



PINNACLE
CONSULTING ENGINEERS

PROPOSED RESIDENTIAL DEVELOPMENT AT MILL LANE, LEIXLIP.

PIN-RP-00-C001-V1

TRAFFIC AND TRANSPORT ASSESSMENT

- BUILDING INFORMATION MODELLING (BIM)
- CIVIL DESIGN & ENGINEERING
- DUE DILIGENCE
- OFFSHORE & ONSHORE ENGINEERING
- PRE-DEVELOPMENT
- STRUCTURAL ENGINEERING
- TRANSPORTATION & HIGHWAYS

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Traffic and Transport Assessment

Version No – 2

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1 INTRODUCTION

1.1 Introduction

This Traffic and Transport Assessment has been prepared by Pinnacle Consulting Engineers in support of a planning application to Kildare County Council.

The development will consist of the demolition of the former ESB premises building and its associated shed at the back and the construction of 36 No. apartments.

A new, mixed-use building is proposed on the Southern Site boundary with a frontage to the Main Street. This building will contain a Community Centre to the front and an apartment to the back.

At the back of the site, the remainder of the apartments will be arranged in 3 blocks enclosing a landscaped communal garden which will incorporate picnic seating areas, bench seating and timber pergolas. The central open space will be equipped with amenity grass, bulb, shrub and feature tree planting.

On the North-Eastern corner, an allotment garden with raised beds, seating and storage for tools and equipment will be provided.

A gravity wastewater drainage system will be provided to collect domestic wastewater discharge from the proposed residential units and community centre. This will be routed to the existing public wastewater network.

Surface Water Drainage will be resolved with an underground piped stormwater network which will collect runoff from the building gutters and downpipes. Roadways and parking areas shall comprise of open concrete lined channels, kerb inlets and grid inlets all discharging into an underground piped network. Sedimentation structures (silt traps) will also be included, especially around the gravel areas within the external landscaped area.

The site is bound to the north by undeveloped lands, to the east by residential units, to the south by Mill Lane and to the west by commercial units.

Access to the proposed development will be through an existing access of Mill Lane.

The site location is shown in Figure 1.

In order to complete this report, Pinnacle Engineering Consultants has referred to the following documents:

- The Traffic Management Guidelines.
- Guidance on Transport Assessment.
- Design Manual for Urban Road and Streets (2019).
- Kildare County Development Plan 2017-2023.
- GDA Cycle Network Plan - National Transport Authority; and
- Celbridge Local Area Plan 2017 – 2023.

