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3 August 2022

**Unio Environmental Limited**
Private Bag 92518
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Attn: Vijay Lala

Dear Vijay

**Reference: Beachlands South Private Plan Change - Response to Request for Information, Supplementary Response**

This letter has been prepared in response to the Clause 23 Request for Further Information ("RFI") issued by Auckland Council on 25 May 2022 in relation to the Private Plan Change request by Beachlands South Limited Partnership. Specifically, it responds to the remaining technical questions on transport matters raised by Council's consultant traffic engineer Wes Edwards (Arrive Ltd) contained within Appendix 2 of the RFI that were not included within the initial Stantec letter response dated 13 July 2022.

## 1. Walking and Cycling Isochrones

Item T6 of the RFI requests information about the relationship between planned development density and transport accessibility, including provision of walking and cycling isochrones for the development to/from the ferry terminal and the proposed village centre. The isochrones are provided in **Attachment 1** of this letter.

It can be seen that the ferry terminal will be within a 10–15-minute walk to the closest half of the plan change area. With the higher density of housing situated in the northern sector of the plan change area, this will mostly be within a 10-minute walk of the ferry terminal. Further, all of the plan change area will be within a 10-minute cycle of the ferry terminal, and it is assumed that this catchment area would be similar for micro-mobility travel modes such as electric scooters.

The isochrones also demonstrate that the vast majority of the plan change area will fall within a 10-15 minute walk of the village centre, with the exception being the light industrial land uses at the far east of the development, adjacent to Whitford-Maraetai Road. Further, almost all of the plan change area will be within a five minute cycle and micro-mobility journey of the village centre, with the far eastern zone within a 10-minute cycle.

In its response to the 2020 National Policy Statement on Urban Development ("NPS-UD"), Auckland Council has identified walkable catchments around metropolitan centres and rapid transit stops. These distances were assumed to be a 15-minute walk (1,200m) from the edge of Auckland CBD; and a 10-minute walk (800m) from the edge of a metropolitan centre and around rapid transit public transport stops. The longer walk to the Auckland CBD is justified because it has the greatest number of jobs and activities and is more likely to be an end-destination for trips (as opposed to rapid transit stops which are usually an intermediate point in journeys). Council has used this rationale to decide where higher density housing (at least six-storeys) should be situated.

It is considered that the proposed Beachlands development aligns reasonably well with this guidance on integration of development with transport accessibility. Although the proposed plan change village centre will not qualify as a full metropolitan centre, it will operate as such within the context of Beachlands – i.e., there are no other metropolitan centres within reasonable walking, cycling or driving distance. As previously noted, all of the higher density residential properties (and most the remaining

properties) will fall within the 10-minute walking catchment of the village centre assumed as appropriate by Council.

With reference to the NPS-UD walkable catchment classification around a rapid transit stop (800m), it is noted that the majority of the high-density residential developments proposed within the plan change fall within a 10-minute (800m) walk of the ferry terminal. Again, in the context of Beachlands it is considered that high density development within the 10-15-minute (800m-1,200m) catchment guidance provided by Council would be acceptable here as Beachlands is located in a relatively peripheral area of Auckland where residents are likely to have expectations of longer average trip lengths and times compared with residents choosing to live in more central locations. For example, the ferry service travelling between Pine Harbour and the Auckland Downtown Ferry Terminal has a trip length of approximately 35 minutes and covers a distance of approximately 20km. In this context, a longer 'first mile' trip to high-quality public transport may be more acceptable than in more central locations.

In addition, planned provision of a frequent shuttle service between the development, including the village centre, and the ferry terminal will strengthen connectivity between the development and public transport.

## 2. Future Public Transport Mode Shares

Item T15 of the RFI table requests a ferry passenger questionnaire survey. This survey was undertaken on 5 and 6 July 2022. The results and key conclusions are provided in this section.

A total of 189 respondents were interviewed over the two days. Most of the respondents who commuted to/from the ferry terminal arrived/departed by:

- Private vehicle (73%)
- On foot (16%)
- Were dropped off by car (6%).

Only four people cycled and four people took a bus to get to the ferry terminal (2% of respondents for each mode). **Figure 1** below provides the model of travel. This data shows that currently the dominant travel mode to connect to ferry is by private vehicle.

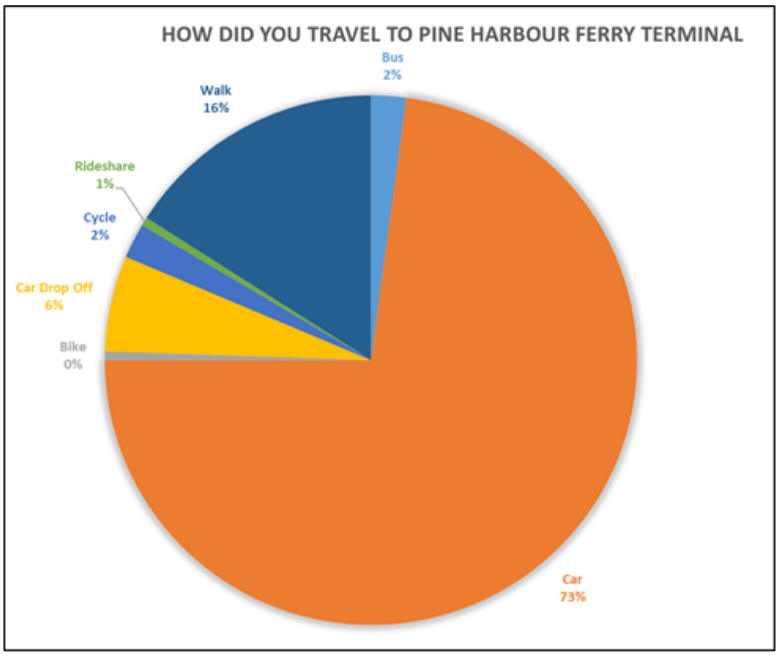


**Figure 1: Mode of Travel**

Respondents were also asked what they considered to be the key challenges that preclude greater ferry uptake. The key challenges that were mentioned are:

- Limited ferry service (34%) – the key elements that have been mentioned were: short ferry service span and lack of weekend or interpeak services
- Limited ferry capacity (21%)
- Poor bus connection (17%).

Ferry reliability and poor walking and cycling network were also mentioned. **Figure 2** below provides a more detailed breakdown.

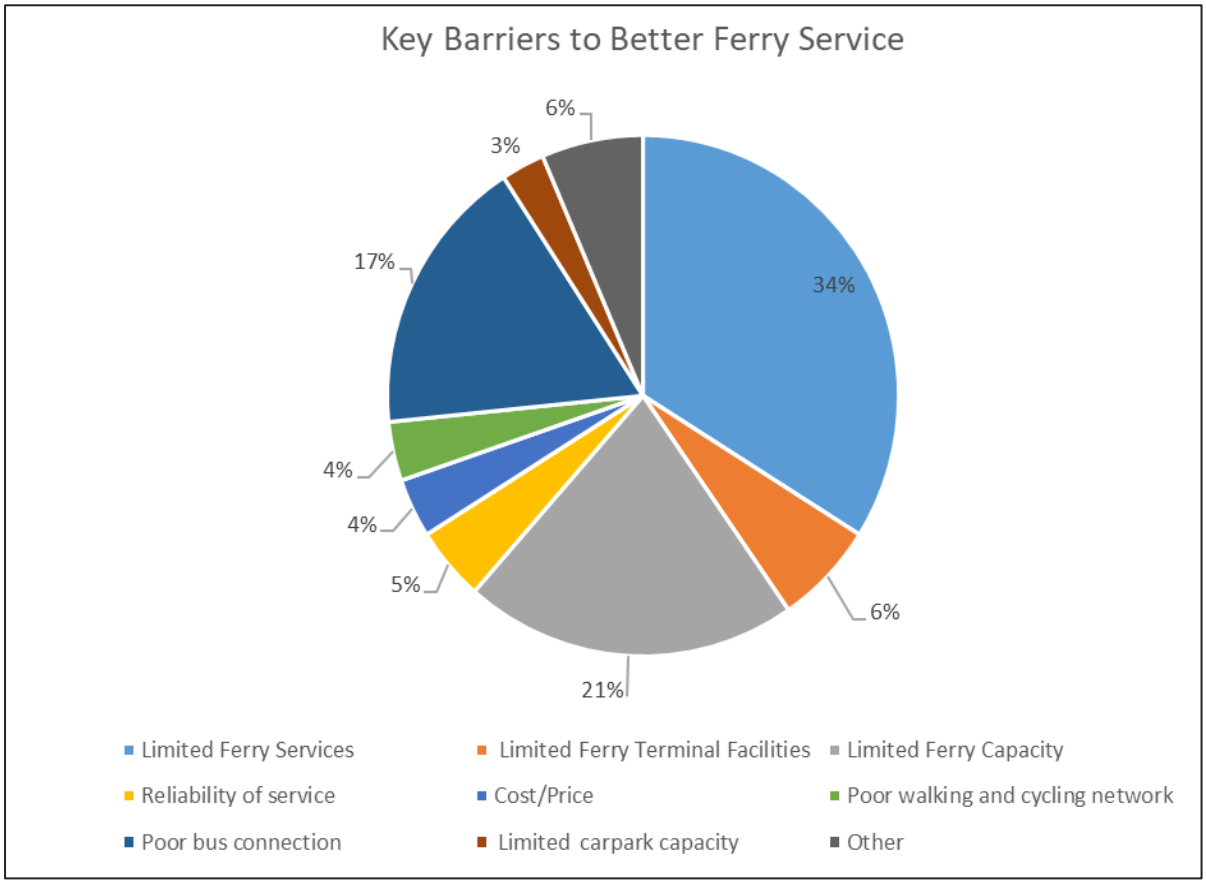


**Figure 2: Challenges to Better Ferry Service**

Respondents were also asked to indicate where they live, using the map provided as **Figure 3** below. The purpose of this question was to establish how responses varied regarding the quality of PT services among different residential areas. **Figure 3** also shows the proportion of people who responded to the questionnaire by location. As shown, most of the respondents live in Zone B (northwest Beachlands).

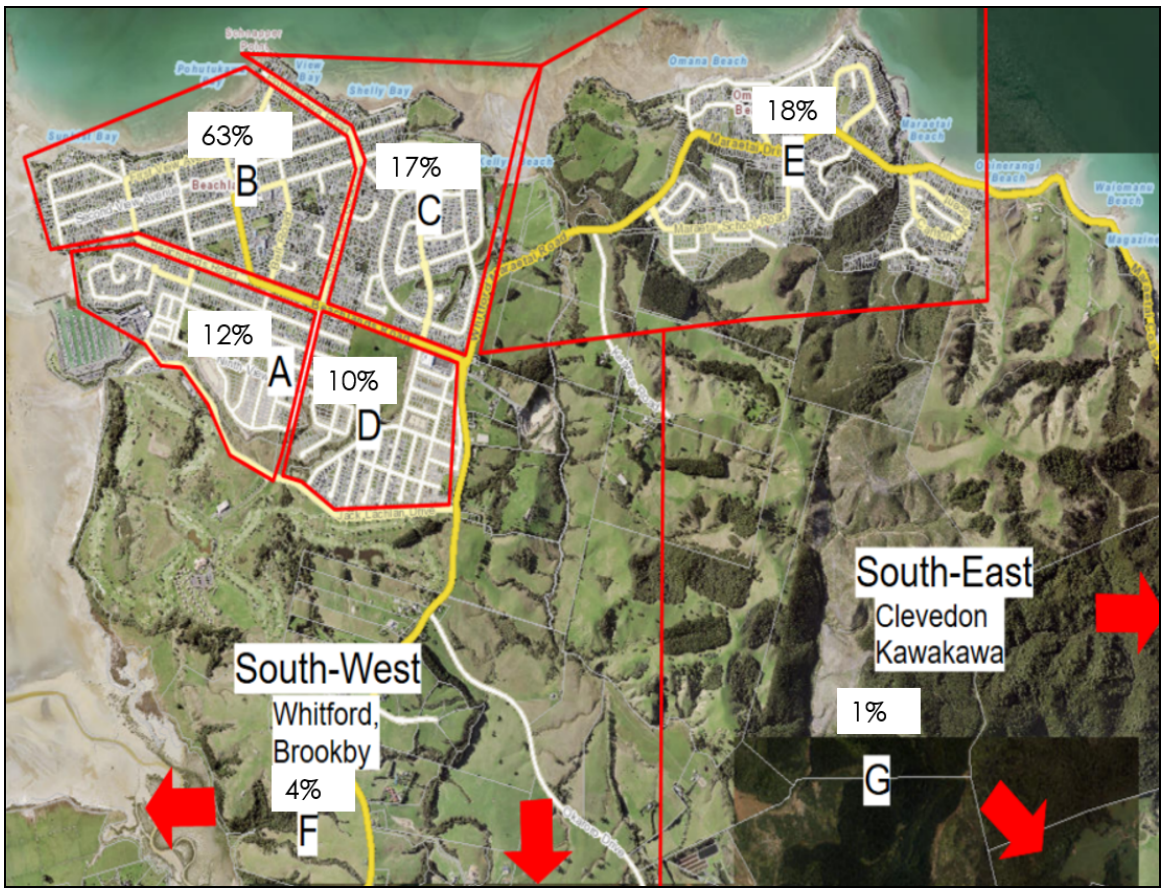


**Figure 3: Home Location of Respondents**

**Figure 4** below shows where the largest proportion of these residents live and how many of them are unsatisfied with PT services (% of unsatisfied residents with ferry services is shown on the X Axis, and bus services on the Y Axis. The size of the bubble shows the number of respondents).

As shown, residents in Zones C and E are most unsatisfied with bus services, around 55% and 75% of respondents respectively for these zones thought that bus services should be improved. Auckland Transport has identified the need (but has not yet identified funding) for a feeder bus service to connect residents in Maraetai and Beachlands to the ferry terminal. If provided this is likely to address these respondents' dissatisfaction.

For the ferry service quality, the most of unsatisfied residents live in Zones E, D, F and G. Residents from all zones except for Zone B have more than 20% of people who think that the ferry services could be improved.

