											
11	T1	870	5.9	870	5.9	0.334	0.6	LOS A	0.7	5.4	0.08	0.02	0.09	55.3
12	R2	30	0.0	30	0.0	0.334	12.0	LOS A	0.7	5.4	0.19	0.06	0.23	49.5
Appro	oach	900	5.7	900	5.7	0.334	1.0	NA	0.7	5.4	0.08	0.02	0.10	55.1
All Ve	ehicles	1729	5.2	1729	5.2	0.366	0.7	NA	0.7	5.4	0.04	0.02	0.05	55.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: VARGA TRAFFIC PLANNING | Licence: NETWORK / 1PC | Processed: Monday, 6 December 2021 2:32:39 PM Project: Z:\DATA\Data\Jobs01\Jobs\21work\21513\_58-76StanmoreRdStanmore\SIDRA\211206\Existing Network 2021.sip9

### MOVEMENT SUMMARY V Site: 101 [STA\_TUPX AM 2021 (Site Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmanc	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS ⊨HV]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tupp	er St (S)												
1 3	L2 R2	16 23	0.0 0.0	16 23	0.0 0.0	0.339 0.339	10.9 41.8	LOS A LOS C	0.8 0.8	5.4 5.4	0.56 0.56	0.70 0.70	0.66 0.66	19.9 19.9
Appro	oach	39	0.0	39	0.0	0.339	29.1	LOS C	0.8	5.4	0.56	0.70	0.66	19.9
East:	Stanm	ore Rd (E	E)											
4 5	L2 T1	22 773	0.0 5.0	22 773	0.0 5.0	0.078 0.343	4.1 0.3	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.09 0.01	0.00 0.00	51.5 58.3
Appro	bach	795	4.9	795	4.9	0.343	0.4	NA	0.0	0.0	0.00	0.02	0.00	58.1
West	: Stanm	ore Rd (	W)											
11	T1	862	5.9	862	5.9	0.236	0.1	LOS A	11.9	87.8	0.02	0.01	0.02	57.4
12	R2	8	0.0	8	0.0	0.236	10.8	LOS A	7.3	53.3	0.04	0.01	0.05	55.0
Appro	bach	870	5.9	870	5.9	0.236	0.2	NA	11.9	87.8	0.02	0.01	0.02	57.4
All Ve	ehicles	1704	5.3	1704	5.3	0.343	1.0	NA	11.9	87.8	0.02	0.03	0.03	49.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### Stanmore Rd & Liberty St

Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	)											
5 6	T1 R2	606 321	5.8 5.0	606 321	5.8 5.0	0.430 * 0.536	4.8 17.7	LOS A LOS B	9.6 7.2	70.3 52.6	0.30 0.44	0.27 0.82	0.30 0.44	37.6 36.5
Appro North		927 y St (N)	5.5	927	5.5	0.536	9.3	LOS A	9.6	70.3	0.35	0.46	0.35	36.8
7 9	L2 R2	310 189	4.2 2.1	310 189	4.2 2.1	0.375 <b>*</b> 0.689	27.2 58.9	LOS B LOS E	11.7 10.9	85.1 77.8	0.70 1.00	0.76 0.84	0.70 1.05	28.9 19.3
Appro	bach	499	3.4	499	3.4	0.689	39.2	LOS C	11.7	85.1	0.81	0.79	0.83	24.3
West:	Stanm	ore Rd (	W)											
10 11	L2 T1	92 793	3.3 6.2	92 793	3.3 6.2	0.715 <b>*</b> 0.715	32.7 29.6	LOS C LOS C	12.2 12.2	89.8 89.8	0.86 0.87	0.79 0.79	0.86 0.88	29.2 7.2
Appro	bach	885	5.9	885	5.9	0.715	30.0	LOS C	12.2	89.8	0.87	0.79	0.88	11.4
All Ve	hicles	2311	5.2	2311	5.2	0.715	23.7	LOS B	12.2	89.8	0.65	0.66	0.65	23.5

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vomont	Porform	nanco							
Mov							footivo	Traval	Tuessel	A
ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef Que	Stop	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		ped	m		Rate	sec	m	m/sec
East: Stanmore I	Rd (E)									
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
North: Liberty St	(N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	)											
1 2	L2 T1	79 564	0.0 11.3	79 564	0.0 11.3	0.847 <b>*</b> 0.847	62.6 58.2	LOS E LOS E	20.2 20.2	151.7 151.7	1.00 1.00	0.98 0.99	1.19 1.19	14.2 16.8
Appr	oach	643	10.0	643	10.0	0.847	58.8	LOS E	20.2	154.3	1.00	0.99	1.19	16.5
East:	Edgew	are Rd (E	Ξ)											
4 5	L2 T1	1 584	0.0 5.3	1 584	0.0 5.3	0.321 0.321	24.7 20.1	LOS B LOS B	10.3 10.3	75.5 75.5	0.65 0.65	0.56 0.56	0.65 0.65	32.4 32.5
Appr	oach	585	5.3	585	5.3	0.321	20.1	LOS B	10.3	75.5	0.65	0.56	0.65	32.5
North	n: Enmo	re Rd (N	)											
7	L2	68	5.9	68	5.9	0.502	42.6	LOS D	17.2	128.6	0.79	0.76	0.79	27.0
8	T1	320	8.1	320	8.1	0.502	36.1	LOS C	17.2	128.6	0.79	0.76	0.79	8.0
9	R2	233	5.6	233	5.6	* 0.654	55.2	LOS D	12.1	89.0	0.97	1.01	0.97	5.5
Appr	oach	621	6.9	621	6.9	0.654	44.0	LOS D	17.2	128.6	0.86	0.86	0.86	10.0
West	: Stanm	ore Rd (	W)											
10	L2	305	5.2	305	5.2	0.275	17.9	LOS B	10.3	75.2	0.60	0.75	0.60	23.9
11	T1	780	6.0	780	6.0	* 0.844	45.7	LOS D	26.6	195.8	0.99	0.93	1.02	25.5
Appr	oach	1085	5.8	1085	5.8	0.844	37.9	LOS C	26.6	195.8	0.88	0.88	0.90	25.3
	ehicles	2934	6.9	2934		0.847		LOS C	26.6	195.8	0.86	0.83	0.91	21.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pede	strian Movem	nent Pe	rform	ance							
Mov	De	em. A	ver.		AVERAGE B QUEU		Prop. Eff Que	ective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
	pe	d/h	sec		ped	m			sec	m	m/sec
South	: Enmore Rd (S	S)									
P1 F	ull	12 5	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
East:	Edgeware Rd (	E)									
P2 F	ull	33 5	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
North:	Enmore Rd (N	I)									
P3 F	ull	13 5	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
West:	Stanmore Rd (	(W)									
P4 F	ull	16 5	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
All Pe	destrians	73 5	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMX AM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	orman	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5	T1	31	0.0	31	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	31	0.0	31	0.0	0.016	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	: Alma	Ave (N)												
7	L2	26	0.0	26	0.0	0.038	3.6	LOS A	0.1	0.9	0.17	0.48	0.17	34.7
9	R2	24	0.0	24	0.0	0.038	4.3	LOS A	0.1	0.9	0.17	0.48	0.17	41.7
Appro	bach	50	0.0	50	0.0	0.038	3.9	LOS A	0.1	0.9	0.17	0.48	0.17	39.4
West	: Newin	gton Rd	(W)											
11	T1	84	0.0	84	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	84	0.0	84	0.0	0.043	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	ehicles	165	0.0	165	0.0	0.043	1.2	NA	0.1	0.9	0.05	0.15	0.05	46.1

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### **MOVEMENT SUMMARY** V Site: 101 [NEW\_TUPX AM 2021 (Site Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5 6	T1 R2	25 15	0.0 0.0	25 15	0.0 0.0	0.022 0.022	0.2 4.9	LOS A LOS A	0.1 0.1	0.6 0.6	0.15 0.15	0.20 0.20	0.15 0.15	43.4 43.4
Appro	bach	40	0.0	40	0.0	0.022	1.9	NA	0.1	0.6	0.15	0.20	0.15	43.4
North	: Tuppe	er St (N)												
7 9	L2 R2	30 6	0.0 0.0	30 6	0.0 0.0	0.025 0.025	4.8 5.0	LOS A LOS A	0.1 0.1	0.7 0.7	0.18 0.18	0.51 0.51	0.18 0.18	40.6 40.6
Appro	bach	36	0.0	36	0.0	0.025	4.8	LOS A	0.1	0.7	0.18	0.51	0.18	40.6
West	: Newin	gton Rd	(W)											
10	L2	20	0.0	20	0.0	0.057	4.5	LOS A	0.0	0.0	0.00	0.10	0.00	43.5
11	T1	90	0.0	90	0.0	0.057	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	43.5
Appro	bach	110	0.0	110	0.0	0.057	0.8	NA	0.0	0.0	0.00	0.10	0.00	43.5
All Ve	ehicles	186	0.0	186	0.0	0.057	1.8	NA	0.1	0.7	0.07	0.20	0.07	42.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWX AM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	ormanc	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Total veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. I Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Enmo	ore Rd (S	5)											
2	T1	592	11.1	592 <sup>-</sup>	11.1	0.163	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	592	11.1	592 <sup>-</sup>	11.1	0.163	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	: Enmo	re Rd (N	)											
8	T1	352	7.7	352	7.7	0.158	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	352	7.7	352	7.7	0.158	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	85	0.0	85	0.0	0.087	6.0	LOS A	0.3	2.2	0.38	0.60	0.38	35.9
12	R2	39	0.0	39	0.0	0.130	15.7	LOS B	0.5	3.2	0.75	0.89	0.75	30.4
Appro	bach	124	0.0	124	0.0	0.130	9.0	LOS A	0.5	3.2	0.50	0.69	0.50	33.3
All Ve	ehicles	1068	8.7	1068	8.7	0.163	1.1	NA	0.5	3.2	0.06	0.08	0.06	54.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **NETWORK LAYOUT**