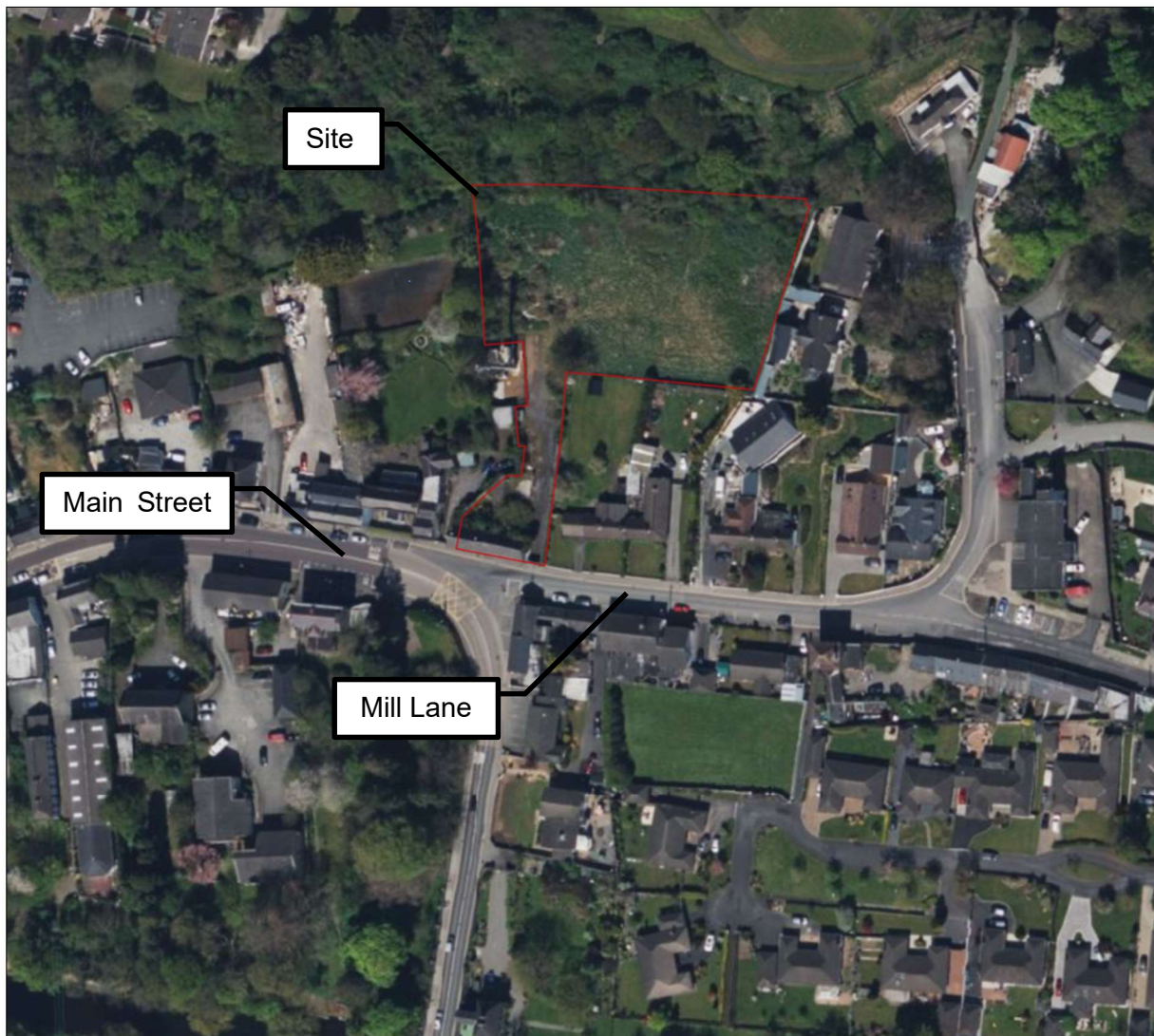


Figure 1: Site Location (Source: Google Maps)

For exact planning boundary refer to Architect's drawings.

1.2 Objectives

The main objective of this report is to examine the traffic impact of the proposed development and its access arrangements on the local area road network. The net change in traffic on the network due to the proposed development has been calculated and its impact on the local area road network has been determined.

1.3 Study Methodology

The methodology adopted for this report can be summarised as follows:

Existing Traffic Flow Assessment: - Baseline traffic counts were undertaken in May 2023.

Existing Transport Infrastructure: - Pinnacle Engineering Consultants collected information on public transport, walking and cycling in the area of the proposed development.

Development Proposals: - Description of proposed development, including proposed improvements to the road access to the site and a review of parking and servicing provisions, and facilities for pedestrians and cyclists.

Development Trip Generation Figures: - Based on the schedule of accommodation of the proposed development, Pinnacle Engineering Consultants derived trip rate data and developed development traffic flows, which were assigned to the existing network having regard for traffic patterns on Main Street, Mill Lane and the surrounding network.

Assessment of Junction Capacity: - The operation of key junction(s), with and without the proposed development, was undertaken, to determine future operation and any requirements for mitigation measures.

1.4 Structure of Report

The remainder of this report is divided into the following sections:

- Section 2 considers the location of the site and existing traffic flows.
- Section 3 discusses the proposed development.
- Section 4 considers the traffic generation.
- Section 5 considers the potential impacts of the development and an analysis of capacity of key junctions, including proposed mitigation measures.
- Section 6 provides a summary and conclusion.