**Reference:** **Beachlands South Private Plan Change - Response to Request for Information, Supplementary Response**

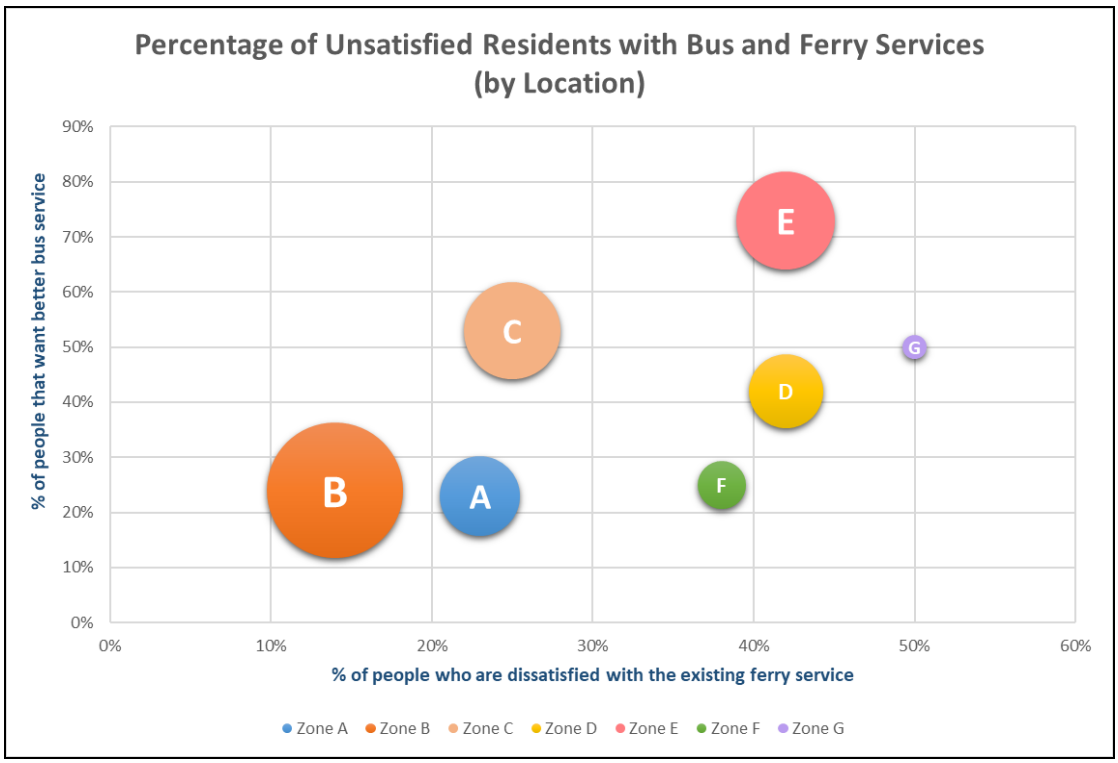


**Figure 4: Dissatisfaction with current public transport choices**

Interestingly, 43% of respondents who currently drive to the ferry terminal stated that they would switch to taking a bus to the ferry terminal if the service was provided. This bodes well for Auckland Transport's proposed feeder bus service. It also suggests that once the feeder bus service is provided, more people will consider taking the ferry as a viable transport option.

In summary, the results of the questionnaire survey show that:

- Most people commute to the ferry terminal by private vehicle (around 80%)
- A large proportion of residents in the area think that bus, ferry services and active mode networks should be improved
- A high proportion of existing car drivers to the ferry terminal would switch to a feeder bus service should it be provided
- The key opportunities available to achieve better outcomes for resident travel are associated with more ferry services, enhanced ferry capacity, and better integration of bus and ferry services.

Accordingly, based on the data collected and the proportion of unsatisfied residents with the current public transport service in Beachlands, it is readily apparent that there is a high potential of increasing public transport mode share if investments are aimed at addressing the key concerns raised in this survey.

It is considered that with the proposed development, Beachlands will become more comparable to Hobsonville Point and would better align with the Hobsonville Point features mentioned in the RFI question. Contrary to what is mentioned in the RFI, mode share increase assumptions in the ITA for Beachlands do not solely rely on population growth. As discussed in the Stantec Response Letter dated 12 July 2022, the features such as the ones listed below will be part of the developing Beachlands area and will contribute to increasing ferry, bus and active mode usage.

These features include:

- Increase in ferry capacity by introducing of larger vessels.
- Better active mode network by connecting new and existing areas around Jack Lachlan Drive with new active mode infrastructure.
- Better public transport integration by providing a new bus service from Maraetai, integrating this service with ferry sailings and providing more frequent bus services to Botany in the long-term.
- More diverse land-use by including a new school, more retail/hospitality and jobs in the proposed development.
- Better onward journey options and travel times from Botany once the Eastern Busway and Botany to Airport upgrades are completed.
- Congestion on the road main roads reducing attractiveness of private vehicle usage.
- Denser housing around the ferry wharf improving accessibility to higher quality PT services.

All of these elements would be part of the proposed development or part of the future transport network changes in Beachlands and would bring the commuting patterns close to those in Hobsonville Point.

## 3. Additional Intersection Modelling

Item T38 of the RFI table requests an analysis of the Whitford-Maraetai/Henson intersection and the Whitford-Maraetai/Clifton/Trig intersections.

### 3.1. Methodology

A 7-day traffic survey was conducted at each of the intersections between 22 and 28 June 2022 to determine the existing traffic flows that are to be imported into the 2022 traffic scenario model.

Traffic modelling was undertaken using the SIDRA intersection analysis software (and the plan change excel spreadsheet model) to assess the effect of any additional traffic generated by the plan change development.

The modelling assesses four forecast years:

- the existing traffic scenario in 2022,
- the beginning of the development in 2024,
- the midpoint of development enabled by the plan change in 2031 and
- the live zoned development completion in 2038.

The traffic has been analysed for the morning and evening peak periods of these modelling years.

For each forecast year, the baseline and development traffic scenarios are analysed, ultimately resulting in seven main model scenarios as follows:

1. 2022 Existing Traffic Scenario
2. 2024 Baseline Scenario
3. 2024 Development Scenario
4. 2031 Baseline Scenario
5. 2031 Development Scenario

6. 2038 Baseline Scenario
7. 2038 Development Scenario

Each scenario is modelled using the same methodology as other intersections within the ITA. This includes applying the background traffic (including any internalisation of background traffic), updated PT mode share and any updated network assumptions. The proposed development land use and trip generation rates are then used to determine the trips generated. Externalisation, inbound/outbound and distribution percentages are then applied to understand how the trips are distributed throughout the network, and existing survey data was assessed to understand the trip distribution at the intersections.

The modelling results for each intersection are summarised below, and full SIDRA outputs are provided in **Attachment 2**. Summarised results show the maximum delay and queue for right turns out of the minor arms of each intersection, as these provide the key effect of the traffic flow generated by the proposed development.

### 3.2. Whitford-Maraetai/Henson Road Intersection

The Whitford-Maraetai/Henson Road Intersection is a Give-Way controlled three-way intersection with a 2-lane major road. **Figure 5** below shows the layout of the intersection.

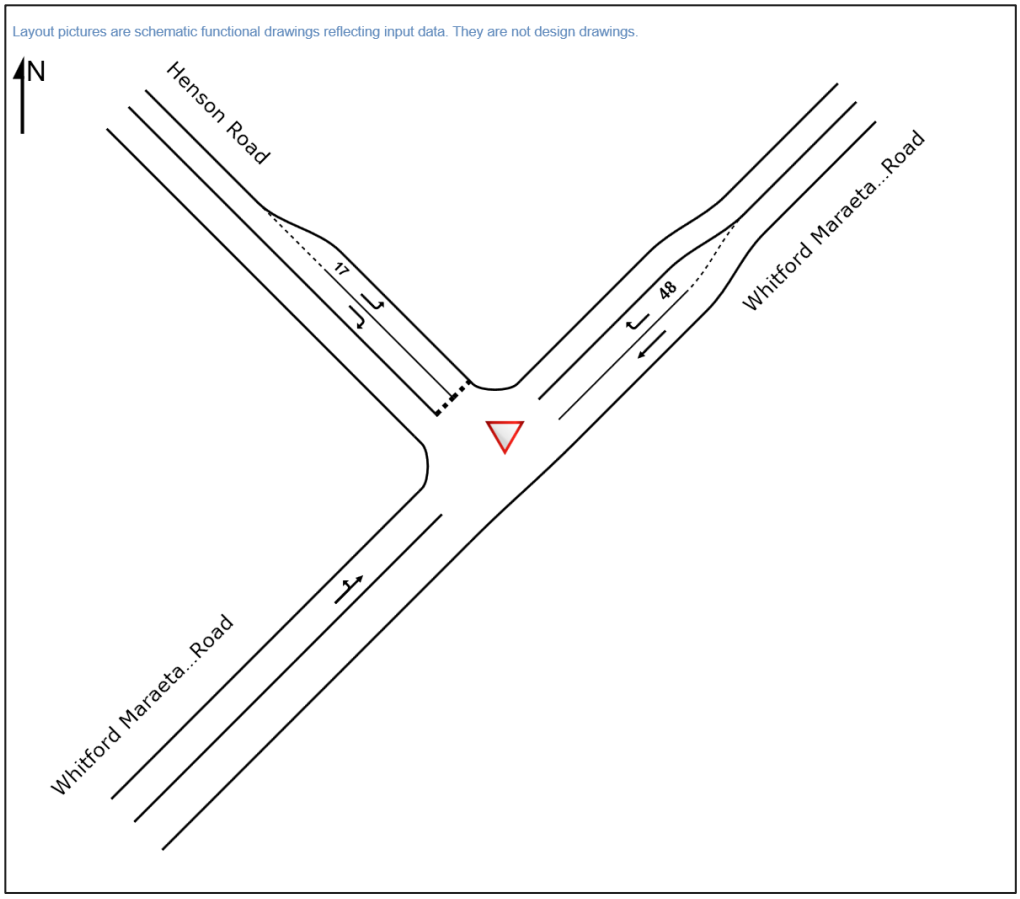


**Figure 5: Existing Whitford-Maraetai/Henson Road Give-Way controlled intersection**

The modelled Whitford-Maraetai/Henson Road intersection peak-hour results are summarised in **Tables 1 and 2** below. The performance parameters summarised in the tables are the max delay (in seconds) and the 95% queue (in number of cars) for each turning movement.

**Table 1: Whitford-Maraetai/Henson Road SIDRA Results – AM**

| Model Scenario - AM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 17 | <1 |
| 2024 Baseline Scenario | 18 | <1 |
| 2024 Development Scenario | 19 | <1 |
| 2031 Baseline Scenario | 19 | <1 |
| 2031 Development Scenario | 27 | <1 |
| 2038 Baseline Scenario | 20 | <1 |
| 2038 Development Scenario | 77 | 1 |

*Minor Road Right Turn Out movement

**Table 2: Whitford-Maraetai/Henson Road SIDRA Results – PM**

| Model Scenario - PM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 21 | <1 |
| 2024 Baseline Scenario | 22 | <1 |
| 2024 Development Scenario | 23 | <1 |
| 2031 Baseline Scenario | 24 | <1 |
| 2031 Development Scenario | 29 | <1 |
| 2038 Baseline Scenario | 25 | <1 |
| 2038 Development Scenario | 67 | 1 |

*Minor Road Right Turn Out movement

The results show that the AM peak max delay of 77 seconds in the 2038 Development Scenario is about 57 seconds greater than the 2038 Baseline scenario. This is due to the delay that occurs at the Henson Road approach for vehicles attempting to turn right onto Whitford-Maraetai Road. The increase in delay and travel time is unlikely to have a significant impact on overall journey times, as it is assumed that the majority of these vehicles leaving Whitford to the south would be travelling towards town centres near East Tamaki. Hence the 57 seconds increase at the intersection in the morning peak is not considered to be significant. To put this into perspective, the average delay is less than a typical cycle time for a traffic signal. It is also particularly relevant to note that the corresponding 95th percentile queue length will be equivalent to just one vehicle.

Overall therefore, the right turn demands will be minor; queue lengths will be negligible; and the moderate delay that will occur to a small number of vehicles will be insignificant when considering the entire context of the journey.

### 3.3. Whitford-Maraetai/Henson Road Intersection

The Whitford-Maraetai/Henson Road intersection is a Stop controlled three-way intersection with a 2-lane major road; **Figure 6** below indicates the layout of the site.

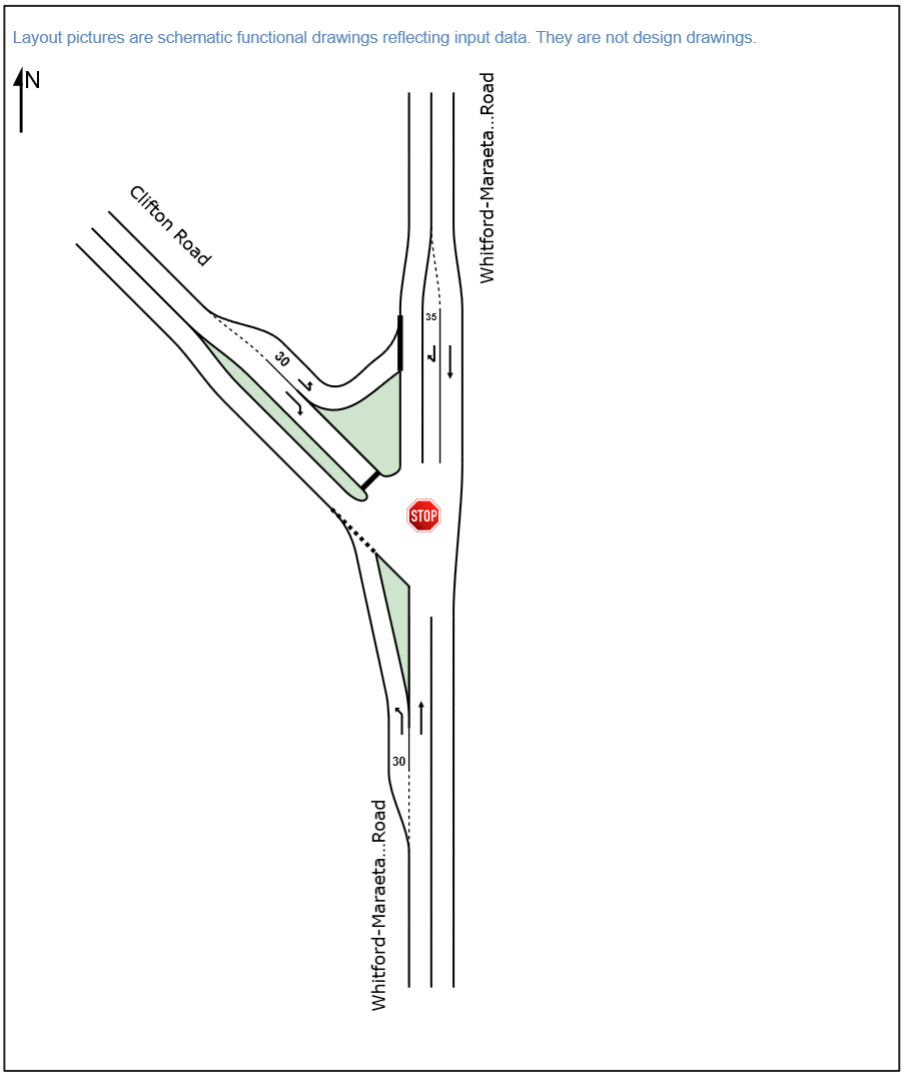


**Figure 6: Existing Whitford-Maraetai Clifton Road Give-Way controlled intersection**

The modelled Whitford-Maraetai/Clifton Road Intersection peak-hour results are summarised in **Table 3** and **Table 4** below.