# ■□ Network: N101 [Existing Network PM 2021 (Network Folder: General)]

Existing Network PM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East: Stanmore Rd (E)														
5	T1	880	2.3	880	2.3	0.286	5.5	LOS A	6.5	46.4	0.28	0.51	0.28	39.9
Appro	bach	880	2.3	880	2.3	0.286	5.5	LOS A	6.5	46.4	0.28	0.51	0.28	39.9
North	: Merch	nant St (N	1)											
7	L2	24	0.0	24	0.0	0.458	63.0	LOS E	4.8	34.4	0.99	0.77	0.99	18.8
9	R2	59	5.1	59	5.1	* 0.458	61.6	LOS E	4.8	34.4	0.99	0.77	0.99	25.4
Appro	bach	83	3.6	83	3.6	0.458	62.0	LOS E	4.8	34.4	0.99	0.77	0.99	24.0
West: Stanmore Rd (W)														
10	L2	30	0.0	30	0.0	0.093	6.1	LOS A	1.7	12.3	0.23	0.27	0.23	42.3
11	T1	718	1.1	718	1.1	* 0.463	3.7	LOS A	10.1	71.1	0.30	0.28	0.30	37.1
Appro	bach	748	1.1	748	1.1	0.463	3.8	LOS A	10.1	71.1	0.30	0.28	0.30	37.4
All Ve	ehicles	1711	1.8	1711	1.8	0.463	7.5	LOS A	10.1	71.1	0.32	0.42	0.32	37.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.		
ID Crossing	rossing Flow Delay Servi		Service	QUEUE [ Ped Dist ]		Que Stop Rate		Time	Dist.	Speed		
	ped/h	sec		ped	m		. tato	sec	m	m/sec		
East: Stanmore Rd (E)												
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98		
North: Merchant St (N)												
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97		
West: Stanmore Rd (W)												
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98		
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98		

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### MOVEMENT SUMMARY V Site: 101 [STA\_ALMX PM 2021 (Site Folder: General)]

Stanmore Rd & Alma St Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	East: Stanmore Rd (E)													
4	L2	46	0.0	46	0.0	0.251	5.0	LOS A	0.0	0.0	0.00	0.06	0.00	54.7
5	T1	919	2.2	919	2.2	0.251	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	57.3
Appro	oach	965	2.1	965	2.1	0.251	0.2	NA	0.0	0.0	0.00	0.03	0.00	57.2
West: Stanmore Rd (W)														
11	T1	745	0.9	745	0.9	0.514	0.5	LOS A	0.5	3.6	0.06	0.01	0.08	56.4
12	R2	12	0.0	12	0.0	0.514	14.9	LOS B	0.5	3.6	0.06	0.01	0.08	56.4
Appro	oach	757	0.9	757	0.9	0.514	0.7	NA	0.5	3.6	0.06	0.01	0.08	56.4
All Ve	ehicles	1722	1.6	1722	1.6	0.514	0.4	NA	0.5	3.6	0.03	0.02	0.04	56.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Organisation: VARGA TRAFFIC PLANNING | Licence: NETWORK / 1PC | Processed: Monday, 6 December 2021 2:47:46 PM Project: Z:\DATA\Data\Jobs01\Jobs\21work\21513\_58-76StanmoreRdStanmore\SIDRA\211206\Existing Network 2021.sip9
### **MOVEMENT SUMMARY** V Site: 101 [STA\_TUPX PM 2021 (Site Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmanc	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tuppe	er St (S)												
1 3	L2 R2	21 21	0.0 0.0	21 21	0.0 0.0	0.302 0.302	8.7 38.5	LOS A LOS C	0.7 0.7	5.0 5.0	0.74 0.74	0.86 0.86	0.86 0.86	21.8 21.8
Appr	oach	42	0.0	42	0.0	0.302	23.6	LOS B	0.7	5.0	0.74	0.86	0.86	21.8
East:	Stanmo	ore Rd (E	E)											
4 5	L2 T1	42 944	0.0 2.3	42 944	0.0 2.3	0.257 0.257	4.1 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.05 0.02	0.00 0.00	54.9 57.4
Appr	oach	986	2.2	986	2.2	0.257	0.2	NA	0.0	0.0	0.00	0.02	0.00	57.2
West	: Stanm	ore Rd (	W)											
11 12	T1 R2	736 9	1.0 0.0	736 9	1.0 0.0	0.198 0.198	0.2 11.6	LOS A LOS A	11.4 2.8	80.7 19.7	0.03 0.07	0.01 0.02	0.03 0.07	56.2 52.7
Appro	oach	745	0.9	745	0.9	0.198	0.3	NA	11.4	80.7	0.03	0.01	0.03	56.2
All Ve	ehicles	1773	1.6	1773	1.6	0.302	0.8	NA	11.4	80.7	0.03	0.04	0.03	49.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

#### Stanmore Rd & Liberty St

Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	)											
5 6	T1 R2	742 390	2.7 0.8	742 390	2.7 0.8	0.540 * 0.565	7.5 23.4	LOS A LOS B	16.3 11.5	116.8 81.0	0.42 0.60	0.38 0.88	0.42 0.60	31.0 33.5
	Approach 1132 2.0 1132 2.0 0.565 13.0 LOS A 16.3 116.8 0.48 0.55 0.48 32 North: Liberty St (N)											32.8		
7 9	L2 R2	375 244	2.1 0.4	375 244	2.1 0.4	0.384 <b>*</b> 0.719	22.0 56.3	LOS B LOS D	12.7 14.0	90.5 98.0	0.63 1.00	0.75 0.86	0.63 1.05	31.4 19.8
Appro	bach	619	1.5	619	1.5	0.719	35.5	LOS C	14.0	98.0	0.77	0.79	0.79	25.5
West	Stanm	ore Rd (	W)											
10 11	L2 T1	79 678	0.0 1.0	79 678	0.0 1.0	0.714 <b>*</b> 0.714	38.9 35.9	LOS C LOS C	12.7 12.7	89.8 89.8	0.92 0.92	0.82 0.82	0.92 0.93	26.8 6.1
Appro		757	0.9	757	0.9	0.714	36.2	LOS C	12.7	89.8	0.92	0.82	0.93	9.8
All Ve	hicles	2508	1.6	2508	1.6	0.719	25.5	LOS B	16.3	116.8	0.68	0.69	0.69	23.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vement	Perforr	nance								
Mov	Dem.	Aver.		AVERAGE		Prop. Et		Travel	Travel	Aver.	
ID Crossing	Flow	Delay	lay Service QUEUE [ Ped Dist ]		Que	Stop Rate	Time	Dist.	Speed		
	ped/h	sec		ped	m		Male	sec	m	m/sec	
East: Stanmore Rd (E)											
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98	
North: Liberty St	: (N)										
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98	
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

#### Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	icle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c		Level of Service	95% BA QUE [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	)											
1 2	L2 T1	104 418	0.0 6.0	104 418	0.0 6.0	0.815 <b>*</b> 0.815	62.9 58.3	LOS E LOS E	15.6 16.4	112.7 120.6	1.00 1.00	0.95 0.94	1.17 1.16	14.0 16.7
Appr		522	4.8	522	4.8	0.815	59.2	LOS E	16.4	120.6	1.00	0.94	1.16	16.2
East	Edgew	vare Rd (I	Ξ)											
4 5	L2 T1	3 692	0.0 2.0	3 692	0.0 2.0	0.424 0.424	28.5 23.9	LOS B LOS B	12.9 14.4	92.1 102.7	0.73 0.73	0.63 0.63	0.73 0.73	30.4 30.4
Appr	oach	695	2.0	695	2.0	0.424	23.9	LOS B	14.4	102.7	0.73	0.63	0.73	30.4
North	n: Enmo	ore Rd (N	)											
7	L2	90	0.0	90	0.0	0.564	39.2	LOS C	19.7	146.9	0.79	0.78	0.79	28.1
8	T1	381	9.7	381	9.7	0.564	32.8	LOS C	19.7	146.9	0.79	0.78	0.79	8.6
9	R2	341	2.1	341	2.1	* 0.700	50.2	LOS D	16.3	116.3	0.96	1.04	0.96	6.0
Appr	oach	812	5.4	812	5.4	0.700	40.8	LOS C	19.7	146.9	0.86	0.89	0.86	10.6
West	: Stann	nore Rd (	W)											
10	L2	312	0.0	312	0.0	0.275	17.8	LOS B	10.5	73.4	0.60	0.75	0.60	24.1
11	T1	746	2.0	746	2.0	* 0.844	43.0	LOS D	27.5	195.8	0.99	0.94	1.03	26.3
Appr	oach	1058	1.4	1058	1.4	0.844	35.6	LOS C	27.5	195.8	0.88	0.88	0.91	26.0
All V	ehicles	3087	3.2	3087		0.844	38.3	LOS C	27.5	195.8	0.86	0.84	0.90	21.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vement	Perform	nance							
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef Que	fective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Enmore F	Rd (S)									
P1 Full	12	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
East: Edgeware	Rd (E)									
P2 Full	33	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
North: Enmore F	Rd (N)									
P3 Full	13	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
West: Stanmore	Rd (W)									
P4 Full	16	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
All Pedestrians	73	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMX PM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5	T1	39	0.0	39	0.0	0.020	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	39	0.0	39	0.0	0.020	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	orth: Alma Ave (N)													
7	L2	23	0.0	23	0.0	0.030	3.6	LOS A	0.1	0.8	0.15	0.47	0.15	34.8
9	R2	18	0.0	18	0.0	0.030	4.2	LOS A	0.1	0.8	0.15	0.47	0.15	41.8
Appro	bach	41	0.0	41	0.0	0.030	3.9	LOS A	0.1	0.8	0.15	0.47	0.15	39.2
West	: Newin	gton Rd	(W)											
11	T1	66	0.0	66	0.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	66	0.0	66	0.0	0.034	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	ehicles	146	0.0	146	0.0	0.034	1.1	NA	0.1	0.8	0.04	0.13	0.04	46.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### MOVEMENT SUMMARY V Site: 101 [NEW\_TUPX PM 2021 (Site Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5 6	T1 R2	26 15	0.0 0.0	26 15	0.0 0.0	0.023 0.023	0.1 4.8	LOS A LOS A	0.1 0.1	0.6 0.6	0.13 0.13	0.20 0.20	0.13 0.13	43.7 43.7
Appr	oach	41	0.0	41	0.0	0.023	1.8	NA	0.1	0.6	0.13	0.20	0.13	43.7
North	: Tuppe	er St (N)												
7 9	L2 R2	33 13	0.0 0.0	33 13	0.0 0.0	0.032 0.032	4.7 4.9	LOS A LOS A	0.1 0.1	0.8 0.8	0.15 0.15	0.51 0.51	0.15 0.15	40.7 40.7
Appro	oach	46	0.0	46	0.0	0.032	4.8	LOS A	0.1	0.8	0.15	0.51	0.15	40.7
West	: Newin	gton Rd	(W)											
10 11	L2 T1	23 66	0.0 0.0	23 66	0.0 0.0	0.046 0.046	4.5 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.14 0.14	0.00 0.00	41.3 41.3
Appro	oach	89	0.0	89	0.0	0.046	1.2	NA	0.0	0.0	0.00	0.14	0.00	41.3
All Ve	ehicles	176	0.0	176	0.0	0.046	2.3	NA	0.1	0.8	0.07	0.25	0.07	41.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWX PM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	ormano	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop.   Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Enmo	ore Rd (S	)											
2	T1	465	6.9	465	6.9	0.208	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	bach	465	6.9	465	6.9	0.208	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	: Enmo	re Rd (N	)											
8	T1	468	8.5	468	8.5	0.127	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	468	8.5	468	8.5	0.127	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	62	0.0	62	0.0	0.050	5.7	LOS A	0.2	1.3	0.17	0.51	0.17	37.4
12	R2	47	0.0	47	0.0	0.154	15.6	LOS B	0.5	3.8	0.75	0.89	0.75	30.5
Appro	oach	109	0.0	109	0.0	0.154	10.0	LOS A	0.5	3.8	0.42	0.67	0.42	33.2
All Ve	ehicles	1042	6.9	1042	6.9	0.208	1.1	NA	0.5	3.8	0.04	0.07	0.04	55.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **NETWORK LAYOUT**