2 Existing Traffic Conditions

2.1 Existing Conditions

The subject site is an infill site located at the junction of Mill Lane and Main Street, Leixlip.

The site is bound to the north by undeveloped lands, to the east by residential units, the south by Mill Lane and to the west by commercial units.



Figure 2 Site Location and Local Road Network

2.2 Existing Road Network

A summary of the existing road network is provided below:

The road network surrounding the site and the wider landholding provides a variety of movement functions. Main Street provides access to Leixlip town. Mill Lane provides local access to residential units, a hotel and fire station.

The road network surrounding the site provides a variety of local movement such as access to local amenities, shopping, schools and further afield via the M4/N4.

These routes provide for pedestrians, cyclists and motorists alike and a general commentary on these facilities is presented below:

Main Street

Main Street measures c. 12.2 m wide adjacent to the proposed development including a bank of parallel car parking spaces. Footpaths between 2.00m and 4.10m are located on both sides of Main Street.

There are no cycle facilities located on Main Street.

Both in bound and outbound bus stops are located on Main Street. Further details of these bus stops are included in Section 2.4.1 of this report.

A posted speed limit of 50km/h is noted on approach to the proposed development.

Mill Lane

Mill Lane forms a priority-controlled junction with Main Street at the existing access to the development site. Mill Lane measures c. 7.72 m wide adjacent to the proposed development including a bank of parallel car parking spaces located on the southern side of the carriageway. Footpaths between 1.80m and 2.1m are located on both sides of Main Street.

There are no cycle facilities located on Mill Lane.

It is assumed that a speed limit of 50km/h applies on approach to the proposed development.

2.3 Traffic Counts

To quantify the volumes of traffic movements at key points on the road network adjacent to the site, a set of classified turning movement traffic counts were commissioned.

Accordingly, classified counts were carried out between the hours of 07.00-10.00 and 16.00-19.00 on the 25th of May 2023 at the following locations:

- Site 1 – Main Street/Mill Lane

The surveys were carried out on the dates identified above to ensure that flows were representative of normal term time and hence not affected by school holidays or other public holidays or events.

As such they provide an appropriate and robust representation of a neutral month during a period of normal school and employment activity. The surveys are designed to provide representative values encompassing AM and PM peak periods during normal traffic conditions and where not affected by Covid 19 lockdowns.

The locations of the surveys are each pertinent to the proposal in terms of being at key nodes in the road network that would be affected by traffic assignment and distribution of flows associated with the development site.

The location of the survey points is depicted below at Figure 3.