**Table 3: Whitford-Maraetai/Clifton Road SIDRA Results – AM**

| Model Scenario - AM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 18 | 1 |
| 2024 Baseline Scenario | 19 | 1 |
| 2024 Development Scenario | 19 | 1 |
| 2031 Baseline Scenario | 20 | 1 |
| 2031 Development Scenario | 27 | 1 |
| 2038 Baseline Scenario | 21 | 1 |
| 2038 Development Scenario | 87 | 3 |

*Minor Road Right Turn Out movement

**Table 4: Whitford-Maraetai/Clifton Road SIDRA Results – PM**

| Model Scenario - PM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 21 | 1 |
| 2024 Baseline Scenario | 22 | 1 |
| 2024 Development Scenario | 22 | 1 |
| 2031 Baseline Scenario | 23 | 1 |
| 2031 Development Scenario | 31 | 1 |
| 2038 Baseline Scenario | 24 | 1 |
| 2038 Development Scenario | 103 | 4 |

*Minor Road Right Turn Out movement

At the Whitford-Maraetai and Clifton Road intersection, a maximum PM peak delay of 103 seconds occurs in the 2038 development scenario. The delay is caused when vehicles right turn from Clifton Road into Whitford-Maraetai Road. This delay is anticipated, and in the context of any right turn into any main road intersection, (regardless of how the intersection is controlled), during peak hour travel, is not significant.

The maximum queue length will equate to about four cars in the 2038 Development scenario. The increase from one car waiting in the queue in the 2038 base model to four cars waiting in queue is minor and is considered reasonable during peak hours. Furthermore, the low queue length at peak hours suggests that there is minimal demand for making right-turns from Clifton Road.

The remaining approaches at the Whitford-Maraetai and Clifton Road intersection are all within accepted levels of traffic performance. This, combined with the low right turn demands, minor queue lengths, and minor delay times at Clifton Road all indicate reasonable and acceptable performance of the intersection under the 2038 development scenario.

### 3.4. Whitford-Maraetai/Trig Road Intersection

The Whitford-Maraetai/Trig Road Intersection is a Give-Way controlled three-way intersection with a 2-lane major road. **Figure 7** below indicates the layout of the site.

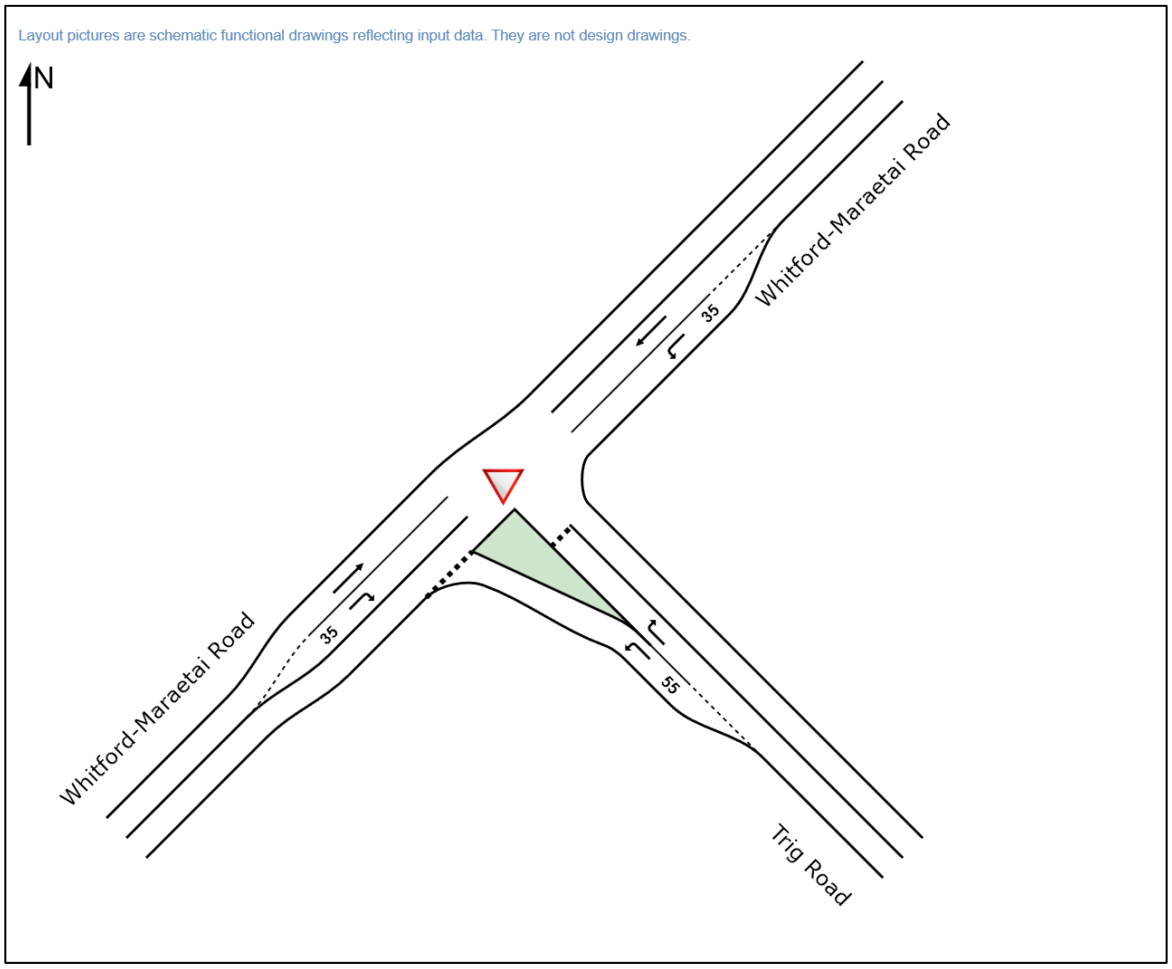


**Figure 7: Existing Whitford-Maraetai/Trig Road Give-Way controlled intersection**

The modelled Whitford-Maraetai/Trig Road Intersection peak-hour results are summarised in **Table 5** and **Table 6** below.

**Table 5: Whitford-Maraetai/Trig Road SIDRA Results – AM**

| Model Scenario - AM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 23 | <1 |
| 2024 Baseline Scenario | 24 | <1 |
| 2024 Development Scenario | 25 | <1 |
| 2031 Baseline Scenario | 26 | <1 |
| 2031 Development Scenario | 41 | <1 |
| 2038 Baseline Scenario | 27 | <1 |
| 2038 Development Scenario | 112 | 1 |

*Minor Road Right Turn Out movement

**Table 6 Whitford-Maraetai/Trig Road SIDRA Results – PM**

| Model Scenario - PM | Average Delay* (s) | 95th %ile Queue* (vehs) |
|---|---|---|
| 2022 Existing Traffic Scenario | 20 | <1 |
| 2024 Baseline Scenario | 20 | <1 |
| 2024 Development Scenario | 21 | <1 |
| 2031 Baseline Scenario | 22 | <1 |
| 2031 Development Scenario | 28 | <1 |
| 2038 Baseline Scenario | 23 | <1 |
| 2038 Development Scenario | 59 | <1 |

*Minor Road Right Turn Out movement

The tables above show that the 2038 Development scenario maximum delay occurs for the right turn from Trig Road. The AM Peak delay of 112 seconds is 85 seconds greater than the 2038 base scenario. As with the analyses of the previous intersections however, right turn demands from Trig Road are very low, with the model predicting only five vehicles turning right from Trig Road onto Whitford-Maraetai Road in the peak hour. Hence, while the right turn delays will be more noticeable in this case, only a very few motorists will be affected. This is seen by the maximum queue length of just one vehicle. Overall, the performance of the intersection in the 2038 Development scenario will be well within reasonable and acceptable levels.

### 3.5. Summary

Based on the above assessments, it is found that while all three intersections will experience increased peak hour delays by 2038, it is important that these delays are put in proper context:

- They will impact only a very small number of right turners from the side roads. This is clearly apparent from the fact that notwithstanding the moderate increases in delay that will occur, queue lengths remain negligible.

- The quantum of delays that will be experienced for the small right turn demands that will occur, are certainly not excessive when compared to peak hour delays for any right turning that could be expected at any intersection, regardless of how the intersection is controlled. The delays are entirely consistent with traffic signal cycle times for example.

Accordingly, it is considered that no further treatments are required to those intersections in order for them to continue to operate satisfactorily by 2038 with the development traffic added.

Yours sincerely

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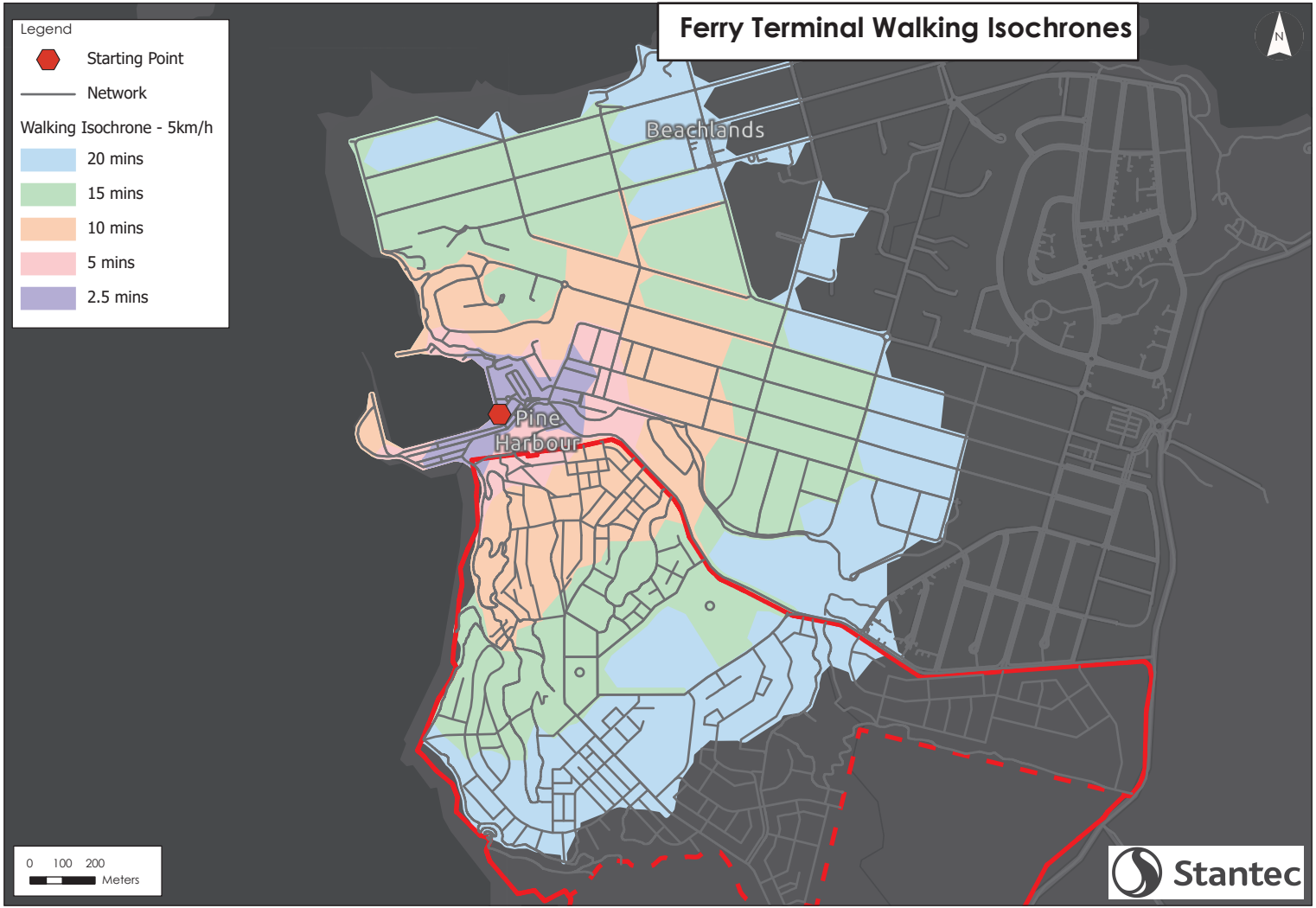
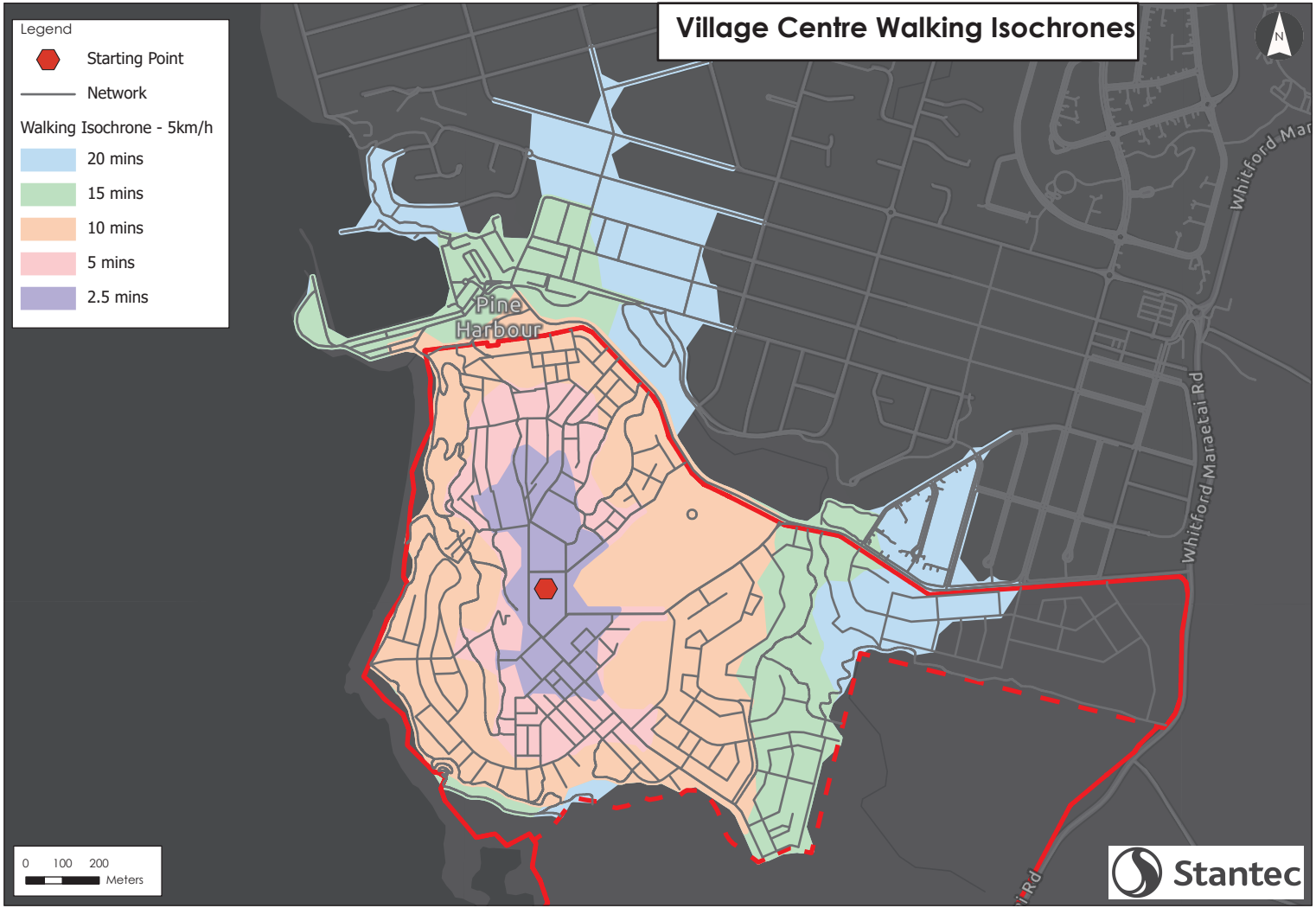
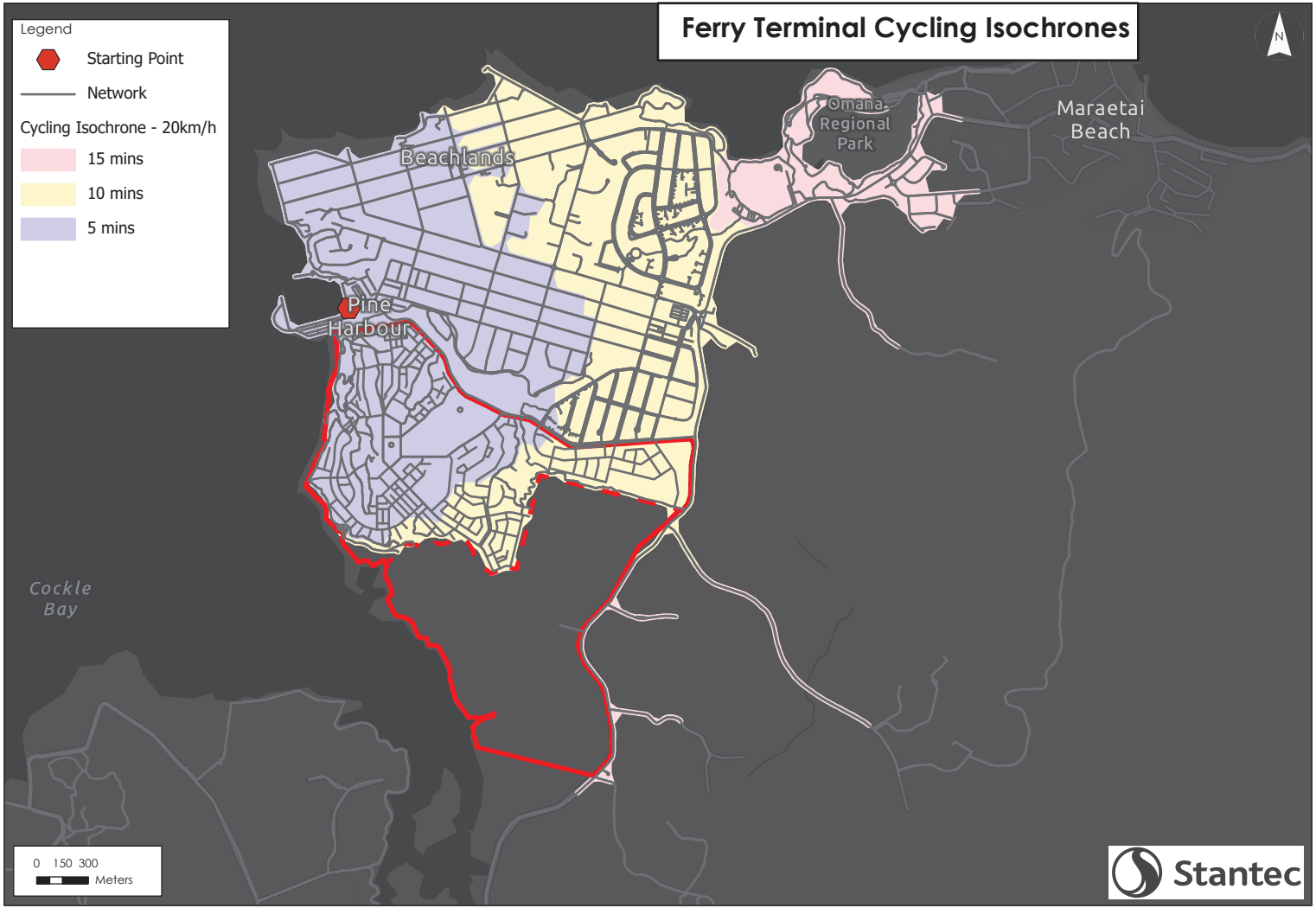
Attachments:
Attachment 1: Walking and Cycling Isochrones
Attachment 2: SIDRA Results