#### ■ □ Network: N101 [Proposed Network AM 2021 (Network Folder: General)]

Existing Network AM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



101	NA	STA_LIBP AM 2021
101	NA	STA_ENM_EDGP AM 2021
√101	NA	NEW_ALMP AM 2021
√101	NA	NEW_TUPP AM 2021
√101	NA	ENM_NEWP AM 2021
√101	NA	ALM_SITEP AM 2021
√101	NA	TUP_SITEP AM 2021

Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	ormano	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	Ξ)											
5	T1	856	4.2	856	4.2	* 0.506	8.2	LOS A	15.4	111.7	0.39	0.57	0.39	38.5
Appro	bach	856	4.2	856	4.2	0.506	8.2	LOS A	15.4	111.7	0.39	0.57	0.39	38.5
North	: Merch	nant St (N	1)											
7	L2	57	0.0	57	0.0	0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	19.6
9	R2	78	3.8	78	3.8	* 0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	26.2
Appro	bach	135	2.2	135	2.2	0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	24.0
West	: Stanm	nore Rd ('	W)											
10	L2	68	0.0	68	0.0	0.314	8.2	LOS A	8.1	59.1	0.34	0.35	0.34	41.3
11	T1	825	6.1	825	6.1	0.314	4.8	LOS A	8.1	59.6	0.34	0.33	0.34	36.0
Appro	bach	893	5.6	893	5.6	0.314	5.1	LOS A	8.1	59.6	0.34	0.33	0.34	36.7
All Ve	ehicles	1884	4.7	1884	4.7	0.521	10.2	LOS A	15.4	111.7	0.41	0.47	0.41	35.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mc	vement	Perform	nance							
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	[Ped Dist]		Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m		. tato	sec	m	m/sec
East: Stanmore	Rd (E)									
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
North: Merchant	St (N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
West: Stanmore	Rd (W)									
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [STA\_ALMP AM 2021 (Site Folder: General)]

Stanmore Rd & Alma St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfc	ormand	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF JEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	East: Stanmore Rd (E)													
4	L2	37	0.0	37	0.0	0.074	4.9	LOS A	0.0	0.0	0.00	0.16	0.00	47.5
5	T1	798	4.9	798	4.9	0.368	0.2	LOS A	0.0	0.0	0.00	0.02	0.00	57.8
Appr	oach	835	4.7	835	4.7	0.368	0.4	NA	0.0	0.0	0.00	0.03	0.00	57.3
West	: Stanm	ore Rd (	W)											
11	T1	875	5.8	875	5.8	0.350	0.6	LOS A	0.8	6.1	0.08	0.02	0.10	54.8
12	R2	32	0.0	32	0.0	0.350	12.3	LOS A	0.8	6.1	0.19	0.06	0.24	49.5
Appr	oach	907	5.6	907	5.6	0.350	1.1	NA	0.8	6.1	0.09	0.03	0.11	54.6
All Ve	ehicles	1742	5.2	1742	5.2	0.368	0.8	NA	0.8	6.1	0.05	0.03	0.06	55.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [STA\_TUPP AM 2021 (Site Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tupp	er St (S)												
1 3	L2 R2	18 24	0.0 0.0	18 24	0.0 0.0	0.361 0.361	11.9 44.0	LOS A LOS D	0.9 0.9	6.0 6.0	0.53 0.53	0.69 0.69	0.65 0.65	6.5 6.5
Appro	oach	42	0.0	42	0.0	0.361	30.3	LOS C	0.9	6.0	0.53	0.69	0.65	6.5
East:	Stanm	ore Rd (E	=)											
4 5	L2 T1	34 777	0.0 5.0	34 777	0.0 5.0	0.079 0.350	4.1 0.3	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.13 0.02	0.00 0.00	48.2 57.7
Appro	oach	811	4.8	811	4.8	0.350	0.4	NA	0.0	0.0	0.00	0.02	0.00	57.2
West	: Stanm	ore Rd (	W)											
11	T1	862	5.9	862	5.9	0.240	0.2	LOS A	13.3	97.7	0.04	0.01	0.04	55.8
12	R2	13	0.0	13	0.0	0.240	11.0	LOS A	4.8	35.2	0.07	0.02	0.08	52.0
Appro	oach	875	5.8	875	5.8	0.240	0.4	NA	13.3	97.7	0.04	0.01	0.04	55.8
All Ve	ehicles	1728	5.2	1728	5.2	0.361	1.1	NA	13.3	97.7	0.03	0.03	0.03	48.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Stanmore Rd & Liberty St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	=)											
5 6	T1 R2	618 324	5.7 4.9	618 324	5.7 4.9	0.438 <b>*</b> 0.541	4.8 17.7	LOS A LOS B	9.7 7.3	71.5 53.0	0.30 0.44	0.27 0.82	0.30 0.44	37.6 36.5
Appro	bach	942	5.4	942	5.4	0.541	9.2	LOS A	9.7	71.5	0.35	0.46	0.35	36.8
North	: Libert	y St (N)												
7 9	L2 R2	310 193	4.2 2.1	310 193	4.2 2.1	0.375 <b>*</b> 0.703	27.2 59.2	LOS B LOS E	11.7 11.2	85.1 79.9	0.70 1.00	0.76 0.85	0.70 1.06	28.9 19.2
Appro	bach	503	3.4	503	3.4	0.703	39.5	LOS C	11.7	85.1	0.81	0.80	0.84	24.2
West	: Stanm	ore Rd (	W)											
10 11	L2 T1	93 793	3.2 6.2	93 793	3.2 6.2	0.716 <b>*</b> 0.716	32.7 29.7	LOS C LOS C	12.2 12.2	89.8 89.8	0.86 0.87	0.79 0.79	0.86 0.88	29.2 7.2
Appro	bach	886	5.9	886	5.9	0.716	30.0	LOS C	12.2	89.8	0.87	0.79	0.88	11.5
All Ve	ehicles	2331	5.1	2331	5.1	0.716	23.6	LOS B	12.2	89.8	0.65	0.66	0.65	23.5

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Dedectries Ma		Destau								
Pedestrian Mo	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
				[Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Stanmore I	Rd (E)									
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
North: Liberty St	(N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

#### Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	:e									
ID	Turn	DEMA FLOV [ Total veh/h	VS HV] %	ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Enmo	ore Rd (S	)											
1	L2	87	0.0	87	0.0	0.863	64.2	LOS E	21.0	157.1	1.00	1.00	1.22	13.9
2	T1	568	11.3	568	11.3	* 0.863	59.9	LOS E	21.0	157.1	1.00	1.01	1.22	16.5
Appro	bach	655	9.8	655	9.8	0.863	60.4	LOS E	21.0	160.1	1.00	1.01	1.22	16.1
East:	Edgew	are Rd (E	E)											
4	L2	1	0.0	1	0.0	0.323	24.7	LOS B	10.4	76.1	0.65	0.56	0.65	32.4
5	T1	588	5.3	588	5.3	0.323	20.1	LOS B	10.4	76.1	0.65	0.56	0.65	32.4
Appro	bach	589	5.3	589	5.3	0.323	20.1	LOS B	10.4	76.1	0.65	0.56	0.65	32.4
North	: Enmo	ore Rd (N)	)											
7	L2	68	5.9	68	5.9	0.502	42.3	LOS C	16.9	126.2	0.79	0.76	0.79	27.1
8	T1	320	8.1	320	8.1	0.502	35.7	LOS C	16.9	126.2	0.79	0.76	0.79	8.1
9	R2	236	5.5	236	5.5	* 0.667	55.8	LOS D	12.4	90.7	0.98	1.01	0.98	5.5
Appro	bach	624	6.9	624	6.9	0.667	44.1	LOS D	16.9	126.2	0.86	0.86	0.86	10.0
West	: Stanm	ore Rd (	N)											
10	L2	305	5.2	305	5.2	0.276	16.9	LOS B	9.7	70.6	0.57	0.74	0.57	24.7
11	T1	780	6.0	780	6.0	*0.846	46.3	LOS D	26.6	195.8	0.99	0.94	1.03	25.3
Appro	bach	1085	5.8	1085	5.8	0.846	38.0	LOS C	26.6	195.8	0.87	0.88	0.90	25.2
All Ve	ehicles	2953	6.8	2953	6.8	0.863	40.7	LOS C	26.6	195.8	0.85	0.84	0.91	21.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vement	Perform	nance							
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef Que	fective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Enmore F	Rd (S)									
P1 Full	12	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
East: Edgeware	Rd (E)									
P2 Full	33	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
North: Enmore R	Rd (N)									
P3 Full	13	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
West: Stanmore	Rd (W)									
P4 Full	16	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
All Pedestrians	73	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMP AM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5	T1	31	0.0	31	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	31	0.0	31	0.0	0.016	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	: Alma	Ave (N)												
7	L2	43	0.0	43	0.0	0.049	3.6	LOS A	0.2	1.3	0.17	0.47	0.17	34.8
9	R2	24	0.0	24	0.0	0.049	4.3	LOS A	0.2	1.3	0.17	0.47	0.17	41.8
Appro	bach	67	0.0	67	0.0	0.049	3.9	LOS A	0.2	1.3	0.17	0.47	0.17	38.6
West	: Newin	gton Rd	(W)											
11	T1	84	0.0	84	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	84	0.0	84	0.0	0.043	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	hicles	182	0.0	182	0.0	0.049	1.4	NA	0.2	1.3	0.06	0.17	0.06	45.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [NEW\_TUPP AM 2021 (Site Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5 6	T1 R2	25 15	0.0 0.0	25 15	0.0 0.0	0.022 0.022	0.2 4.9	LOS A LOS A	0.1 0.1	0.6 0.6	0.17 0.17	0.20 0.20	0.17 0.17	43.2 43.2
Appro	bach	40	0.0	40	0.0	0.022	2.0	NA	0.1	0.6	0.17	0.20	0.17	43.2
North	: Tuppe	er St (N)												
7 9	L2 R2	32 6	0.0 0.0	32 6	0.0 0.0	0.027 0.027	4.9 5.1	LOS A LOS A	0.1 0.1	0.7 0.7	0.20 0.20	0.51 0.51	0.20 0.20	39.0 39.0
Appro	bach	38	0.0	38	0.0	0.027	4.9	LOS A	0.1	0.7	0.20	0.51	0.20	39.0
West	: Newin	gton Rd	(W)											
10	L2	20	0.0	20	0.0	0.066	4.5	LOS A	0.0	0.0	0.00	0.09	0.00	44.2
11	T1	107	0.0	107	0.0	0.066	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	44.2
Appro	bach	127	0.0	127	0.0	0.066	0.7	NA	0.0	0.0	0.00	0.09	0.00	44.2
All Ve	ehicles	205	0.0	205	0.0	0.066	1.7	NA	0.1	0.7	0.07	0.19	0.07	41.9