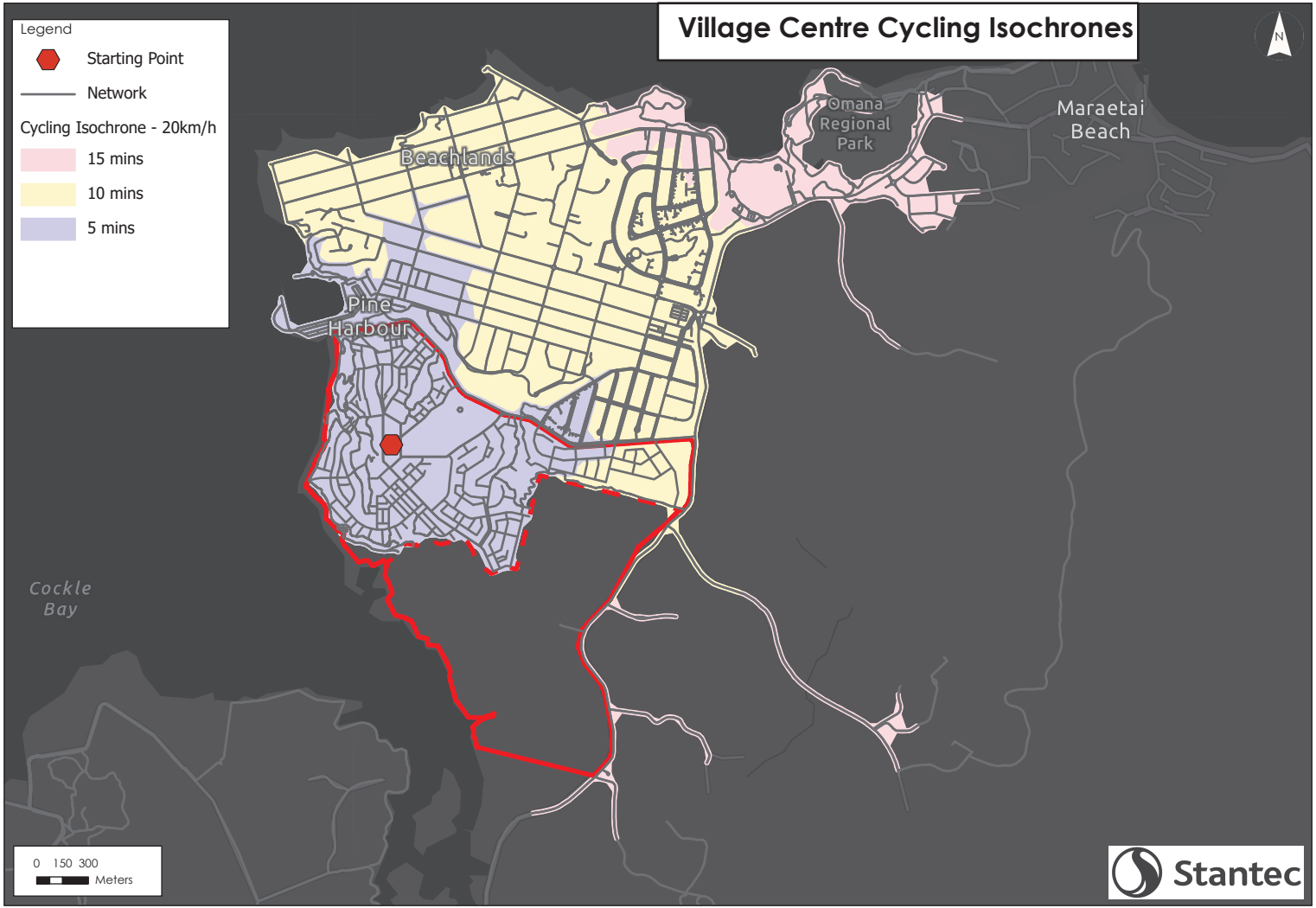
# ATTACHMENT 1

**Walking and Cycling Isochrones**


Ferry Terminal Walking Isochrones
Legend
Starting Point
Network
Walking Isochrone - 5km/h
20 mins
15 mins
10 mins
5 mins
2.5 mins
Beachlands
Pine Harbour
N
0 100 200
Meters
Stantec


Village Centre Walking Isochrones
Legend
Starting Point
Network
Walking Isochrone - 5km/h
20 mins
15 mins
10 mins
5 mins
2.5 mins
Pine Harbour
Whitford Maraetai Rd
0 100 200
Meters
N
Stantec


Ferry Terminal Cycling Isochrones
Legend
Starting Point
Network
Cycling Isochrone - 20km/h
15 mins
10 mins
5 mins
Beachlands
Omana Regional Park
Maraetai Beach
Pine Harbour
Cockle Bay
0 150 300
Meters
N
Stantec


Village Centre Cycling Isochrones
Legend
Starting Point
Network
Cycling Isochrone - 20km/h
15 mins
10 mins
5 mins
N
Beachlands
Omana Regional Park
Maraetai Beach
Pine Harbour
Cockle Bay
0 150 300
Meters
Stantec