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWP AM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmand	e:									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	5)											
2	T1	597	11.1	597 <sup>-</sup>	11.1	0.164	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	597	11.1	597 <sup>-</sup>	11.1	0.164	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	n: Enmo	re Rd (N	)											
8	T1	352	7.7	352	7.7	0.158	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appr	oach	352	7.7	352	7.7	0.158	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	92	0.0	92	0.0	0.095	6.0	LOS A	0.3	2.4	0.38	0.61	0.38	35.9
12	R2	51	0.0	51	0.0	0.172	16.1	LOS B	0.6	4.2	0.76	0.89	0.76	30.2
Appr	oach	143	0.0	143	0.0	0.172	9.6	LOS A	0.6	4.2	0.52	0.71	0.52	32.9
All Ve	ehicles	1092	8.5	1092	8.5	0.172	1.3	NA	0.6	4.2	0.07	0.09	0.07	54.0

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [ALM\_SITEP AM 2021 (Site Folder: General)]

Alma Ave & Residential Access Site Category: (None) Give-Way (Two-Way)

Vehi	icle Mc	vement	Perfo	rman	се									
Mov ID	Turn	DEMA FLO		ARR FLO [ Tota	WS	Deg. Satn	Aver. Delay	Level of Service		ACK OF EUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed
		veh/h	%	veh/h		v/c	sec		veh	m				km/h
East	Reside	ential Acc	ess (E	)										
4	L2	24	0.0	24	0.0	0.015	3.6	LOS A	0.1	0.4	0.14	0.43	0.14	36.8
Appr	oach	24	0.0	24	0.0	0.015	3.6	LOS A	0.1	0.4	0.14	0.43	0.14	36.8
North	n: Alma	Ave (N)												
7	L2	6	0.0	6	0.0	0.036	3.4	LOS A	0.0	0.0	0.00	0.04	0.00	40.0
8	T1	63	0.0	63	0.0	0.036	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	38.5
Appr	oach	69	0.0	69	0.0	0.036	0.3	NA	0.0	0.0	0.00	0.04	0.00	39.1
All V	ehicles	93	0.0	93	0.0	0.036	1.1	NA	0.1	0.4	0.04	0.14	0.04	37.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [TUP\_SITEP AM 2021 (Site Folder: General)]

Tupper St & Club/Retail Access Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	се									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARR FLO [ Tota veh/h	₩S II HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		BACK OF JEUE Dist ] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tuppe	er St (S)												
1 2	L2 T1	1 39	0.0 0.0	1 39	0.0 0.0	0.021 0.021	3.4 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.01 0.01	0.00 0.00	40.1 39.9
Appro	bach	40	0.0	40	0.0	0.021	0.1	NA	0.0	0.0	0.00	0.01	0.00	39.9
North	: Tuppe	er St (N)												
8 9	T1 R2	30 17	0.0 0.0	30 17	0.0 0.0	0.025 0.025	0.1 3.6	LOS A LOS A	0.1 0.1	0.6 0.6	0.08 0.08	0.17 0.17	0.08 0.08	30.9 38.4
Appro	bach	47	0.0	47	0.0	0.025	1.4	NA	0.1	0.6	0.08	0.17	0.08	37.0
West	: Club 8	Retail A	ccess	(W)										
10 12	L2 R2	3 2	0.0 0.0	3 2	0.0 0.0	0.004 0.004	3.5 3.8	LOS A LOS A	0.0 0.0	0.1 0.1	0.11 0.11	0.45 0.45	0.11 0.11	36.9 36.9
Appro	bach	5	0.0	5	0.0	0.004	3.6	LOS A	0.0	0.1	0.11	0.45	0.11	36.9
All Ve	ehicles	92	0.0	92	0.0	0.025	0.9	NA	0.1	0.6	0.05	0.12	0.05	38.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **NETWORK LAYOUT**

# ■□ Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Existing Network PM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BA QUE [ Veh. veh	ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	Ξ)											
5	T1	895	2.2	895	2.2	0.288	5.3	LOS A	6.4	45.5	0.27	0.50	0.27	40.1
Appro	bach	895	2.2	895	2.2	0.288	5.3	LOS A	6.4	45.5	0.27	0.50	0.27	40.1
North	: Merch	nant St (N	۷)											
7	L2	24	0.0	24	0.0	0.500	64.4	LOS E	4.8	34.9	0.99	0.77	0.99	18.5
9	R2	59	5.1	59	5.1	* 0.500	63.0	LOS E	4.8	34.9	0.99	0.77	0.99	25.2
Appro	bach	83	3.6	83	3.6	0.500	63.4	LOS E	4.8	34.9	0.99	0.77	0.99	23.7
West	: Stanm	ore Rd (	W)											
10	L2	30	0.0	30	0.0	0.096	5.9	LOS A	1.8	12.3	0.22	0.26	0.22	42.4
11	T1	750	1.1	750	1.1	* 0.478	3.5	LOS A	10.3	72.4	0.29	0.28	0.29	37.2
Appro	bach	780	1.0	780	1.0	0.478	3.6	LOS A	10.3	72.4	0.29	0.28	0.29	37.6
All Ve	hicles	1758	1.8	1758	1.8	0.500	7.3	LOS A	10.3	72.4	0.31	0.41	0.31	37.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mc	vement	Perform	nance							
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m		. tato	sec	m	m/sec
East: Stanmore	Rd (E)									
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
North: Merchant	St (N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
West: Stanmore	Rd (W)									
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### MOVEMENT SUMMARY V Site: 101 [STA\_ALMP PM 2021 (Site Folder: General)]

### Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Stanmore Rd & Alma St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO	NS HV ]	ARRI FLO	WS I HV ]	Deg. Satn	Delay	Level of Service	Ql [ Veh.	BACK OF JEUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed
East:	Stanmo	veh/h ore Rd (E	% E)	veh/h	%	v/c	Sec	_	veh	m	_	_	_	km/h
4	L2	61	0.0	61	0.0	0.259	5.0	LOS A	0.0	0.0	0.00	0.07	0.00	53.4
5	T1	933	2.1	933	2.1	0.259	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	56.7
Appro	oach	994	2.0	994	2.0	0.259	0.3	NA	0.0	0.0	0.00	0.04	0.00	56.5
West	: Stanm	ore Rd (	W)											
11	T1	770	0.9	770	0.9	0.557	0.8	LOS A	0.9	6.2	0.09	0.02	0.14	54.2
12	R2	19	0.0	19	0.0	0.557	15.8	LOS B	0.9	6.2	0.09	0.02	0.14	54.2
Appro	oach	789	0.9	789	0.9	0.557	1.2	NA	0.9	6.2	0.09	0.02	0.14	54.2
All Ve	ehicles	1783	1.5	1783	1.5	0.557	0.7	NA	0.9	6.2	0.04	0.03	0.06	55.0

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [STA\_TUPP PM 2021 (Site Folder: General)]

### Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmand	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tuppe	er St (S)												
1 3	L2 R2	35 30	0.0 0.0	35 30	0.0 0.0	0.470 0.470	14.9 49.3	LOS B LOS D	1.3 1.3	9.3 9.3	0.75 0.75	0.95 0.95	1.05 1.05	6.4 6.4
Appro	bach	65	0.0	65	0.0	0.470	30.8	LOS C	1.3	9.3	0.75	0.95	1.05	6.4
East:	Stanmo	ore Rd (E	)											
4 5	L2 T1	90 959	0.0 2.3	90 959	0.0 2.3	0.274 0.274	4.1 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.10 0.05	0.00 0.00	50.6 55.3
Appro	oach	1049	2.1	1049	2.1	0.274	0.4	NA	0.0	0.0	0.00	0.05	0.00	54.8
West	: Stanm	ore Rd (	W)											
11	T1	736	1.0	736	1.0	0.221	0.8	LOS A	11.8	83.4	0.11	0.03	0.11	48.1
12	R2	34	0.0	34	0.0	0.221	12.3	LOS A	2.3	16.6	0.26	0.07	0.27	37.8
Appro	bach	770	0.9	770	0.9	0.221	1.3	NA	11.8	83.4	0.12	0.03	0.12	47.5
All Ve	ehicles	1884	1.5	1884	1.5	0.470	1.8	NA	11.8	83.4	0.07	0.07	0.09	42.1

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Stanmore Rd & Liberty St

Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	E)											
5 6	T1 R2	794 391	2.5 0.8	794 391	2.5 0.8	0.584 <b>*</b> 0.584	8.7 27.9	LOS A LOS B	21.8 12.2	155.6 86.3	0.52 0.64	0.48 0.90	0.52 0.64	28.8 31.5
Appro North		1185 y St (N)	1.9	1185	1.9	0.584	15.0	LOS B	21.8	155.6	0.56	0.62	0.56	30.6
7 9	L2 R2	375 255	2.1 0.4	375 255	2.1 0.4	0.384 <b>*</b> 0.718	22.0 55.5	LOS B LOS D	12.7 14.5	90.5 101.8	0.63 0.99	0.75 0.86	0.63 1.04	31.4 20.0
Appro	bach	630	1.4	630	1.4	0.718	35.5	LOS C	14.5	101.8	0.78	0.79	0.80	25.5
West	: Stanm	ore Rd (	W)											
10 11	L2 T1	84 682	0.0 1.0	84 682	0.0 1.0	0.722 <b>*</b> 0.722	39.0 36.2	LOS C LOS C	12.7 12.7	89.8 89.8	0.92 0.92	0.82 0.83	0.92 0.94	26.8 6.1
Appro	bach	766	0.9	766	0.9	0.722	36.5	LOS C	12.7	89.8	0.92	0.83	0.94	9.9
All Ve	ehicles	2581	1.5	2581	1.5	0.722	26.4	LOS B	21.8	155.6	0.72	0.72	0.73	22.9

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Dedectries Ma		Deuferm								
Pedestrian Mo	vement	Perforr	nance							
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	ffective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
				[Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Stanmore I	Rd (E)									
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
North: Liberty St	(N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

#### Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	)											
1	L2	132	0.0	132	0.0	0.875	69.3	LOS E	16.6	118.7	1.00	1.02	1.30	12.9
2	T1	419	6.0	419	6.0	* 0.875	63.6	LOS E	19.6	144.1	1.00	1.02	1.27	15.7
Appr	oach	551	4.5	551	4.5	0.875	64.9	LOS E	19.6	144.1	1.00	1.02	1.28	15.1
East:	Edgew	are Rd (B	Ξ)											
4 5	L2 T1	3 707	0.0 2.0	3 707	0.0 2.0	0.503 0.503	29.8 24.7	LOS C LOS B	13.2 15.7	93.8 111.8	0.76 0.75	0.67 0.66	0.76 0.75	29.8 30.0
Appr	oach	710	2.0	710	2.0	0.503	24.7	LOS B	15.7	111.8	0.75	0.66	0.75	30.0
North	n: Enmo	re Rd (N	)											
7	L2	90	0.0	90	0.0	0.564	39.2	LOS C	19.7	146.9	0.79	0.78	0.79	28.1
8	T1	381	9.7	381	9.7	0.564	32.8	LOS C	19.7	146.9	0.79	0.78	0.79	8.6
9	R2	351	2.0	351	2.0	* 0.756	54.4	LOS D	17.7	125.8	0.98	1.07	1.03	5.6
Appr	oach	822	5.4	822	5.4	0.756	42.7	LOS D	19.7	146.9	0.87	0.90	0.89	10.2
West	: Stanm	ore Rd (	W)											
10	L2	316	0.0	316	0.0	0.276	17.8	LOS B	10.6	74.1	0.60	0.75	0.60	24.1
11	T1	746	2.0	746	2.0	* 0.846	43.3	LOS D	27.5	195.8	0.99	0.94	1.04	26.2
Appr	oach	1062	1.4	1062	1.4	0.846	35.7	LOS C	27.5	195.8	0.88	0.88	0.91	25.9
All V	ehicles	3145	3.1	3145	3.1	0.875	40.2	LOS C	27.5	195.8	0.87	0.86	0.93	21.0

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vement	Perform	nance							
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef Que	fective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: Enmore F	Rd (S)									
P1 Full	12	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
East: Edgeware	Rd (E)									
P2 Full	33	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
North: Enmore R	Rd (N)									
P3 Full	13	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
West: Stanmore	Rd (W)									
P4 Full	16	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
All Pedestrians	73	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMP PM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5	T1	39	0.0	39	0.0	0.020	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	39	0.0	39	0.0	0.020	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	: Alma	Ave (N)												
7	L2	27	0.0	27	0.0	0.033	3.6	LOS A	0.1	0.8	0.15	0.47	0.15	34.8
9	R2	18	0.0	18	0.0	0.033	4.2	LOS A	0.1	0.8	0.15	0.47	0.15	41.8
Appro	bach	45	0.0	45	0.0	0.033	3.8	LOS A	0.1	0.8	0.15	0.47	0.15	38.9
West	Newin	gton Rd	(W)											
11	T1	66	0.0	66	0.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	66	0.0	66	0.0	0.034	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	hicles	150	0.0	150	0.0	0.034	1.2	NA	0.1	0.8	0.05	0.14	0.05	46.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [NEW\_TUPP PM 2021 (Site Folder: General)]

### ■□ Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5 6	T1 R2	26 15	0.0 0.0	26 15	0.0 0.0	0.023 0.023	0.1 4.8	LOS A LOS A	0.1 0.1	0.6 0.6	0.14 0.14	0.20 0.20	0.14 0.14	43.6 43.6
Appro	bach	41	0.0	41	0.0	0.023	1.9	NA	0.1	0.6	0.14	0.20	0.14	43.6
North	: Tuppe	er St (N)												
7 9	L2 R2	52 13	0.0 0.0	52 13	0.0 0.0	0.045 0.045	4.8 5.0	LOS A LOS A	0.2 0.2	1.2 1.2	0.16 0.16	0.51 0.51	0.16 0.16	39.3 39.3
Appro	bach	65	0.0	65	0.0	0.045	4.8	LOS A	0.2	1.2	0.16	0.51	0.16	39.3
West	: Newin	gton Rd	(W)											
10 11	L2 T1	23 70	0.0 0.0	23 70	0.0 0.0	0.048 0.048	4.5 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.13 0.13	0.00 0.00	41.6 41.6
Appro	bach	93	0.0	93	0.0	0.048	1.1	NA	0.0	0.0	0.00	0.13	0.00	41.6
All Ve	ehicles	199	0.0	199	0.0	0.048	2.5	NA	0.2	1.2	0.08	0.27	0.08	40.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWP PM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	icle Mo	vement	Perfo	rmand	e:									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	5)											
2	T1	492	6.5	492	6.5	0.219	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appr	oach	492	6.5	492	6.5	0.219	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	n: Enmo	re Rd (N	)											
8	T1	468	8.5	468	8.5	0.127	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appr	oach	468	8.5	468	8.5	0.127	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	64	0.0	64	0.0	0.052	5.7	LOS A	0.2	1.3	0.17	0.51	0.17	37.3
12	R2	68	0.0	68	0.0	0.235	17.4	LOS B	0.9	6.1	0.78	0.93	0.86	29.2
Appr	oach	132	0.0	132	0.0	0.235	11.8	LOS A	0.9	6.1	0.49	0.72	0.52	31.7
All V	ehicles	1092	6.6	1092	6.6	0.235	1.5	NA	0.9	6.1	0.06	0.09	0.06	54.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [ALM\_SITEP PM 2021 (Site Folder: General)]

Alma Ave & Residential Access Site Category: (None) Give-Way (Two-Way)

Vehi	icle Mc	vement	Perfo	rman	се									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLC [ Tota veh/h	al HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BA QUE [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East	Reside	ential Acc	ess (E	)										
4	L2	5	0.0	5	0.0	0.003	3.6	LOS A	0.0	0.1	0.13	0.43	0.13	36.9
Appr	oach	5	0.0	5	0.0	0.003	3.6	LOS A	0.0	0.1	0.13	0.43	0.13	36.9
North	n: Alma	Ave (N)												
7	L2	22	0.0	22	0.0	0.042	3.4	LOS A	0.0	0.0	0.00	0.13	0.00	39.5
8	T1	58	0.0	58	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	35.7
Appr	oach	80	0.0	80	0.0	0.042	0.9	NA	0.0	0.0	0.00	0.13	0.00	38.4
All V	ehicles	85	0.0	85	0.0	0.042	1.1	NA	0.0	0.1	0.01	0.15	0.01	38.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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### **MOVEMENT SUMMARY** V Site: 101 [TUP\_SITEP PM 2021 (Site Folder: General)]

### Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Tupper St & Club/Retail Access Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLO\ [ Total	NS HV]	ARRI FLO [ Tota	WS I HV ]	Deg. Satn	Delay	Level of Service	QU [ Veh.	ACK OF EUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed
South	. Tunn	veh/h er St (S)	%	veh/h	%	v/c	sec	_	veh	m	_	_	_	km/h
1	L2	1	0.0	1	0.0	0.022	3.4	LOS A	0.0	0.0	0.00	0.01	0.00	40.1
2	T1	42	0.0	42	0.0	0.022	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	39.9
Appro	bach	43	0.0	43	0.0	0.022	0.1	NA	0.0	0.0	0.00	0.01	0.00	39.9
North	: Tuppe	er St (N)												
8	T1	51	0.0	51	0.0	0.069	0.1	LOS A	0.3	2.2	0.12	0.28	0.12	27.3
9	R2	73	0.0	73	0.0	0.069	3.7	LOS A	0.3	2.2	0.12	0.28	0.12	37.8
Appro	bach	124	0.0	124	0.0	0.069	2.2	NA	0.3	2.2	0.12	0.28	0.12	36.8
West	Club 8	Retail A	ccess	(W)										
10	L2	23	0.0	23	0.0	0.032	3.5	LOS A	0.1	0.8	0.12	0.46	0.12	36.9
12	R2	19	0.0	19	0.0	0.032	4.1	LOS A	0.1	0.8	0.12	0.46	0.12	36.9
Appro	bach	42	0.0	42	0.0	0.032	3.8	LOS A	0.1	0.8	0.12	0.46	0.12	36.9
All Ve	hicles	209	0.0	209	0.0	0.069	2.1	NA	0.3	2.2	0.09	0.26	0.09	37.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **APPENDIX D**

# SIDRA MOVEMENT SUMMARIES TWO WAY ALMA AVENUE

## **NETWORK LAYOUT**

# ■□ Network: N101 [Proposed Network AM 2021 (Network Folder: General)]

#### Existing Network AM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	)											
5	T1	856	4.2	856	4.2	* 0.506	8.2	LOS A	15.4	111.7	0.39	0.57	0.39	38.5
Appro	bach	856	4.2	856	4.2	0.506	8.2	LOS A	15.4	111.7	0.39	0.57	0.39	38.5
North	: Merch	nant St (N	1)											
7	L2	57	0.0	57	0.0	0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	19.6
9	R2	78	3.8	78	3.8	* 0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	26.2
Appro	bach	135	2.2	135	2.2	0.521	57.3	LOS E	7.5	53.6	0.97	0.80	0.97	24.0
West	: Stanm	ore Rd (	W)											
10	L2	68	0.0	68	0.0	0.314	8.2	LOS A	8.1	59.1	0.34	0.35	0.34	41.3
11	T1	825	6.1	825	6.1	0.314	4.8	LOS A	8.1	59.6	0.34	0.33	0.34	36.0
Appro	bach	893	5.6	893	5.6	0.314	5.1	LOS A	8.1	59.6	0.34	0.33	0.34	36.7
All Ve	hicles	1884	4.7	1884	4.7	0.521	10.2	LOS A	15.4	111.7	0.41	0.47	0.41	35.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.		
ID Crossing	Flow	Delay	Service	QUEUE [ Ped Dist ]		Que	Stop Rate	Time	Dist.	Speed		
	ped/h	sec		ped	m		. tato	sec	m	m/sec		
East: Stanmore Rd (E)												
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98		
North: Merchant	St (N)											
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97		
West: Stanmore Rd (W)												
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98		
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98		

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

### **MOVEMENT SUMMARY** V Site: 101 [STA\_ALMP AM 2021 (Site Folder: General)]

Stanmore Rd & (Two-Way) Alma St Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South: Alma St (S)														
1 3	L2 R2	7 7	0.0 0.0	7 7	0.0 0.0	0.091 0.091	5.5 39.7	LOS A LOS C	0.2 0.2	1.6 1.6	0.47 0.47	0.58 0.58	0.47 0.47	27.2 27.2
Appro	bach	14	0.0	14	0.0	0.091	22.6	LOS B	0.2	1.6	0.47	0.58	0.47	27.2
East: Stanmore Rd (E)														
4 5	L2 T1	37 798	0.0 4.9	37 798	0.0 4.9	0.074 0.368	4.9 0.2	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.16 0.02	0.00 0.00	47.5 57.8
Appro	oach	835	4.7	835	4.7	0.368	0.4	NA	0.0	0.0	0.00	0.03	0.00	57.3
West	: Stanm	ore Rd (	W)											
11 12	T1 R2	875 32	5.8 0.0	875 32	5.8 0.0	0.335 0.335	0.6 12.2	LOS A LOS A	0.8 0.8	5.9 5.9	0.08 0.20	0.02 0.06	0.10 0.24	54.9 49.2
Appro	bach	907	5.6	907	5.6	0.335	1.0	NA	0.8	5.9	0.09	0.03	0.10	54.7
All Ve	ehicles	1756	5.1	1756	5.1	0.368	0.9	NA	0.8	5.9	0.05	0.03	0.06	53.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

### MOVEMENT SUMMARY V Site: 101 [STA\_TUPP AM 2021 (Site Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	South: Tupper St (S)													
1 3	L2 R2	18 24	0.0 0.0	18 24	0.0 0.0	0.365 0.365	12.2 44.6	LOS A LOS D	0.9 0.9	6.0 6.0	0.53 0.53	0.69 0.69	0.66 0.66	6.5 6.5
Appro	bach	42	0.0	42	0.0	0.365	30.7	LOS C	0.9	6.0	0.53	0.69	0.66	6.5
East: Stanmore Rd (E)														
4 5	L2 T1	34 777	0.0 5.0	34 777	0.0 5.0	0.079 0.350	4.1 0.3	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.13 0.02	0.00 0.00	48.2 57.7
Appro	bach	811	4.8	811	4.8	0.350	0.4	NA	0.0	0.0	0.00	0.02	0.00	57.2
West	West: Stanmore Rd (W)													
11 12	T1 R2	869 13	5.9 0.0	869 13	5.9 0.0	0.242 0.242	0.2 11.0	LOS A LOS A	12.2 5.1	89.9 37.2	0.04 0.07	0.01 0.02	0.04 0.08	55.8 52.0
Appro		882	5.8	882	5.8	0.242	0.4	NA	12.2	89.9	0.07	0.02	0.08	55.8
All Ve	ehicles	1735	5.2	1735	5.2	0.365	1.1	NA	12.2	89.9	0.03	0.03	0.03	48.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Stanmore Rd & Liberty St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	=)											
5 6	T1 R2	618 324	5.7 4.9	618 324	5.7 4.9	0.438 * 0.552	4.8 17.9	LOS A LOS B	9.8 7.4	71.9 54.3	0.30 0.45	0.27 0.82	0.30 0.45	37.5 36.4
Appro	bach	942	5.4	942	5.4	0.552	9.3	LOS A	9.8	71.9	0.35	0.46	0.35	36.7
North	: Libert	y St (N)												
7 9	L2 R2	310 193	4.2 2.1	310 193	4.2 2.1	0.382 <b>*</b> 0.703	27.9 59.2	LOS B LOS E	11.9 11.2	86.5 79.9	0.71 1.00	0.77 0.85	0.71 1.06	28.6 19.2
Appro	bach	503	3.4	503	3.4	0.703	39.9	LOS C	11.9	86.5	0.82	0.80	0.84	24.1
West	: Stanm	ore Rd (	W)											
10 11	L2 T1	96 797	3.1 6.1	96 797	3.1 6.1	0.708 <b>*</b> 0.708	31.9 28.7	LOS C LOS C	12.2 12.2	89.8 89.8	0.85 0.86	0.78 0.78	0.85 0.87	29.5 7.4
Appro	bach	893	5.8	893	5.8	0.708	29.1	LOS C	12.2	89.8	0.86	0.78	0.86	11.8
All Ve	ehicles	2338	5.1	2338	5.1	0.708	23.5	LOS B	12.2	89.8	0.65	0.66	0.65	23.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mo	vomont	Porform	2220							
	vement	Periori								
Mov	Dem.	Aver.	Level of	AVERAGE	BACK OF	Prop. Ef	fective	Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE	UE	Que	Stop	Time	Dist.	Speed
				[Ped	Dist ]		Rate			
	ped/h	sec		ped	m			sec	m	m/sec
East: Stanmore F	Rd (E)									
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
North: Liberty St	(N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmano	e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	h: Enmo	ore Rd (S	)											
1	L2	84	0.0	84	0.0	0.854	63.2	LOS E	20.5	153.9	1.00	0.99	1.20	14.1
2	T1	564	11.3	564	11.3	* 0.854	58.9	LOS E	20.5	153.9	1.00	0.99	1.20	16.7
Appr	oach	648	9.9	648	9.9	0.854	59.4	LOS E	20.5	156.7	1.00	0.99	1.20	16.3
East:	Edgew	are Rd (E	E)											
4 5	L2 T1	1 588	0.0 5.3	1 588	0.0 5.3	0.323 0.323	24.7 20.1	LOS B LOS B	10.4 10.4	76.1 76.1	0.65 0.65	0.56 0.56	0.65 0.65	32.4 32.4
Appro	oach	589	5.3	589	5.3	0.323	20.1	LOS B	10.4	76.1	0.65	0.56	0.65	32.4
North	n: Enmo	re Rd (N)	)											
7	L2	68	5.9	68	5.9	0.502	42.6	LOS D	17.2	128.6	0.79	0.76	0.79	27.0
8	T1	320	8.1	320	8.1	0.502	36.1	LOS C	17.2	128.6	0.79	0.76	0.79	8.0
9	R2	236	5.5	236	5.5	* 0.664	55.6	LOS D	12.3	90.4	0.97	1.01	0.98	5.5
Appr	oach	624	6.9	624	6.9	0.664	44.2	LOS D	17.2	128.6	0.86	0.86	0.86	9.9
West	: Stanm	ore Rd (	N)											
10	L2	309	5.2	309	5.2	0.276	17.2	LOS B	10.0	73.2	0.58	0.74	0.58	24.4
11	T1	780	6.0	780	6.0	* 0.847	46.2	LOS D	26.6	195.8	0.99	0.93	1.02	25.3
Appro	oach	1089	5.8	1089	5.8	0.847	38.0	LOS C	26.6	195.8	0.88	0.88	0.90	25.2
All Ve	ehicles	2950	6.8	2950	6.8	0.854	40.4	LOS C	26.6	195.8	0.86	0.84	0.91	21.5

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedest	rian Movemen	t Perforr	nance							
Mov ID Cro	Dem. ssing Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef	fective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
	ped/h	sec		ped	m			sec	m	m/sec
South: E	nmore Rd (S)									
P1 Full	12	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
East: Ed	lgeware Rd (E)									
P2 Full	33	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
North: E	nmore Rd (N)									
P3 Full	13	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
West: St	anmore Rd (W)									
P4 Full	16	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98
All Pede	strians 73	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMP AM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (	E)											
5	T1	31	0.0	31	0.0	0.016	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	31	0.0	31	0.0	0.016	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	: Alma	Ave (N)												
7	L2	36	0.0	36	0.0	0.044	3.6	LOS A	0.2	1.1	0.17	0.48	0.17	34.8
9	R2	24	0.0	24	0.0	0.044	4.3	LOS A	0.2	1.1	0.17	0.48	0.17	41.7
Appro	bach	60	0.0	60	0.0	0.044	3.9	LOS A	0.2	1.1	0.17	0.48	0.17	38.9
West	: Newin	gton Rd	(W)											
11	T1	84	0.0	84	0.0	0.043	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	84	0.0	84	0.0	0.043	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	hicles	175	0.0	175	0.0	0.044	1.3	NA	0.2	1.1	0.06	0.16	0.06	45.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **MOVEMENT SUMMARY** V Site: 101 [NEW\_TUPP AM 2021 (Site Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmand	ce									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (												
5 6	T1 R2	25 15	0.0 0.0	25 15	0.0 0.0	0.022 0.022	0.2 4.9	LOS A LOS A	0.1 0.1	0.6 0.6	0.16 0.16	0.20 0.20	0.16 0.16	43.3 43.3
Appro	bach	40	0.0	40	0.0	0.022	2.0	NA	0.1	0.6	0.16	0.20	0.16	43.3
North	: Tuppe	er St (N)												
7 9	L2 R2	32 6	0.0 0.0	32 6	0.0 0.0	0.027 0.027	4.8 5.1	LOS A LOS A	0.1 0.1	0.7 0.7	0.19 0.19	0.51 0.51	0.19 0.19	39.1 39.1
Appro	bach	38	0.0	38	0.0	0.027	4.9	LOS A	0.1	0.7	0.19	0.51	0.19	39.1
West	: Newin	gton Rd	(W)											
10 11	L2 T1	20 100	0.0 0.0	20 100	0.0 0.0	0.062 0.062	4.5 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.09 0.09	0.00 0.00	43.9 43.9
Appro	bach	120	0.0	120	0.0	0.062	0.8	NA	0.0	0.0	0.00	0.09	0.00	43.9
All Ve	ehicles	198	0.0	198	0.0	0.062	1.8	NA	0.1	0.7	0.07	0.19	0.07	41.9

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWP AM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	n: Enmo	ore Rd (S	5)											
2	T1	597	11.1	597 <sup>-</sup>	11.1	0.164	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	597	11.1	597 <sup>-</sup>	11.1	0.164	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	: Enmo	re Rd (N	)											
8	T1	352	7.7	352	7.7	0.158	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	352	7.7	352	7.7	0.158	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	85	0.0	85	0.0	0.087	6.0	LOS A	0.3	2.2	0.38	0.60	0.38	35.9
12	R2	61	0.0	61	0.0	0.205	16.6	LOS B	0.7	5.2	0.77	0.91	0.81	29.8
Appr	oach	146	0.0	146	0.0	0.205	10.4	LOS A	0.7	5.2	0.54	0.73	0.56	32.3
All Ve	ehicles	1095	8.5	1095	8.5	0.205	1.4	NA	0.7	5.2	0.07	0.10	0.07	53.5

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# **MOVEMENT SUMMARY** V Site: 101 [ALM\_SITEP AM 2021 (Site Folder: General)]

(Two-Way) Alma Ave & Residential Access Site Category: (None) Give-Way (Two-Way)

Vehic	cle Mo	vement	Perfo	rman	ce									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARR FLO [ Tota veh/h	I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Alma	Ave (S)	70	ven/n	70	V/C	Sec	_	ven	m	_	_	_	K11/11
2	T1	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.14	0.23	0.14	36.1
3	R2	1	0.0	1	0.0	0.001	3.7	LOS A	0.0	0.0	0.14	0.23	0.14	38.4
Appro	ach	2	0.0	2	0.0	0.001	1.9	NA	0.0	0.0	0.14	0.23	0.14	37.8
East:	Reside	ential Acc	ess (E	)										
4	L2	10	0.0	10	0.0	0.018	3.6	LOS A	0.1	0.4	0.14	0.46	0.14	36.8
6	R2	14	0.0	14	0.0	0.018	3.7	LOS A	0.1	0.4	0.14	0.46	0.14	36.8
Appro	ach	24	0.0	24	0.0	0.018	3.7	LOS A	0.1	0.4	0.14	0.46	0.14	36.8
North	Alma	Ave (N)												
7	L2	6	0.0	6	0.0	0.036	3.4	LOS A	0.0	0.0	0.00	0.04	0.00	40.0
8	T1	63	0.0	63	0.0	0.036	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	38.5
Appro	ach	69	0.0	69	0.0	0.036	0.3	NA	0.0	0.0	0.00	0.04	0.00	39.1
All Ve	hicles	95	0.0	95	0.0	0.036	1.2	NA	0.1	0.4	0.04	0.15	0.04	37.7