# ATTACHMENT 2

**SIDRA Results at the Henson Road, Clifton Road and Trig Road intersections with Whitford-Maraetai Road**

# MOVEMENT SUMMARY

## Site: 8_R0am [Whitford-Henson_2022_AM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1068 | 26 | 1124 | 2.4 | 0.580 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.4 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.005 | 7.6 | LOS A | 0.0 | 0.2 | 0.44 | 0.58 | 0.44 | 57.6 |
| Approach | | 1073 | 27 | 1129 | 2.5 | 0.580 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 64.4 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 9 | 1 | 9 | 11.1 | 0.008 | 8.0 | LOS A | 0.0 | 0.2 | 0.34 | 0.61 | 0.34 | 60.3 |
| 29 | R2 | 14 | 2 | 15 | 14.3 | 0.044 | 17.3 | LOS C | 0.1 | 1.1 | 0.83 | 0.94 | 0.83 | 51.7 |
| Approach | | 23 | 3 | 24 | 13.0 | 0.044 | 13.7 | LOS B | 0.1 | 1.1 | 0.64 | 0.81 | 0.64 | 54.8 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 3 | 1 | 3 | 33.3 | 0.193 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 61.5 |
| 31 | T1 | 343 | 39 | 361 | 11.4 | 0.193 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| Approach | | 346 | 40 | 364 | 11.6 | 0.193 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| All Vehicles | | 1442 | 70 | 1518 | 4.9 | 0.580 | 0.5 | NA | 0.1 | 1.1 | 0.01 | 0.02 | 0.01 | 64.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R0pm [Whitford-Henson_2022_PM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 430 | 19 | 453 | 4.4 | 0.238 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.9 |
| 26 | R2 | 19 | 1 | 20 | 5.3 | 0.036 | 11.6 | LOS B | 0.1 | 0.9 | 0.72 | 0.86 | 0.72 | 55.0 |
| Approach | | 449 | 20 | 473 | 4.5 | 0.238 | 0.6 | NA | 0.1 | 0.9 | 0.03 | 0.04 | 0.03 | 64.4 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 21 | 1 | 22 | 4.8 | 0.041 | 12.6 | LOS B | 0.1 | 1.0 | 0.70 | 0.89 | 0.70 | 58.1 |
| 29 | R2 | 5 | 1 | 5 | 20.0 | 0.020 | 21.1 | LOS C | 0.1 | 0.6 | 0.86 | 0.93 | 0.86 | 48.0 |
| Approach | | 26 | 2 | 27 | 7.7 | 0.041 | 14.2 | LOS B | 0.1 | 1.0 | 0.74 | 0.90 | 0.74 | 55.9 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 4 | 1 | 4 | 25.0 | 0.494 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.5 |
| 31 | T1 | 941 | 12 | 991 | 1.3 | 0.494 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.6 |
| Approach | | 945 | 13 | 995 | 1.4 | 0.494 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.6 |
| All Vehicles | | 1420 | 35 | 1495 | 2.5 | 0.494 | 0.6 | NA | 0.1 | 1.0 | 0.02 | 0.03 | 0.02 | 64.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R0am [Whitford-Clifton_2022_AM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 35 | 3 | 37 | 8.6 | 0.024 | 6.3 | LOS A | 0.1 | 0.7 | 0.02 | 0.61 | 0.02 | 65.2 |
| 2 | T1 | 340 | 40 | 358 | 11.8 | 0.199 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.9 |
| Approach | | 375 | 43 | 395 | 11.5 | 0.199 | 0.6 | LOS A | 0.1 | 0.7 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1079 | 27 | 1136 | 2.5 | 0.595 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.3 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.002 | 10.1 | LOS B | 0.0 | 0.1 | 0.46 | 0.60 | 0.46 | 59.2 |
| Approach | | 1081 | 28 | 1138 | 2.6 | 0.595 | 0.2 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 79.2 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 14.9 | LOS B | 0.0 | 0.1 | 0.60 | 0.68 | 0.60 | 50.0 |
| 29a | R1 | 50 | 2 | 53 | 4.0 | 0.102 | 18.4 | LOS C | 0.5 | 3.5 | 0.86 | 1.02 | 0.86 | 55.1 |
| Approach | | 52 | 3 | 55 | 5.8 | 0.102 | 18.3 | LOS C | 0.5 | 3.5 | 0.85 | 1.01 | 0.85 | 54.8 |
| All Vehicles | | 1508 | 74 | 1587 | 4.9 | 0.595 | 0.9 | NA | 0.5 | 3.5 | 0.03 | 0.05 | 0.03 | 77.8 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R0pm [Whitford-Clifton_2022_PM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 57 | 2 | 60 | 3.5 | 0.037 | 6.2 | LOS A | 0.2 | 1.1 | 0.02 | 0.61 | 0.02 | 65.6 |
| 2 | T1 | 944 | 11 | 994 | 1.2 | 0.516 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.5 |
| Approach | | 1001 | 13 | 1054 | 1.3 | 0.516 | 0.5 | LOS A | 0.2 | 1.1 | 0.00 | 0.03 | 0.00 | 78.5 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 429 | 18 | 452 | 4.2 | 0.239 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.006 | 17.1 | LOS C | 0.0 | 0.2 | 0.77 | 0.80 | 0.77 | 53.2 |
| Approach | | 431 | 19 | 454 | 4.4 | 0.239 | 0.1 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.7 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.004 | 20.6 | LOS C | 0.0 | 0.2 | 0.78 | 0.81 | 0.78 | 46.6 |
| 29a | R1 | 45 | 4 | 47 | 8.9 | 0.108 | 21.3 | LOS C | 0.6 | 4.2 | 0.88 | 1.02 | 0.88 | 51.9 |
| Approach | | 47 | 5 | 49 | 10.6 | 0.108 | 21.3 | LOS C | 0.6 | 4.2 | 0.87 | 1.01 | 0.87 | 51.6 |
| All Vehicles | | 1479 | 37 | 1557 | 2.5 | 0.516 | 1.0 | NA | 0.6 | 4.2 | 0.03 | 0.06 | 0.03 | 77.6 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R0am [Whitford-Trig_2022_AM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 14 | 10 | 15 | 71.4 | 0.044 | 17.9 | LOS C | 0.1 | 1.5 | 0.81 | 0.92 | 0.81 | 42.9 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.014 | 22.7 | LOS C | 0.1 | 0.5 | 0.90 | 0.87 | 0.90 | 46.3 |
| Approach | | 18 | 11 | 19 | 61.1 | 0.044 | 18.9 | LOS C | 0.1 | 1.5 | 0.83 | 0.91 | 0.83 | 43.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 3 | 2 | 3 | 66.7 | 0.003 | 8.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 48.4 |
| 25 | T1 | 1120 | 29 | 1179 | 2.6 | 0.618 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| Approach | | 1123 | 31 | 1182 | 2.8 | 0.618 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.1 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 390 | 51 | 411 | 13.1 | 0.230 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 3 | 1 | 3 | 33.3 | 0.013 | 19.9 | LOS C | 0.0 | 0.3 | 0.83 | 0.94 | 0.83 | 46.5 |
| Approach | | 393 | 52 | 414 | 13.2 | 0.230 | 0.2 | NA | 0.0 | 0.3 | 0.01 | 0.01 | 0.01 | 79.4 |
| All Vehicles | | 1534 | 94 | 1615 | 6.1 | 0.618 | 0.5 | NA | 0.1 | 1.5 | 0.01 | 0.01 | 0.01 | 78.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R0pm [Whitford_Trig_2022_PM (Site Folder: 2022 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 26 | 11 | 27 | 42.3 | 0.026 | 10.0 | LOS B | 0.1 | 1.1 | 0.53 | 0.66 | 0.53 | 52.3 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.014 | 19.5 | LOS C | 0.1 | 0.5 | 0.87 | 0.84 | 0.87 | 49.1 |
| Approach | | 31 | 12 | 33 | 38.7 | 0.026 | 11.6 | LOS B | 0.1 | 1.1 | 0.58 | 0.69 | 0.58 | 51.8 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 5 | 1 | 5 | 20.0 | 0.003 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 59.2 |
| 25 | T1 | 475 | 26 | 500 | 5.5 | 0.267 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 480 | 27 | 505 | 5.6 | 0.267 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1007 | 19 | 1060 | 1.9 | 0.553 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.4 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.008 | 9.8 | LOS A | 0.0 | 0.2 | 0.50 | 0.66 | 0.50 | 57.4 |
| Approach | | 1013 | 20 | 1066 | 2.0 | 0.553 | 0.2 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.2 |
| All Vehicles | | 1524 | 59 | 1604 | 3.9 | 0.553 | 0.4 | NA | 0.1 | 1.1 | 0.01 | 0.02 | 0.01 | 78.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R1aam [Whitford-Henson_2024_AM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1091 | 27 | 1148 | 2.5 | 0.592 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.4 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.005 | 7.7 | LOS A | 0.0 | 0.2 | 0.44 | 0.58 | 0.44 | 57.6 |
| Approach | | 1096 | 28 | 1154 | 2.6 | 0.592 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 64.3 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 9 | 1 | 9 | 11.1 | 0.008 | 8.0 | LOS A | 0.0 | 0.2 | 0.35 | 0.61 | 0.35 | 60.3 |
| 29 | R2 | 14 | 2 | 15 | 14.3 | 0.046 | 18.0 | LOS C | 0.2 | 1.2 | 0.84 | 0.94 | 0.84 | 51.3 |
| Approach | | 23 | 3 | 24 | 13.0 | 0.046 | 14.1 | LOS B | 0.2 | 1.2 | 0.65 | 0.81 | 0.65 | 54.5 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 3 | 1 | 3 | 33.3 | 0.197 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 61.5 |
| 31 | T1 | 351 | 40 | 369 | 11.4 | 0.197 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| Approach | | 354 | 41 | 373 | 11.6 | 0.197 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| All Vehicles | | 1473 | 72 | 1551 | 4.9 | 0.592 | 0.5 | NA | 0.2 | 1.2 | 0.01 | 0.02 | 0.01 | 64.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R1apm [Whitford-Henson_2024_PM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 438 | 19 | 461 | 4.3 | 0.243 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.9 |
| 26 | R2 | 19 | 1 | 20 | 5.3 | 0.037 | 11.9 | LOS B | 0.1 | 1.0 | 0.73 | 0.88 | 0.73 | 54.8 |
| Approach | | 457 | 20 | 481 | 4.4 | 0.243 | 0.6 | NA | 0.1 | 1.0 | 0.03 | 0.04 | 0.03 | 64.4 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 21 | 1 | 22 | 4.8 | 0.043 | 12.8 | LOS B | 0.1 | 1.0 | 0.72 | 0.90 | 0.72 | 57.9 |
| 29 | R2 | 5 | 1 | 5 | 20.0 | 0.021 | 21.9 | LOS C | 0.1 | 0.6 | 0.87 | 0.95 | 0.87 | 47.5 |
| Approach | | 26 | 2 | 27 | 7.7 | 0.043 | 14.6 | LOS B | 0.1 | 1.0 | 0.75 | 0.91 | 0.75 | 55.6 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 5 | 1 | 5 | 20.0 | 0.506 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.6 |
| 31 | T1 | 962 | 13 | 1013 | 1.4 | 0.506 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| Approach | | 967 | 14 | 1018 | 1.4 | 0.506 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| All Vehicles | | 1450 | 36 | 1526 | 2.5 | 0.506 | 0.6 | NA | 0.1 | 1.0 | 0.02 | 0.03 | 0.02 | 64.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R1aam [Whitford-Clifton_2024_AM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 35 | 3 | 37 | 8.6 | 0.024 | 6.3 | LOS A | 0.1 | 0.7 | 0.02 | 0.61 | 0.02 | 65.2 |
| 2 | T1 | 348 | 41 | 366 | 11.8 | 0.203 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.9 |
| Approach | | 383 | 44 | 403 | 11.5 | 0.203 | 0.6 | LOS A | 0.1 | 0.7 | 0.00 | 0.06 | 0.00 | 78.3 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1102 | 27 | 1160 | 2.5 | 0.607 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.002 | 10.2 | LOS B | 0.0 | 0.1 | 0.47 | 0.60 | 0.47 | 59.1 |
| Approach | | 1104 | 28 | 1162 | 2.5 | 0.607 | 0.2 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 79.2 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 14.9 | LOS B | 0.0 | 0.1 | 0.61 | 0.67 | 0.61 | 49.9 |
| 29a | R1 | 51 | 2 | 54 | 3.9 | 0.109 | 18.9 | LOS C | 0.5 | 3.7 | 0.87 | 1.02 | 0.87 | 54.7 |
| Approach | | 53 | 3 | 56 | 5.7 | 0.109 | 18.8 | LOS C | 0.5 | 3.7 | 0.86 | 1.01 | 0.86 | 54.5 |
| All Vehicles | | 1540 | 75 | 1621 | 4.9 | 0.607 | 1.0 | NA | 0.5 | 3.7 | 0.03 | 0.05 | 0.03 | 77.8 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R1apm [Whitford-Clifton_2024_PM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 58 | 2 | 61 | 3.4 | 0.038 | 6.2 | LOS A | 0.2 | 1.1 | 0.02 | 0.61 | 0.02 | 65.6 |
| 2 | T1 | 965 | 12 | 1016 | 1.2 | 0.528 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.5 |
| Approach | | 1023 | 14 | 1077 | 1.4 | 0.528 | 0.5 | LOS A | 0.2 | 1.1 | 0.00 | 0.03 | 0.00 | 78.5 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 438 | 19 | 461 | 4.3 | 0.244 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.006 | 17.6 | LOS C | 0.0 | 0.2 | 0.79 | 0.81 | 0.79 | 52.8 |
| Approach | | 440 | 20 | 463 | 4.5 | 0.244 | 0.1 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.7 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.005 | 21.1 | LOS C | 0.0 | 0.2 | 0.79 | 0.82 | 0.79 | 46.4 |
| 29a | R1 | 46 | 4 | 48 | 8.7 | 0.115 | 21.9 | LOS C | 0.6 | 4.4 | 0.88 | 1.02 | 0.88 | 51.5 |
| Approach | | 48 | 5 | 51 | 10.4 | 0.115 | 21.9 | LOS C | 0.6 | 4.4 | 0.88 | 1.01 | 0.88 | 51.2 |
| All Vehicles | | 1511 | 39 | 1591 | 2.6 | 0.528 | 1.1 | NA | 0.6 | 4.4 | 0.03 | 0.06 | 0.03 | 77.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R1aam [Whitford-Trig_2024_AM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 14 | 10 | 15 | 71.4 | 0.046 | 18.5 | LOS C | 0.1 | 1.6 | 0.83 | 0.93 | 0.83 | 42.6 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.015 | 23.6 | LOS C | 0.1 | 0.5 | 0.90 | 0.88 | 0.90 | 45.7 |
| Approach | | 18 | 11 | 19 | 61.1 | 0.046 | 19.7 | LOS C | 0.1 | 1.6 | 0.84 | 0.92 | 0.84 | 43.3 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 3 | 2 | 3 | 66.7 | 0.003 | 8.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 48.4 |
| 25 | T1 | 1143 | 29 | 1203 | 2.5 | 0.630 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| Approach | | 1146 | 31 | 1206 | 2.7 | 0.630 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.0 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 398 | 52 | 419 | 13.1 | 0.234 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 3 | 1 | 3 | 33.3 | 0.014 | 20.7 | LOS C | 0.0 | 0.3 | 0.84 | 0.94 | 0.84 | 46.0 |
| Approach | | 401 | 53 | 422 | 13.2 | 0.234 | 0.2 | NA | 0.0 | 0.3 | 0.01 | 0.01 | 0.01 | 79.4 |
| All Vehicles | | 1565 | 95 | 1647 | 6.1 | 0.630 | 0.5 | NA | 0.1 | 1.6 | 0.01 | 0.01 | 0.01 | 78.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R1apm [Whitford_Trig_2024_PM_Base (Site Folder: 2024 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 26 | 11 | 27 | 42.3 | 0.026 | 10.1 | LOS B | 0.1 | 1.1 | 0.53 | 0.66 | 0.53 | 52.3 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.015 | 20.3 | LOS C | 0.1 | 0.5 | 0.88 | 0.85 | 0.88 | 48.7 |
| Approach | | 31 | 12 | 33 | 38.7 | 0.026 | 11.7 | LOS B | 0.1 | 1.1 | 0.59 | 0.69 | 0.59 | 51.7 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 5 | 1 | 5 | 20.0 | 0.003 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 59.2 |
| 25 | T1 | 485 | 26 | 511 | 5.4 | 0.272 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 490 | 27 | 516 | 5.5 | 0.272 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1028 | 19 | 1082 | 1.8 | 0.564 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.4 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.008 | 9.8 | LOS A | 0.0 | 0.2 | 0.51 | 0.67 | 0.51 | 57.3 |
| Approach | | 1034 | 20 | 1088 | 1.9 | 0.564 | 0.2 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.2 |
| All Vehicles | | 1555 | 59 | 1637 | 3.8 | 0.564 | 0.4 | NA | 0.1 | 1.1 | 0.01 | 0.02 | 0.01 | 78.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R2bam [Whitford-Henson_2024_AM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1110 | 27 | 1168 | 2.4 | 0.602 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.3 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.005 | 7.7 | LOS A | 0.0 | 0.2 | 0.45 | 0.58 | 0.45 | 57.6 |
| Approach | | 1115 | 28 | 1174 | 2.5 | 0.602 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 64.3 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 9 | 1 | 9 | 11.1 | 0.008 | 8.0 | LOS A | 0.0 | 0.2 | 0.35 | 0.62 | 0.35 | 60.3 |
| 29 | R2 | 14 | 2 | 15 | 14.3 | 0.048 | 18.5 | LOS C | 0.2 | 1.2 | 0.85 | 0.95 | 0.85 | 50.9 |
| Approach | | 23 | 3 | 24 | 13.0 | 0.048 | 14.4 | LOS B | 0.2 | 1.2 | 0.66 | 0.82 | 0.66 | 54.2 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 3 | 1 | 3 | 33.3 | 0.201 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 61.5 |
| 31 | T1 | 357 | 40 | 376 | 11.2 | 0.201 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| Approach | | 360 | 41 | 379 | 11.4 | 0.201 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 64.8 |
| All Vehicles | | 1498 | 72 | 1577 | 4.8 | 0.602 | 0.5 | NA | 0.2 | 1.2 | 0.01 | 0.02 | 0.01 | 64.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R2bpm [Whitford-Henson_2024_PM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 449 | 19 | 473 | 4.2 | 0.249 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.9 |
| 26 | R2 | 19 | 1 | 20 | 5.3 | 0.038 | 12.2 | LOS B | 0.1 | 1.0 | 0.74 | 0.89 | 0.74 | 54.6 |
| Approach | | 468 | 20 | 493 | 4.3 | 0.249 | 0.6 | NA | 0.1 | 1.0 | 0.03 | 0.04 | 0.03 | 64.4 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 22 | 1 | 23 | 4.5 | 0.046 | 13.0 | LOS B | 0.1 | 1.1 | 0.73 | 0.90 | 0.73 | 57.8 |
| 29 | R2 | 5 | 1 | 5 | 20.0 | 0.022 | 22.6 | LOS C | 0.1 | 0.6 | 0.88 | 0.95 | 0.88 | 47.1 |
| Approach | | 27 | 2 | 28 | 7.4 | 0.046 | 14.8 | LOS B | 0.1 | 1.1 | 0.75 | 0.91 | 0.75 | 55.4 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 6 | 1 | 6 | 16.7 | 0.514 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.7 |
| 31 | T1 | 977 | 12 | 1028 | 1.2 | 0.514 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| Approach | | 983 | 13 | 1035 | 1.3 | 0.514 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| All Vehicles | | 1478 | 35 | 1556 | 2.4 | 0.514 | 0.6 | NA | 0.1 | 1.1 | 0.02 | 0.03 | 0.02 | 64.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R2bam [Whitford-Clifton_2024_AM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 36 | 3 | 38 | 8.3 | 0.024 | 6.3 | LOS A | 0.1 | 0.7 | 0.02 | 0.61 | 0.02 | 65.2 |
| 2 | T1 | 353 | 40 | 372 | 11.3 | 0.206 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.9 |
| Approach | | 389 | 43 | 409 | 11.1 | 0.206 | 0.6 | LOS A | 0.1 | 0.7 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1119 | 27 | 1178 | 2.4 | 0.617 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.002 | 10.2 | LOS B | 0.0 | 0.1 | 0.47 | 0.60 | 0.47 | 59.1 |
| Approach | | 1121 | 28 | 1180 | 2.5 | 0.617 | 0.2 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 79.2 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 15.0 | LOS B | 0.0 | 0.1 | 0.61 | 0.67 | 0.61 | 49.9 |
| 29a | R1 | 52 | 2 | 55 | 3.8 | 0.115 | 19.3 | LOS C | 0.5 | 3.9 | 0.87 | 1.02 | 0.87 | 54.4 |
| Approach | | 54 | 3 | 57 | 5.6 | 0.115 | 19.1 | LOS C | 0.5 | 3.9 | 0.86 | 1.01 | 0.86 | 54.2 |
| All Vehicles | | 1564 | 74 | 1646 | 4.7 | 0.617 | 1.0 | NA | 0.5 | 3.9 | 0.03 | 0.05 | 0.03 | 77.7 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R2bpm [Whitford-Clifton_2024_PM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 59 | 2 | 62 | 3.4 | 0.039 | 6.2 | LOS A | 0.2 | 1.1 | 0.02 | 0.61 | 0.02 | 65.6 |
| 2 | T1 | 979 | 12 | 1031 | 1.2 | 0.535 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.4 |
| Approach | | 1038 | 14 | 1093 | 1.3 | 0.535 | 0.5 | LOS A | 0.2 | 1.1 | 0.00 | 0.03 | 0.00 | 78.5 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 448 | 18 | 472 | 4.0 | 0.249 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.006 | 17.9 | LOS C | 0.0 | 0.2 | 0.79 | 0.82 | 0.79 | 52.5 |
| Approach | | 450 | 19 | 474 | 4.2 | 0.249 | 0.1 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.7 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.005 | 21.4 | LOS C | 0.0 | 0.2 | 0.80 | 0.82 | 0.80 | 46.2 |
| 29a | R1 | 47 | 4 | 49 | 8.5 | 0.122 | 22.4 | LOS C | 0.6 | 4.6 | 0.89 | 1.02 | 0.89 | 51.2 |
| Approach | | 49 | 5 | 52 | 10.2 | 0.122 | 22.4 | LOS C | 0.6 | 4.6 | 0.89 | 1.01 | 0.89 | 51.0 |
| All Vehicles | | 1537 | 38 | 1618 | 2.5 | 0.535 | 1.1 | NA | 0.6 | 4.6 | 0.03 | 0.06 | 0.03 | 77.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R2bam [Whitford-Trig_2024_AM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 14 | 10 | 15 | 71.4 | 0.049 | 19.1 | LOS C | 0.1 | 1.7 | 0.83 | 0.93 | 0.83 | 42.4 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.016 | 24.5 | LOS C | 0.1 | 0.6 | 0.91 | 0.89 | 0.91 | 45.2 |
| Approach | | 18 | 11 | 19 | 61.1 | 0.049 | 20.3 | LOS C | 0.1 | 1.7 | 0.85 | 0.92 | 0.85 | 43.0 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 4 | 2 | 4 | 50.0 | 0.003 | 7.7 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 51.7 |
| 25 | T1 | 1162 | 29 | 1223 | 2.5 | 0.641 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.1 |
| Approach | | 1166 | 31 | 1227 | 2.7 | 0.641 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.0 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 404 | 52 | 425 | 12.9 | 0.238 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 3 | 1 | 3 | 33.3 | 0.015 | 21.4 | LOS C | 0.0 | 0.4 | 0.85 | 0.94 | 0.85 | 45.6 |
| Approach | | 407 | 53 | 428 | 13.0 | 0.238 | 0.2 | NA | 0.0 | 0.4 | 0.01 | 0.01 | 0.01 | 79.4 |
| All Vehicles | | 1591 | 95 | 1675 | 6.0 | 0.641 | 0.5 | NA | 0.1 | 1.7 | 0.01 | 0.01 | 0.01 | 78.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R2bpm [Whitford_Trig_2024_PM_Build (Site Folder: 2024 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 26 | 11 | 27 | 42.3 | 0.027 | 10.1 | LOS B | 0.1 | 1.1 | 0.54 | 0.66 | 0.54 | 52.3 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.016 | 20.8 | LOS C | 0.1 | 0.6 | 0.89 | 0.86 | 0.89 | 48.3 |
| Approach | | 31 | 12 | 33 | 38.7 | 0.027 | 11.9 | LOS B | 0.1 | 1.1 | 0.59 | 0.70 | 0.59 | 51.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 5 | 1 | 5 | 20.0 | 0.003 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 59.2 |
| 25 | T1 | 494 | 26 | 520 | 5.3 | 0.277 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 499 | 27 | 525 | 5.4 | 0.277 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1043 | 19 | 1098 | 1.8 | 0.573 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.3 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.008 | 9.9 | LOS A | 0.0 | 0.2 | 0.51 | 0.67 | 0.51 | 57.3 |
| Approach | | 1049 | 20 | 1104 | 1.9 | 0.573 | 0.2 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.2 |
| All Vehicles | | 1579 | 59 | 1662 | 3.7 | 0.573 | 0.4 | NA | 0.1 | 1.1 | 0.01 | 0.02 | 0.01 | 78.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R16am [Whitford-Henson_2031_AM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1134 | 28 | 1194 | 2.5 | 0.616 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.3 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.005 | 7.7 | LOS A | 0.0 | 0.2 | 0.45 | 0.58 | 0.45 | 57.6 |
| Approach | | 1139 | 29 | 1199 | 2.5 | 0.616 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 64.3 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 9 | 1 | 9 | 11.1 | 0.008 | 8.1 | LOS A | 0.0 | 0.2 | 0.36 | 0.62 | 0.36 | 60.3 |
| 29 | R2 | 15 | 2 | 16 | 13.3 | 0.054 | 19.0 | LOS C | 0.2 | 1.4 | 0.86 | 0.95 | 0.86 | 50.7 |
| Approach | | 24 | 3 | 25 | 12.5 | 0.054 | 14.9 | LOS B | 0.2 | 1.4 | 0.67 | 0.82 | 0.67 | 53.9 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 3 | 1 | 3 | 33.3 | 0.205 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.5 |
| 31 | T1 | 365 | 42 | 384 | 11.5 | 0.205 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| Approach | | 368 | 43 | 387 | 11.7 | 0.205 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| All Vehicles | | 1531 | 75 | 1612 | 4.9 | 0.616 | 0.5 | NA | 0.2 | 1.4 | 0.01 | 0.02 | 0.01 | 64.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R16pm [Whitford-Henson_2031_PM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 456 | 20 | 480 | 4.4 | 0.252 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.9 |
| 26 | R2 | 20 | 1 | 21 | 5.0 | 0.042 | 12.5 | LOS B | 0.1 | 1.1 | 0.75 | 0.90 | 0.75 | 54.3 |
| Approach | | 476 | 21 | 501 | 4.4 | 0.252 | 0.6 | NA | 0.1 | 1.1 | 0.03 | 0.04 | 0.03 | 64.3 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 22 | 1 | 23 | 4.5 | 0.048 | 13.4 | LOS B | 0.2 | 1.1 | 0.74 | 0.90 | 0.74 | 57.4 |
| 29 | R2 | 5 | 1 | 5 | 20.0 | 0.023 | 23.6 | LOS C | 0.1 | 0.7 | 0.88 | 0.96 | 0.88 | 46.5 |
| Approach | | 27 | 2 | 28 | 7.4 | 0.048 | 15.3 | LOS C | 0.2 | 1.1 | 0.77 | 0.91 | 0.77 | 55.0 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 6 | 1 | 6 | 16.7 | 0.526 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.7 |
| 31 | T1 | 1000 | 13 | 1053 | 1.3 | 0.526 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| Approach | | 1006 | 14 | 1059 | 1.4 | 0.526 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| All Vehicles | | 1509 | 37 | 1588 | 2.5 | 0.526 | 0.6 | NA | 0.2 | 1.1 | 0.02 | 0.03 | 0.02 | 64.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R16am [Whitford-Clifton_2031_AM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 37 | 3 | 39 | 8.1 | 0.025 | 6.3 | LOS A | 0.1 | 0.7 | 0.02 | 0.61 | 0.02 | 65.2 |
| 2 | T1 | 361 | 42 | 380 | 11.6 | 0.211 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.9 |
| Approach | | 398 | 45 | 419 | 11.3 | 0.211 | 0.6 | LOS A | 0.1 | 0.7 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1145 | 28 | 1205 | 2.4 | 0.631 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.002 | 10.3 | LOS B | 0.0 | 0.1 | 0.47 | 0.60 | 0.47 | 59.0 |
| Approach | | 1147 | 29 | 1207 | 2.5 | 0.631 | 0.3 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 79.1 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 15.1 | LOS C | 0.0 | 0.1 | 0.62 | 0.67 | 0.62 | 49.9 |
| 29a | R1 | 53 | 2 | 56 | 3.8 | 0.124 | 19.9 | LOS C | 0.6 | 4.2 | 0.88 | 1.02 | 0.88 | 54.0 |
| Approach | | 55 | 3 | 58 | 5.5 | 0.124 | 19.7 | LOS C | 0.6 | 4.2 | 0.87 | 1.01 | 0.87 | 53.8 |
| All Vehicles | | 1600 | 77 | 1684 | 4.8 | 0.631 | 1.0 | NA | 0.6 | 4.2 | 0.03 | 0.05 | 0.03 | 77.6 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R16pm [Whitford-Clifton_2031_PM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 60 | 2 | 63 | 3.3 | 0.039 | 6.2 | LOS A | 0.2 | 1.2 | 0.02 | 0.61 | 0.02 | 65.6 |
| 2 | T1 | 1003 | 12 | 1056 | 1.2 | 0.548 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.4 |
| Approach | | 1063 | 14 | 1119 | 1.3 | 0.548 | 0.5 | LOS A | 0.2 | 1.2 | 0.00 | 0.03 | 0.00 | 78.5 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 455 | 19 | 479 | 4.2 | 0.254 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.006 | 18.5 | LOS C | 0.0 | 0.2 | 0.80 | 0.83 | 0.80 | 52.1 |
| Approach | | 457 | 20 | 481 | 4.4 | 0.254 | 0.1 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.6 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.005 | 21.9 | LOS C | 0.0 | 0.2 | 0.81 | 0.83 | 0.81 | 45.9 |
| 29a | R1 | 48 | 4 | 51 | 8.3 | 0.131 | 23.1 | LOS C | 0.7 | 4.9 | 0.90 | 1.02 | 0.90 | 50.7 |
| Approach | | 50 | 5 | 53 | 10.0 | 0.131 | 23.1 | LOS C | 0.7 | 4.9 | 0.89 | 1.01 | 0.89 | 50.5 |
| All Vehicles | | 1570 | 39 | 1653 | 2.5 | 0.548 | 1.1 | NA | 0.7 | 4.9 | 0.03 | 0.06 | 0.03 | 77.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R16am [Whitford-Trig_2031_AM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 15 | 11 | 16 | 73.3 | 0.057 | 20.3 | LOS C | 0.2 | 2.0 | 0.85 | 0.94 | 0.85 | 41.5 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.017 | 25.9 | LOS D | 0.1 | 0.6 | 0.92 | 0.91 | 0.92 | 44.5 |
| Approach | | 19 | 12 | 20 | 63.2 | 0.057 | 21.5 | LOS C | 0.2 | 2.0 | 0.86 | 0.93 | 0.86 | 42.1 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 4 | 2 | 4 | 50.0 | 0.003 | 7.7 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 51.7 |
| 25 | T1 | 1189 | 30 | 1252 | 2.5 | 0.656 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.1 |
| Approach | | 1193 | 32 | 1256 | 2.7 | 0.656 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.9 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 414 | 54 | 436 | 13.0 | 0.244 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 3 | 1 | 3 | 33.3 | 0.016 | 22.6 | LOS C | 0.0 | 0.4 | 0.86 | 0.95 | 0.86 | 45.0 |
| Approach | | 417 | 55 | 439 | 13.2 | 0.244 | 0.2 | NA | 0.0 | 0.4 | 0.01 | 0.01 | 0.01 | 79.4 |
| All Vehicles | | 1629 | 99 | 1715 | 6.1 | 0.656 | 0.5 | NA | 0.2 | 2.0 | 0.01 | 0.01 | 0.01 | 78.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R16pm [Whitford_Trig_2031_PM_Base (Site Folder: 2031 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 26 | 11 | 27 | 42.3 | 0.027 | 10.2 | LOS B | 0.1 | 1.1 | 0.54 | 0.67 | 0.54 | 52.3 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.017 | 21.8 | LOS C | 0.1 | 0.6 | 0.90 | 0.88 | 0.90 | 47.7 |
| Approach | | 31 | 12 | 33 | 38.7 | 0.027 | 12.1 | LOS B | 0.1 | 1.1 | 0.60 | 0.70 | 0.60 | 51.5 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 5 | 1 | 5 | 20.0 | 0.003 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 59.2 |
| 25 | T1 | 504 | 27 | 531 | 5.4 | 0.283 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 509 | 28 | 536 | 5.5 | 0.283 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1069 | 20 | 1125 | 1.9 | 0.587 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.3 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.009 | 10.0 | LOS A | 0.0 | 0.2 | 0.52 | 0.67 | 0.52 | 57.2 |
| Approach | | 1075 | 21 | 1132 | 2.0 | 0.587 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.1 |
| All Vehicles | | 1615 | 61 | 1700 | 3.8 | 0.587 | 0.4 | NA | 0.1 | 1.1 | 0.01 | 0.02 | 0.01 | 78.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R16am [Whitford-Henson_2031_AM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1304 | 27 | 1373 | 2.1 | 0.706 | 0.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.0 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.006 | 8.4 | LOS A | 0.0 | 0.2 | 0.52 | 0.62 | 0.52 | 57.1 |
| Approach | | 1309 | 28 | 1378 | 2.1 | 0.706 | 0.5 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 63.9 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 10 | 1 | 11 | 10.0 | 0.010 | 8.5 | LOS A | 0.0 | 0.2 | 0.41 | 0.65 | 0.41 | 60.4 |
| 29 | R2 | 17 | 2 | 18 | 11.8 | 0.100 | 26.9 | LOS D | 0.3 | 2.3 | 0.92 | 0.97 | 0.92 | 45.9 |
| Approach | | 27 | 3 | 28 | 11.1 | 0.100 | 20.1 | LOS C | 0.3 | 2.3 | 0.73 | 0.85 | 0.73 | 50.4 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 4 | 1 | 4 | 25.0 | 0.268 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.7 |
| 31 | T1 | 487 | 40 | 513 | 8.2 | 0.268 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| Approach | | 491 | 41 | 517 | 8.4 | 0.268 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| All Vehicles | | 1827 | 72 | 1923 | 3.9 | 0.706 | 0.7 | NA | 0.3 | 2.3 | 0.01 | 0.02 | 0.01 | 63.9 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R16pm [Whitford-Henson_2031_PM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 578 | 19 | 608 | 3.3 | 0.317 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| 26 | R2 | 19 | 1 | 20 | 5.3 | 0.053 | 13.7 | LOS B | 0.2 | 1.3 | 0.82 | 0.92 | 0.82 | 41.6 |
| Approach | | 597 | 20 | 628 | 3.4 | 0.317 | 0.5 | NA | 0.2 | 1.3 | 0.03 | 0.03 | 0.03 | 63.7 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 27 | 1 | 28 | 3.7 | 0.077 | 13.4 | LOS B | 0.2 | 1.7 | 0.81 | 0.91 | 0.81 | 41.9 |
| 29 | R2 | 7 | 1 | 7 | 14.3 | 0.047 | 28.7 | LOS D | 0.2 | 1.2 | 0.93 | 0.97 | 0.93 | 35.4 |
| Approach | | 34 | 2 | 36 | 5.9 | 0.077 | 16.6 | LOS C | 0.2 | 1.7 | 0.83 | 0.92 | 0.83 | 40.3 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 7 | 1 | 7 | 14.3 | 0.594 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.5 |
| 31 | T1 | 1131 | 12 | 1191 | 1.1 | 0.594 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.2 |
| Approach | | 1138 | 13 | 1198 | 1.1 | 0.594 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.2 |
| All Vehicles | | 1769 | 35 | 1862 | 2.0 | 0.594 | 0.7 | NA | 0.2 | 1.7 | 0.02 | 0.03 | 0.02 | 63.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R16am [Whitford-Clifton_2031_AM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 47 | 3 | 49 | 6.4 | 0.031 | 6.3 | LOS A | 0.1 | 0.9 | 0.02 | 0.61 | 0.02 | 65.4 |
| 2 | T1 | 471 | 40 | 496 | 8.5 | 0.270 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 518 | 43 | 545 | 8.3 | 0.270 | 0.6 | LOS A | 0.1 | 0.9 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1307 | 27 | 1376 | 2.1 | 0.719 | 0.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.003 | 11.0 | LOS B | 0.0 | 0.1 | 0.53 | 0.63 | 0.53 | 58.3 |
| Approach | | 1309 | 28 | 1378 | 2.1 | 0.719 | 0.4 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 78.7 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 16.1 | LOS C | 0.0 | 0.1 | 0.68 | 0.68 | 0.68 | 49.3 |
| 29a | R1 | 60 | 2 | 63 | 3.3 | 0.214 | 26.8 | LOS D | 0.9 | 6.7 | 0.93 | 1.02 | 0.97 | 49.1 |
| Approach | | 62 | 3 | 65 | 4.8 | 0.214 | 26.4 | LOS D | 0.9 | 6.7 | 0.93 | 1.01 | 0.96 | 49.1 |
| All Vehicles | | 1889 | 74 | 1988 | 3.9 | 0.719 | 1.3 | NA | 0.9 | 6.7 | 0.03 | 0.05 | 0.03 | 77.1 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R16pm [Whitford-Clifton_2031_PM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 74 | 2 | 78 | 2.7 | 0.048 | 6.2 | LOS A | 0.2 | 1.4 | 0.02 | 0.61 | 0.02 | 65.7 |
| 2 | T1 | 1118 | 12 | 1177 | 1.1 | 0.611 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.2 |
| Approach | | 1192 | 14 | 1255 | 1.2 | 0.611 | 0.6 | LOS A | 0.2 | 1.4 | 0.00 | 0.04 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 573 | 18 | 603 | 3.1 | 0.317 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.009 | 22.4 | LOS C | 0.0 | 0.3 | 0.86 | 0.90 | 0.86 | 49.4 |
| Approach | | 575 | 19 | 605 | 3.3 | 0.317 | 0.1 | NA | 0.0 | 0.3 | 0.00 | 0.00 | 0.00 | 79.6 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.007 | 25.3 | LOS D | 0.0 | 0.3 | 0.86 | 0.87 | 0.86 | 44.1 |