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY V Site: 101 [TUP\_SITEP AM 2021 (Site Folder: General)]

Tupper St & Club/Retail Access Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rman	се									
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		BACK OF JEUE Dist ] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Tupp	er St (S)	/0	VOH/T	70	110	000	_	Voll		_		_	
1 2	L2 T1	1 39	0.0 0.0	1 39	0.0 0.0	0.021 0.021	3.4 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.01 0.01	0.00 0.00	40.1 39.9
Appro	bach	40	0.0	40	0.0	0.021	0.1	NA	0.0	0.0	0.00	0.01	0.00	39.9
North	: Tuppe	er St (N)												
8 9	T1 R2	30 17	0.0 0.0	30 17	0.0 0.0	0.025 0.025	0.1 3.6	LOS A LOS A	0.1 0.1	0.6 0.6	0.08 0.08	0.17 0.17	0.08 0.08	30.9 38.4
Appro	bach	47	0.0	47	0.0	0.025	1.4	NA	0.1	0.6	0.08	0.17	0.08	37.0
West	Club 8	& Retail A	ccess	(W)										
10	L2	3	0.0	3	0.0	0.004	3.5	LOS A	0.0	0.1	0.11	0.45	0.11	36.9
12	R2	2	0.0	2	0.0	0.004	3.8	LOS A	0.0	0.1	0.11	0.45	0.11	36.9
Appro	bach	5	0.0	5	0.0	0.004	3.6	LOS A	0.0	0.1	0.11	0.45	0.11	36.9
All Ve	hicles	92	0.0	92	0.0	0.025	0.9	NA	0.1	0.6	0.05	0.12	0.05	38.2

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# **NETWORK LAYOUT**

# ■□ Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Existing Network PM 2021 Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Stanmore Rd & Merchant St

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehi	cle Mo	vement	Perfo	rmand	:e									
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BA QUE [ Veh. veh	ACK OF EUE Dist ] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanm	ore Rd (E	Ξ)											
5	T1	895	2.2	895	2.2	0.288	5.3	LOS A	6.4	45.5	0.27	0.50	0.27	40.1
Appro	bach	895	2.2	895	2.2	0.288	5.3	LOS A	6.4	45.5	0.27	0.50	0.27	40.1
North	: Merch	nant St (N	۷)											
7	L2	24	0.0	24	0.0	0.500	64.4	LOS E	4.8	34.9	0.99	0.77	0.99	18.5
9	R2	59	5.1	59	5.1	* 0.500	63.0	LOS E	4.8	34.9	0.99	0.77	0.99	25.2
Appro	bach	83	3.6	83	3.6	0.500	63.4	LOS E	4.8	34.9	0.99	0.77	0.99	23.7
West	: Stanm	ore Rd (	W)											
10	L2	30	0.0	30	0.0	0.096	5.9	LOS A	1.8	12.3	0.22	0.26	0.22	42.4
11	T1	750	1.1	750	1.1	* 0.478	3.5	LOS A	10.3	72.4	0.29	0.28	0.29	37.2
Appro	bach	780	1.0	780	1.0	0.478	3.6	LOS A	10.3	72.4	0.29	0.28	0.29	37.6
All Ve	hicles	1758	1.8	1758	1.8	0.500	7.3	LOS A	10.3	72.4	0.31	0.41	0.31	37.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Mc	vement	Perform	nance							
Mov	Dem.	Aver.	Level of			Prop. Ef		Travel	Travel	Aver.
ID Crossing	Flow	Delay	Service	QUE [ Ped	:UE Dist ]	Que	Stop Rate	Time	Dist.	Speed
	ped/h	sec		ped	m		. tato	sec	m	m/sec
East: Stanmore	Rd (E)									
P2 Full	15	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98
North: Merchant	St (N)									
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
West: Stanmore	Rd (W)									
P4 Full	45	54.3	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98
All Pedestrians	64	54.2	LOS E	0.1	0.1	0.95	0.95	219.4	214.8	0.98

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# **MOVEMENT SUMMARY** V Site: 101 [STA\_ALMP PM 2021 (Site Folder: General)]

## Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Stanmore Rd & (Two-Way) Alma St Site Category: (None) Give-Way (Two-Way)

Vehi	cle Mo	vement	Perfo	rmano	ce									
Mov ID	Turn	DEMA FLO [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Alma	St (S)												
1 3	L2 R2	1 2	0.0 0.0	1 2	0.0 0.0	0.019 0.019	4.9 29.1	LOS A LOS C	0.0 0.0	0.3 0.3	0.78 0.78	0.78 0.78	0.78 0.78	27.5 27.5
Appro	bach	3	0.0	3	0.0	0.019	21.1	LOS B	0.0	0.3	0.78	0.78	0.78	27.5
East:	Stanm	ore Rd (E	E)											
4 5	L2 T1	61 933	0.0 2.1	61 933	0.0 2.1	0.259 0.259	5.0 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.07 0.03	0.00 0.00	53.4 56.7
Appro	bach	994	2.0	994	2.0	0.259	0.3	NA	0.0	0.0	0.00	0.04	0.00	56.5
West	: Stanm	ore Rd (	W)											
11	T1	770	0.9	770	0.9	0.559	0.8	LOS A	0.9	6.2	0.09	0.02	0.14	54.2
12	R2	19	0.0	19	0.0	0.559	15.8	LOS B	0.9	6.2	0.09	0.02	0.14	54.2
Appro	bach	789	0.9	789	0.9	0.559	1.2	NA	0.9	6.2	0.09	0.02	0.14	54.2
All Ve	ehicles	1786	1.5	1786	1.5	0.559	0.7	NA	0.9	6.2	0.04	0.03	0.06	54.6

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY V Site: 101 [STA\_TUPP PM 2021 (Site Folder: General)]

## Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Stanmore Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	n: Tuppe	er St (S)												
1 3	L2 R2	35 30	0.0 0.0	35 30	0.0 0.0	0.471 0.471	14.9 49.5	LOS B LOS D	1.3 1.3	9.3 9.3	0.75 0.75	0.95 0.95	1.05 1.05	6.3 6.3
Appro	bach	65	0.0	65	0.0	0.471	30.9	LOS C	1.3	9.3	0.75	0.95	1.05	6.3
East:	Stanmo	ore Rd (E	E)											
4 5	L2 T1	90 959	0.0 2.3	90 959	0.0 2.3	0.274 0.274	4.1 0.0	LOS A LOS A	0.0 0.0	0.0 0.0	0.00 0.00	0.10 0.05	0.00 0.00	50.6 55.3
Appro	bach	1049	2.1	1049	2.1	0.274	0.4	NA	0.0	0.0	0.00	0.05	0.00	54.8
West	: Stanm	ore Rd (	W)											
11 12	T1 R2	738 34	0.9 0.0	738 34	0.9 0.0	0.221 0.221	0.8 12.3	LOS A LOS A	11.9 2.3	84.0 16.1	0.11 0.26	0.03 0.07	0.11 0.27	48.1 37.8
Appro	bach	772	0.9	772	0.9	0.221	1.3	NA	11.9	84.0	0.12	0.03	0.12	47.5
All Ve	ehicles	1886	1.5	1886	1.5	0.471	1.8	NA	11.9	84.0	0.07	0.07	0.09	42.0

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Stanmore Rd & Liberty St

Site Category: (None) Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehi	Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Stanmo	ore Rd (E	)											
5 6	T1 R2	794 391	2.5 0.8	794 391	2.5 0.8	0.584 * 0.584	8.7 28.9	LOS A LOS C	21.8 12.5	155.8 87.8	0.52 0.65	0.48 0.90	0.52 0.65	28.8 31.0
									0.56	0.62	0.56	30.3		
North	North: Liberty St (N)													
7 9	L2 R2	375 255	2.1 0.4	375 255	2.1 0.4	0.384 <b>*</b> 0.718	22.0 55.5	LOS B LOS D	12.7 14.5	90.5 101.8	0.63 0.99	0.75 0.86	0.63 1.04	31.4 20.0
Appro	bach	630	1.4	630	1.4	0.718	35.5	LOS C	14.5	101.8	0.78	0.79	0.80	25.5
West	Stanm	ore Rd (	N)											
10 11	L2 T1	85 683	0.0 1.0	85 683	0.0 1.0	0.724 <b>*</b> 0.724	39.1 36.3	LOS C LOS C	12.7 12.7	89.8 89.8	0.92 0.92	0.82 0.83	0.92 0.94	26.8 6.0
Appro	bach	768	0.9	768	0.9	0.724	36.6	LOS C	12.7	89.8	0.92	0.83	0.94	10.0
All Ve	hicles	2583	1.5	2583	1.5	0.724	26.6	LOS B	21.8	155.8	0.72	0.72	0.73	22.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

		-											
Pedestrian Movement Performance													
Mov ID Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE QUE	UE	Prop. Ef Que	Stop	Travel Time	Travel Dist.	Aver. Speed			
	ped/h	sec		[ Ped ped	Dist ] m		Rate	sec	m	m/sec			
East: Stanmore I	East: Stanmore Rd (E)												
P2 Full	23	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98			
North: Liberty St	(N)												
P3 Full	4	54.2	LOS E	0.0	0.0	0.95	0.95	217.2	211.9	0.98			
All Pedestrians	27	54.2	LOS E	0.1	0.1	0.95	0.95	219.3	214.7	0.98			

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## Stanmore Rd, Enmore Rd & Edgeware Rd