| 29a | R1 | 62 | 4 | 65 | 6.5 | 0.237 | 30.6 | LOS D | 1.1 | 8.5 | 0.94 | 1.02 | 1.00 | 46.3 |
| Approach | | 64 | 5 | 67 | 7.8 | 0.237 | 30.4 | LOS D | 1.1 | 8.5 | 0.94 | 1.02 | 0.99 | 46.2 |
| All Vehicles | | 1831 | 38 | 1927 | 2.1 | 0.611 | 1.5 | NA | 1.1 | 8.5 | 0.03 | 0.06 | 0.04 | 76.8 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R16am [Whitford-Trig_2031_AM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 17 | 10 | 18 | 58.8 | 0.089 | 24.6 | LOS C | 0.3 | 2.6 | 0.90 | 0.96 | 0.90 | 41.3 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.032 | 40.5 | LOS E | 0.1 | 1.0 | 0.96 | 0.98 | 0.96 | 37.7 |
| Approach | | 21 | 11 | 22 | 52.4 | 0.089 | 27.6 | LOS D | 0.3 | 2.6 | 0.91 | 0.96 | 0.91 | 40.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 4 | 2 | 4 | 50.0 | 0.003 | 7.7 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 51.7 |
| 25 | T1 | 1355 | 29 | 1426 | 2.1 | 0.745 | 0.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.6 |
| Approach | | 1359 | 31 | 1431 | 2.3 | 0.745 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 532 | 52 | 560 | 9.8 | 0.307 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 4 | 1 | 4 | 25.0 | 0.031 | 30.0 | LOS D | 0.1 | 0.7 | 0.91 | 0.97 | 0.91 | 42.3 |
| Approach | | 536 | 53 | 564 | 9.9 | 0.307 | 0.3 | NA | 0.1 | 0.7 | 0.01 | 0.01 | 0.01 | 79.2 |
| All Vehicles | | 1916 | 95 | 2017 | 5.0 | 0.745 | 0.7 | NA | 0.3 | 2.6 | 0.01 | 0.01 | 0.01 | 77.9 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R16pm [Whitford_Trig_2031_PM_Build (Site Folder: 2031 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 27 | 11 | 28 | 40.7 | 0.032 | 10.9 | LOS B | 0.1 | 1.3 | 0.59 | 0.72 | 0.59 | 52.2 |
| 23 | R2 | 6 | 1 | 6 | 16.7 | 0.029 | 28.2 | LOS D | 0.1 | 0.9 | 0.93 | 0.98 | 0.93 | 44.5 |
| Approach | | 33 | 12 | 35 | 36.4 | 0.032 | 14.1 | LOS B | 0.1 | 1.3 | 0.65 | 0.77 | 0.65 | 50.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 6 | 1 | 6 | 16.7 | 0.004 | 7.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 60.1 |
| 25 | T1 | 615 | 26 | 647 | 4.2 | 0.343 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.7 |
| Approach | | 621 | 27 | 654 | 4.3 | 0.343 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1195 | 19 | 1258 | 1.6 | 0.655 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.1 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.010 | 11.0 | LOS B | 0.0 | 0.3 | 0.56 | 0.72 | 0.56 | 56.3 |
| Approach | | 1201 | 20 | 1264 | 1.7 | 0.655 | 0.3 | NA | 0.0 | 0.3 | 0.00 | 0.00 | 0.00 | 78.9 |
| All Vehicles | | 1855 | 59 | 1953 | 3.2 | 0.655 | 0.5 | NA | 0.1 | 1.3 | 0.01 | 0.02 | 0.01 | 78.3 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R17fam [Whitford-Henson_2038_AM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1161 | 29 | 1222 | 2.5 | 0.630 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.3 |
| 26 | R2 | 5 | 1 | 5 | 20.0 | 0.005 | 7.8 | LOS A | 0.0 | 0.2 | 0.46 | 0.58 | 0.46 | 57.5 |
| Approach | | 1166 | 30 | 1227 | 2.6 | 0.630 | 0.4 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 64.2 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 9 | 1 | 9 | 11.1 | 0.008 | 8.1 | LOS A | 0.0 | 0.2 | 0.36 | 0.62 | 0.36 | 60.3 |
| 29 | R2 | 15 | 2 | 16 | 13.3 | 0.058 | 19.9 | LOS C | 0.2 | 1.4 | 0.87 | 0.95 | 0.87 | 50.1 |
| Approach | | 24 | 3 | 25 | 12.5 | 0.058 | 15.5 | LOS C | 0.2 | 1.4 | 0.68 | 0.83 | 0.68 | 53.5 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 3 | 1 | 3 | 33.3 | 0.210 | 6.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.5 |
| 31 | T1 | 373 | 43 | 393 | 11.5 | 0.210 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| Approach | | 376 | 44 | 396 | 11.7 | 0.210 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| All Vehicles | | 1566 | 77 | 1648 | 4.9 | 0.630 | 0.5 | NA | 0.2 | 1.4 | 0.01 | 0.02 | 0.01 | 64.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R17fpm [Whitford-Henson_2038_PM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 466 | 20 | 491 | 4.3 | 0.257 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.8 |
| 26 | R2 | 20 | 1 | 21 | 5.0 | 0.044 | 12.9 | LOS B | 0.2 | 1.1 | 0.76 | 0.91 | 0.76 | 54.0 |
| Approach | | 486 | 21 | 512 | 4.3 | 0.257 | 0.6 | NA | 0.2 | 1.1 | 0.03 | 0.04 | 0.03 | 64.3 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 22 | 1 | 23 | 4.5 | 0.051 | 13.7 | LOS B | 0.2 | 1.2 | 0.75 | 0.91 | 0.75 | 57.1 |
| 29 | R2 | 5 | 1 | 5 | 20.0 | 0.025 | 24.6 | LOS C | 0.1 | 0.7 | 0.89 | 0.96 | 0.89 | 45.9 |
| Approach | | 27 | 2 | 28 | 7.4 | 0.051 | 15.8 | LOS C | 0.2 | 1.2 | 0.78 | 0.92 | 0.78 | 54.6 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 6 | 1 | 6 | 16.7 | 0.538 | 6.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.7 |
| 31 | T1 | 1022 | 13 | 1076 | 1.3 | 0.538 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| Approach | | 1028 | 14 | 1082 | 1.4 | 0.538 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.5 |
| All Vehicles | | 1541 | 37 | 1622 | 2.4 | 0.538 | 0.6 | NA | 0.2 | 1.2 | 0.02 | 0.03 | 0.02 | 64.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R17fam [Whitford-Clifton_2038_AM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 38 | 3 | 40 | 7.9 | 0.025 | 6.3 | LOS A | 0.1 | 0.8 | 0.02 | 0.61 | 0.02 | 65.3 |
| 2 | T1 | 369 | 43 | 388 | 11.7 | 0.215 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.9 |
| Approach | | 407 | 46 | 428 | 11.3 | 0.215 | 0.6 | LOS A | 0.1 | 0.8 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1171 | 29 | 1233 | 2.5 | 0.646 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.1 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.002 | 10.3 | LOS B | 0.0 | 0.1 | 0.48 | 0.60 | 0.48 | 59.0 |
| Approach | | 1173 | 30 | 1235 | 2.6 | 0.646 | 0.3 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 79.1 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.002 | 15.1 | LOS C | 0.0 | 0.1 | 0.62 | 0.67 | 0.62 | 49.8 |
| 29a | R1 | 54 | 2 | 57 | 3.7 | 0.133 | 20.5 | LOS C | 0.6 | 4.4 | 0.89 | 1.02 | 0.89 | 53.5 |
| Approach | | 56 | 3 | 59 | 5.4 | 0.133 | 20.3 | LOS C | 0.6 | 4.4 | 0.88 | 1.00 | 0.88 | 53.3 |
| All Vehicles | | 1636 | 79 | 1722 | 4.8 | 0.646 | 1.0 | NA | 0.6 | 4.4 | 0.03 | 0.05 | 0.03 | 77.6 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R17fpm [Whitford-Clifton_2038_PM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 61 | 2 | 64 | 3.3 | 0.040 | 6.2 | LOS A | 0.2 | 1.2 | 0.02 | 0.61 | 0.02 | 65.6 |
| 2 | T1 | 1025 | 12 | 1079 | 1.2 | 0.560 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.4 |
| Approach | | 1086 | 14 | 1143 | 1.3 | 0.560 | 0.5 | LOS A | 0.2 | 1.2 | 0.00 | 0.03 | 0.00 | 78.5 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 466 | 20 | 491 | 4.3 | 0.260 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.007 | 19.2 | LOS C | 0.0 | 0.2 | 0.82 | 0.84 | 0.82 | 51.6 |
| Approach | | 468 | 21 | 493 | 4.5 | 0.260 | 0.1 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.6 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.005 | 22.5 | LOS C | 0.0 | 0.2 | 0.82 | 0.84 | 0.82 | 45.6 |
| 29a | R1 | 49 | 4 | 52 | 8.2 | 0.141 | 23.9 | LOS C | 0.7 | 5.2 | 0.90 | 1.02 | 0.90 | 50.3 |
| Approach | | 51 | 5 | 54 | 9.8 | 0.141 | 23.8 | LOS C | 0.7 | 5.2 | 0.90 | 1.01 | 0.90 | 50.0 |
| All Vehicles | | 1605 | 40 | 1689 | 2.5 | 0.560 | 1.1 | NA | 0.7 | 5.2 | 0.03 | 0.06 | 0.03 | 77.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R17fam [Whitford-Trig_2038_AM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 15 | 11 | 16 | 73.3 | 0.062 | 21.3 | LOS C | 0.2 | 2.1 | 0.86 | 0.94 | 0.86 | 41.1 |
| 23 | R2 | 4 | 1 | 4 | 25.0 | 0.019 | 27.4 | LOS D | 0.1 | 0.6 | 0.92 | 0.93 | 0.92 | 43.6 |
| Approach | | 19 | 12 | 20 | 63.2 | 0.062 | 22.6 | LOS C | 0.2 | 2.1 | 0.88 | 0.94 | 0.88 | 41.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 4 | 2 | 4 | 50.0 | 0.003 | 7.7 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 51.7 |
| 25 | T1 | 1216 | 31 | 1280 | 2.5 | 0.671 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.0 |
| Approach | | 1220 | 33 | 1284 | 2.7 | 0.671 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.9 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 424 | 56 | 446 | 13.2 | 0.250 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| 32 | R2 | 3 | 1 | 3 | 33.3 | 0.017 | 23.9 | LOS C | 0.0 | 0.4 | 0.87 | 0.95 | 0.87 | 44.3 |
| Approach | | 427 | 57 | 449 | 13.3 | 0.250 | 0.2 | NA | 0.0 | 0.4 | 0.01 | 0.01 | 0.01 | 79.4 |
| All Vehicles | | 1666 | 102 | 1754 | 6.1 | 0.671 | 0.5 | NA | 0.2 | 2.1 | 0.01 | 0.01 | 0.01 | 78.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R17fpm [Whitford_Trig_2038_PM_Base (Site Folder: 2038 - Base)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 28 | 12 | 29 | 42.9 | 0.030 | 10.3 | LOS B | 0.1 | 1.2 | 0.55 | 0.68 | 0.55 | 52.1 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.018 | 22.8 | LOS C | 0.1 | 0.6 | 0.90 | 0.89 | 0.90 | 47.1 |
| Approach | | 33 | 13 | 35 | 39.4 | 0.030 | 12.2 | LOS B | 0.1 | 1.2 | 0.60 | 0.71 | 0.60 | 51.3 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 5 | 1 | 5 | 20.0 | 0.003 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 59.2 |
| 25 | T1 | 516 | 28 | 543 | 5.4 | 0.290 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.8 |
| Approach | | 521 | 29 | 548 | 5.6 | 0.290 | 0.1 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.5 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1093 | 20 | 1151 | 1.8 | 0.600 | 0.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.3 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.009 | 10.1 | LOS B | 0.0 | 0.2 | 0.52 | 0.68 | 0.52 | 57.1 |
| Approach | | 1099 | 21 | 1157 | 1.9 | 0.600 | 0.3 | NA | 0.0 | 0.2 | 0.00 | 0.00 | 0.00 | 79.1 |
| All Vehicles | | 1653 | 63 | 1740 | 3.8 | 0.600 | 0.5 | NA | 0.1 | 1.2 | 0.01 | 0.02 | 0.01 | 78.4 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R17fam [Whitford-Henson_2038_AM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 1585 | 28 | 1668 | 1.8 | 0.857 | 1.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 62.6 |
| 26 | R2 | 6 | 1 | 6 | 16.7 | 0.008 | 9.6 | LOS A | 0.0 | 0.3 | 0.59 | 0.69 | 0.59 | 56.2 |
| Approach | | 1591 | 29 | 1675 | 1.8 | 0.857 | 1.1 | NA | 0.0 | 0.3 | 0.00 | 0.00 | 0.00 | 62.5 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 11 | 1 | 12 | 9.1 | 0.013 | 9.3 | LOS A | 0.0 | 0.3 | 0.49 | 0.71 | 0.49 | 60.1 |
| 29 | R2 | 20 | 2 | 21 | 10.0 | 0.338 | 76.7 | LOS F | 0.9 | 7.2 | 0.98 | 1.01 | 1.06 | 28.4 |
| Approach | | 31 | 3 | 33 | 9.7 | 0.338 | 52.8 | LOS F | 0.9 | 7.2 | 0.81 | 0.90 | 0.86 | 34.9 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 5 | 1 | 5 | 20.0 | 0.365 | 6.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.8 |
| 31 | T1 | 672 | 41 | 707 | 6.1 | 0.365 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.7 |
| Approach | | 677 | 42 | 713 | 6.2 | 0.365 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.7 |
| All Vehicles | | 2299 | 74 | 2420 | 3.2 | 0.857 | 1.5 | NA | 0.9 | 7.2 | 0.01 | 0.02 | 0.01 | 62.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 8_R17fpm [Whitford-Henson_2038_PM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NorthEast: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 25 | T1 | 792 | 20 | 834 | 2.5 | 0.433 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 64.7 |
| 26 | R2 | 20 | 1 | 21 | 5.0 | 0.120 | 24.7 | LOS C | 0.4 | 2.6 | 0.92 | 0.96 | 0.92 | 36.9 |
| Approach | | 812 | 21 | 855 | 2.6 | 0.433 | 0.8 | NA | 0.4 | 2.6 | 0.02 | 0.02 | 0.02 | 63.5 |
| NorthWest: Henson Road | | | | | | | | | | | | | | |
| 27 | L2 | 37 | 1 | 39 | 2.7 | 0.216 | 24.8 | LOS C | 0.6 | 4.5 | 0.92 | 0.98 | 0.98 | 37.0 |
| 29 | R2 | 9 | 1 | 9 | 11.1 | 0.158 | 66.9 | LOS F | 0.5 | 3.5 | 0.98 | 0.99 | 0.99 | 25.8 |
| Approach | | 46 | 2 | 48 | 4.3 | 0.216 | 33.1 | LOS D | 0.6 | 4.5 | 0.93 | 0.98 | 0.98 | 34.1 |
| SouthWest: Whitford Maraetai Road | | | | | | | | | | | | | | |
| 30 | L2 | 9 | 1 | 9 | 11.1 | 0.726 | 6.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 61.2 |
| 31 | T1 | 1383 | 13 | 1456 | 0.9 | 0.726 | 0.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 63.7 |
| Approach | | 1392 | 14 | 1465 | 1.0 | 0.726 | 0.5 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 63.7 |
| All Vehicles | | 2250 | 37 | 2368 | 1.6 | 0.726 | 1.3 | NA | 0.6 | 4.5 | 0.03 | 0.03 | 0.03 | 62.5 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R17fam [Whitford-Clifton_2038_AM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 64 | 3 | 67 | 4.7 | 0.042 | 6.3 | LOS A | 0.2 | 1.3 | 0.02 | 0.61 | 0.02 | 65.5 |
| 2 | T1 | 642 | 42 | 676 | 6.5 | 0.363 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.7 |
| Approach | | 706 | 45 | 743 | 6.4 | 0.363 | 0.6 | LOS A | 0.2 | 1.3 | 0.00 | 0.06 | 0.00 | 78.2 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 1583 | 28 | 1666 | 1.8 | 0.869 | 0.9 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 77.0 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.003 | 12.6 | LOS B | 0.0 | 0.1 | 0.61 | 0.68 | 0.61 | 56.9 |
| Approach | | 1585 | 29 | 1668 | 1.8 | 0.869 | 0.9 | NA | 0.0 | 0.1 | 0.00 | 0.00 | 0.00 | 76.9 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 2 | 1 | 2 | 50.0 | 0.003 | 18.3 | LOS C | 0.0 | 0.2 | 0.75 | 0.72 | 0.75 | 47.9 |
| 29a | R1 | 72 | 2 | 76 | 2.8 | 0.652 | 87.3 | LOS F | 2.8 | 19.9 | 0.99 | 1.07 | 1.35 | 27.1 |
| Approach | | 74 | 3 | 78 | 4.1 | 0.652 | 85.4 | LOS F | 2.8 | 19.9 | 0.98 | 1.06 | 1.34 | 27.4 |
| All Vehicles | | 2365 | 77 | 2489 | 3.3 | 0.869 | 3.5 | NA | 2.8 | 19.9 | 0.03 | 0.05 | 0.04 | 73.1 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 9_R17fpm [Whitford-Clifton_2038_PM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Stop (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 1a | L1 | 96 | 2 | 101 | 2.1 | 0.063 | 6.2 | LOS A | 0.3 | 1.9 | 0.02 | 0.61 | 0.02 | 65.7 |
| 2 | T1 | 1349 | 12 | 1420 | 0.9 | 0.736 | 0.4 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.7 |
| Approach | | 1445 | 14 | 1521 | 1.0 | 0.736 | 0.8 | LOS A | 0.3 | 1.9 | 0.00 | 0.04 | 0.00 | 77.7 |
| North: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 8 | T1 | 783 | 20 | 824 | 2.6 | 0.432 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.6 |
| 9b | R3 | 2 | 1 | 2 | 50.0 | 0.019 | 38.6 | LOS E | 0.1 | 0.5 | 0.94 | 0.98 | 0.94 | 40.5 |
| Approach | | 785 | 21 | 826 | 2.7 | 0.432 | 0.2 | NA | 0.1 | 0.5 | 0.00 | 0.00 | 0.00 | 79.4 |
| NorthWest: Clifton Road | | | | | | | | | | | | | | |
| 27b | L3 | 5 | 1 | 5 | 20.0 | 0.022 | 27.7 | LOS D | 0.1 | 0.6 | 0.91 | 1.00 | 0.91 | 47.0 |
| 29a | R1 | 86 | 4 | 91 | 4.7 | 0.725 | 103.2 | LOS F | 3.8 | 27.4 | 0.99 | 1.11 | 1.52 | 24.1 |
| Approach | | 91 | 5 | 96 | 5.5 | 0.725 | 99.0 | LOS F | 3.8 | 27.4 | 0.99 | 1.11 | 1.49 | 24.8 |
| All Vehicles | | 2321 | 40 | 2443 | 1.7 | 0.736 | 4.4 | NA | 3.8 | 27.4 | 0.04 | 0.07 | 0.06 | 72.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R17fam [Whitford-Trig_2038_AM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 21 | 10 | 22 | 47.6 | 0.342 | 69.4 | LOS F | 0.9 | 8.7 | 0.98 | 1.01 | 1.06 | 28.1 |
| 23 | R2 | 5 | 1 | 5 | 20.0 | 0.137 | 111.9 | LOS F | 0.4 | 3.6 | 0.99 | 1.00 | 0.99 | 21.9 |
| Approach | | 26 | 11 | 27 | 42.3 | 0.342 | 77.6 | LOS F | 0.9 | 8.7 | 0.98 | 1.01 | 1.05 | 26.7 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 6 | 2 | 6 | 33.3 | 0.004 | 7.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 55.6 |
| 25 | T1 | 1638 | 30 | 1724 | 1.8 | 0.899 | 1.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 76.0 |
| Approach | | 1644 | 32 | 1731 | 1.9 | 0.899 | 1.2 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 75.9 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 717 | 53 | 755 | 7.4 | 0.408 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.7 |
| 32 | R2 | 6 | 1 | 6 | 16.7 | 0.141 | 75.6 | LOS F | 0.3 | 2.7 | 0.98 | 0.99 | 0.98 | 28.2 |
| Approach | | 723 | 54 | 761 | 7.5 | 0.408 | 0.7 | NA | 0.3 | 2.7 | 0.01 | 0.01 | 0.01 | 78.5 |
| All Vehicles | | 2393 | 97 | 2519 | 4.1 | 0.899 | 1.9 | NA | 0.9 | 8.7 | 0.01 | 0.01 | 0.01 | 75.2 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 10_R17fpm [Whitford_Trig_2038_PM_Build (Site Folder: 2038 - Buildout)]

New Site
Site Category: (None)
Give-Way (Two-Way)

**Vehicle Movement Performance**

| Mov ID | Turn | INPUT VOLUMES [ Total veh/h | HV ] veh/h | DEMAND FLOWS [ Total veh/h | HV ] % | Deg. Satn v/c | Aver. Delay sec | Level of Service | 95% BACK OF QUEUE [ Veh. veh | Dist ] m | Prop. Que | Effective Stop Rate | Aver. No. Cycles | Aver. Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SouthEast: Trig Road | | | | | | | | | | | | | | |
| 21 | L2 | 30 | 11 | 32 | 36.7 | 0.048 | 12.6 | LOS B | 0.2 | 1.7 | 0.67 | 0.83 | 0.67 | 51.7 |
| 23 | R2 | 7 | 1 | 7 | 14.3 | 0.090 | 59.2 | LOS F | 0.3 | 2.4 | 0.98 | 0.99 | 0.98 | 32.5 |
| Approach | | 37 | 12 | 39 | 32.4 | 0.090 | 21.4 | LOS C | 0.3 | 2.4 | 0.73 | 0.86 | 0.73 | 46.6 |
| NorthEast: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 24 | L2 | 7 | 1 | 7 | 14.3 | 0.004 | 7.2 | LOS A | 0.0 | 0.0 | 0.00 | 0.63 | 0.00 | 60.8 |
| 25 | T1 | 821 | 27 | 864 | 3.3 | 0.455 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 79.6 |
| Approach | | 828 | 28 | 872 | 3.4 | 0.455 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 79.4 |
| SouthWest: Whitford-Maraetai Road | | | | | | | | | | | | | | |
| 31 | T1 | 1447 | 19 | 1523 | 1.3 | 0.792 | 0.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 78.2 |
| 32 | R2 | 7 | 1 | 7 | 14.3 | 0.016 | 13.5 | LOS B | 0.1 | 0.4 | 0.69 | 0.82 | 0.69 | 54.8 |
| Approach | | 1454 | 20 | 1531 | 1.4 | 0.792 | 0.6 | NA | 0.1 | 0.4 | 0.00 | 0.00 | 0.00 | 78.0 |
| All Vehicles | | 2319 | 60 | 2441 | 2.6 | 0.792 | 0.8 | NA | 0.3 | 2.4 | 0.01 | 0.02 | 0.01 | 77.7 |

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.