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.														
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BA QUI [ Veh. veh		Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	h: Enmo	ore Rd (S	)											
1 2	L2 T1	131 418	0.0 6.0	131 418	0.0 6.0	0.872 * 0.872	68.8 63.2	LOS E LOS E	16.4 19.4	117.8 143.0	1.00 1.00	1.02 1.01	1.29 1.26	12.9 15.8
Appr		549	4.6	549	4.6	0.872	64.5	LOS E	19.4	143.0	1.00	1.02	1.27	15.1
East: Edgeware Rd (E)														
4 5	L2 T1	3 707	0.0 2.0	3 707	0.0 2.0	0.503 0.503	29.8 24.7	LOS C LOS B	13.2 15.7	93.8 111.9	0.76 0.75	0.67 0.66	0.76 0.75	29.8 30.0
Appr	oach	710	2.0	710	2.0	0.503	24.7	LOS B	15.7	111.9	0.75	0.66	0.75	30.0
North	n: Enmo	re Rd (N	)											
7	L2	90	0.0	90	0.0	0.564	39.2	LOS C	19.7	146.9	0.79	0.78	0.79	28.1
8	T1	381	9.7	381	9.7	0.564	32.8	LOS C	19.7	146.9	0.79	0.78	0.79	8.6
9	R2	351	2.0	351	2.0	* 0.756	54.3	LOS D	17.6	125.6	0.98	1.07	1.03	5.6
Appr	oach	822	5.4	822	5.4	0.756	42.7	LOS D	19.7	146.9	0.87	0.90	0.89	10.2
West	t: Stanm	ore Rd (	W)											
10	L2	317	0.0	317	0.0	0.276	17.6	LOS B	10.4	73.0	0.59	0.75	0.59	24.3
11	T1	746	2.0	746	2.0	* 0.846	43.4	LOS D	27.5	195.8	0.99	0.94	1.04	26.2
Appr	oach	1063	1.4	1063	1.4	0.846	35.7	LOS C	27.5	195.8	0.87	0.88	0.90	25.9
	ehicles	3144	3.1	3144		0.872		LOS C	27.5	195.8	0.87	0.86	0.93	21.1

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

\* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID Crossing	Dem. I Flow	Aver. Delay	Level of Service	AVERAGE QUE [ Ped		Prop. Ef Que	fective Stop Rate	Travel Time	Travel Dist.	Aver. Speed		
	ped/h	sec		ped	m			sec	m	m/sec		
South: Enmo	re Rd (S)											
P1 Full	12	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98		
East: Edgewa	are Rd (E)											
P2 Full	33	54.2	LOS E	0.1	0.1	0.95	0.95	219.8	215.2	0.98		
North: Enmor	e Rd (N)											
P3 Full	13	54.2	LOS E	0.0	0.0	0.95	0.95	219.7	215.2	0.98		
West: Stanmo	ore Rd (W)											
P4 Full	16	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98		
All Pedestriar	ns 73	54.2	LOS E	0.1	0.1	0.95	0.95	219.7	215.2	0.98		

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay) Pedestrian movement LOS values are based on average delay per pedestrian movement. Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## **MOVEMENT SUMMARY** V Site: 101 [NEW\_ALMP PM 2021 (Site Folder: General)]

Newington Rd & Alma Ave Site Category: (None) Give-Way (Two-Way)

Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.														
Mov ID	Turn	DEMA FLO\ [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	East: Newington Rd (E)													
5	T1	39	0.0	39	0.0	0.020	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	39	0.0	39	0.0	0.020	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
North	North: Alma Ave (N)													
7	L2	25	0.0	25	0.0	0.031	3.6	LOS A	0.1	0.8	0.15	0.47	0.15	34.8
9	R2	18	0.0	18	0.0	0.031	4.2	LOS A	0.1	0.8	0.15	0.47	0.15	41.8
Appro	bach	43	0.0	43	0.0	0.031	3.9	LOS A	0.1	0.8	0.15	0.47	0.15	39.1
West	: Newin	gton Rd	(W)											
11	T1	66	0.0	66	0.0	0.034	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
Appro	bach	66	0.0	66	0.0	0.034	0.0	NA	0.0	0.0	0.00	0.00	0.00	50.0
All Ve	ehicles	148	0.0	148	0.0	0.034	1.1	NA	0.1	0.8	0.04	0.14	0.04	46.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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## **MOVEMENT SUMMARY** V Site: 101 [NEW\_TUPP PM 2021 (Site Folder: General)]

Newington Rd & Tupper St Site Category: (None) Give-Way (Two-Way)

Vehi	Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF IEUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
East:	Newing	gton Rd (		ven/n	70	v/C	360		Ven		_		_	KI11/11
5 6	T1 R2	26 15	0.0 0.0	26 15	0.0 0.0	0.023 0.023	0.1 4.8	LOS A LOS A	0.1 0.1	0.6 0.6	0.13 0.13	0.20 0.20	0.13 0.13	43.6 43.6
Appro	bach	41	0.0	41	0.0	0.023	1.8	NA	0.1	0.6	0.13	0.20	0.13	43.6
North	North: Tupper St (N)													
7 9	L2 R2	52 13	0.0 0.0	52 13	0.0 0.0	0.045 0.045	4.8 5.0	LOS A LOS A	0.2 0.2	1.2 1.2	0.15 0.15	0.51 0.51	0.15 0.15	39.3 39.3
Appro	bach	65	0.0	65	0.0	0.045	4.8	LOS A	0.2	1.2	0.15	0.51	0.15	39.3
West	: Newin	gton Rd	(W)											
10	L2	23	0.0	23	0.0	0.047	4.5	LOS A	0.0	0.0	0.00	0.14	0.00	41.4
11	T1	68	0.0	68	0.0	0.047	0.0	LOS A	0.0	0.0	0.00	0.14	0.00	41.4
Appro	bach	91	0.0	91	0.0	0.047	1.1	NA	0.0	0.0	0.00	0.14	0.00	41.4
All Ve	ehicles	197	0.0	197	0.0	0.047	2.5	NA	0.2	1.2	0.08	0.27	0.08	40.8

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## **MOVEMENT SUMMARY** V Site: 101 [ENM\_NEWP PM 2021 (Site Folder: General)]

Enmore Rd & Newington Rd Site Category: (None) Give-Way (Two-Way)

Vehi	Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARRI FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		ACK OF EUE Dist] m	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
Sout	n: Enmo	ore Rd (S	)											
2	T1	492	6.5	492	6.5	0.219	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appro	oach	492	6.5	492	6.5	0.219	0.2	NA	0.0	0.0	0.00	0.00	0.00	59.9
North	North: Enmore Rd (N)													
8	T1	468	8.5	468	8.5	0.127	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Appr	oach	468	8.5	468	8.5	0.127	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
West	: Newin	gton Rd	(W)											
10	L2	62	0.0	62	0.0	0.050	5.7	LOS A	0.2	1.3	0.17	0.51	0.17	37.3
12	R2	70	0.0	70	0.0	0.242	17.6	LOS B	0.9	6.4	0.78	0.93	0.86	29.1
Appr	oach	132	0.0	132	0.0	0.242	12.0	LOS A	0.9	6.4	0.50	0.73	0.54	31.6
All Ve	ehicles	1092	6.6	1092	6.6	0.242	1.5	NA	0.9	6.4	0.06	0.09	0.07	54.1

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab). Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# **MOVEMENT SUMMARY** V Site: 101 [ALM\_SITEP PM 2021 (Site Folder: General)]

## Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

(Two-Way) Alma Ave & Residential Access Site Category: (None) Give-Way (Two-Way)

Vehi	Vehicle Movement Performance Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLOV [ Total		ARRIVAL FLOWS [ Total HV ]		Deg. Satn	Aver. Delay	Level of Service		ACK OF JEUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed
		veh/h	%	veh/h	1%	v/c	sec		veh	m				km/h
South	n: Alma	Ave (S)												
2	T1	1	0.0	1	0.0	0.001	0.1	LOS A	0.0	0.0	0.15	0.28	0.15	48.6
3	R2	1	0.0	1	0.0	0.001	5.6	LOS A	0.0	0.0	0.15	0.28	0.15	53.1
Appro	bach	2	0.0	2	0.0	0.001	2.9	NA	0.0	0.0	0.15	0.28	0.15	52.0
East:	East: Residential Access (E)													
4	L2	2	0.0	2	0.0	0.004	3.6	LOS A	0.0	0.1	0.13	0.51	0.13	43.8
6	R2	3	0.0	3	0.0	0.004	5.7	LOS A	0.0	0.1	0.13	0.51	0.13	43.8
Appro	bach	5	0.0	5	0.0	0.004	4.8	LOS A	0.0	0.1	0.13	0.51	0.13	43.8
North	: Alma	Ave (N)												
7	L2	22	0.0	22	0.0	0.042	3.4	LOS A	0.0	0.0	0.00	0.13	0.00	39.5
8	T1	58	0.0	58	0.0	0.042	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	35.7
Appro	bach	80	0.0	80	0.0	0.042	0.9	NA	0.0	0.0	0.00	0.13	0.00	38.4
All Ve	ehicles	87	0.0	87	0.0	0.042	1.2	NA	0.0	0.1	0.01	0.15	0.01	39.4

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY V Site: 101 [TUP\_SITEP PM 2021 (Site Folder: General)]

## Network: N101 [Proposed Network PM 2021 (Network Folder: General)]

Tupper St & Club/Retail Access Site Category: (None) Give-Way (Two-Way)

Vehi	<b>Vehicle Movement Performance</b> Mov Turn DEMAND ARRIVAL Deg. Aver. Level of 95% BACK OF Prop. EffectiveAver. No. Aver.													
Mov ID	Turn	DEMA FLOV [ Total veh/h		ARR FLO [ Tota veh/h	WS I HV ]	Deg. Satn v/c	Aver. Delay sec	Level of Service		JEUE Dist ]	Prop. Que	EffectiveA Stop Rate	ver. No. Cycles	Aver. Speed km/h
South	: Tuppe	er St (S)	70	ven/n	70	V/C	Sec	_	ven	m	_	_	_	KIII/11
1	L2	1	0.0	1	0.0	0.022	3.4	LOS A	0.0	0.0	0.00	0.01	0.00	40.1
2 Appro	T1 bach	42 43	0.0 0.0	42 43	0.0 0.0	0.022	0.0	LOS A NA	0.0	0.0	0.00	0.01	0.00	39.9 39.9
North	North: Tupper St (N)													
8 9	T1 R2	51 73	0.0 0.0	51 73	0.0 0.0	0.069 0.069	0.1 3.7	LOS A LOS A	0.3 0.3	2.2 2.2	0.12 0.12	0.28 0.28	0.12 0.12	27.3 37.8
Appro	ach	124	0.0	124	0.0	0.069	2.2	NA	0.3	2.2	0.12	0.28	0.12	36.8
West	Club 8	Retail A	ccess	(W)										
10 12	L2 R2	23 19	0.0 0.0	23 19	0.0 0.0	0.032 0.032	3.5 4.1	LOS A LOS A	0.1 0.1	0.8 0.8	0.12 0.12	0.46 0.46	0.12 0.12	36.9 36.9
Appro	ach	42	0.0	42	0.0	0.032	3.8	LOS A	0.1	0.8	0.12	0.46	0.12	36.9
All Ve	hicles	209	0.0	209	0.0	0.069	2.1	NA	0.3	2.2	0.09	0.26	0.09	37.3

Site Level of Service (LOS) Method: Delay (RTANSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.