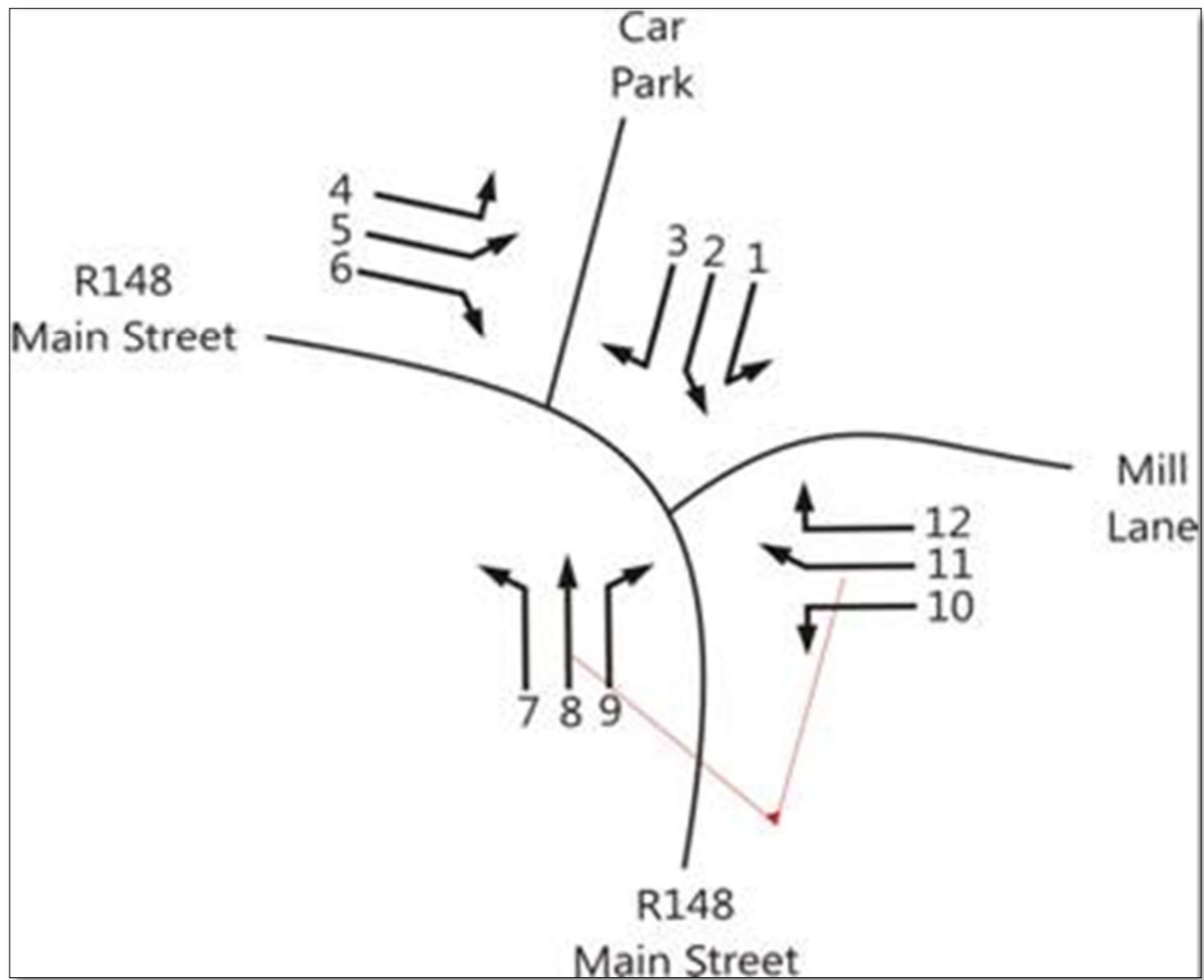


Figure 3 Survey Location

2.4 Public Transport

2.4.1 Bus

Bus transport within the vicinity of the proposed development is illustrated in Figure 4.



Figure 4 Bus Stop Locations (Source: TFI Transport Planner)

There are numerous bus operators providing a bus service locally and within walking distance to the site, with further details shown in Table 1 below.

No.	Route	Service		Mon-Fri	Sat	Sun
C3	Straffan Road - Ringsend	Straffan Road	First	05:32	05:38	05:38
			Last	04:36	04:35	04:36
		Ringsend	First	05:34	05:20	05:36
			Last	23:35	23:35	23:36
		Frequency		Up to 38 services / day	Up to 36 services / day	Up to 34 services / day
L54			First	06:07	06:07	08:07

	River Forest - Red Cow Luas	River Forest	Last	23:37	23:37	23:37
		Red Cow Luas	First	05:52	06:07	08:07
			Last	23:07	23:37	23:37
		Frequency		Up to 28services / day	Up to 32 services / day	Up to 28 services / day
52	Intel - Ringsend Road	Intel	First	08:30	06:30	08:30
			Last	23:30	23:30	23:30
		Ringsend Road	First	04:55	06:05	08:05
			Last	22:50	22:50	22:50
		Frequency		Up to 15services / day	Up to 18 services / day	Up to 16services / day

Table 1 Local Bus Services

The nearest bus stop is located on Main Street, c. 150m from the proposed development access.

2.4.2 Train

The subject site is located c. 1.3km (18-minute walk/7min cycle time) from Confey Train Station on the Dublin Western Commuter Line which operates services between Ashtown, Leixlip, Maynooth, Kilcock, Sligo etc.

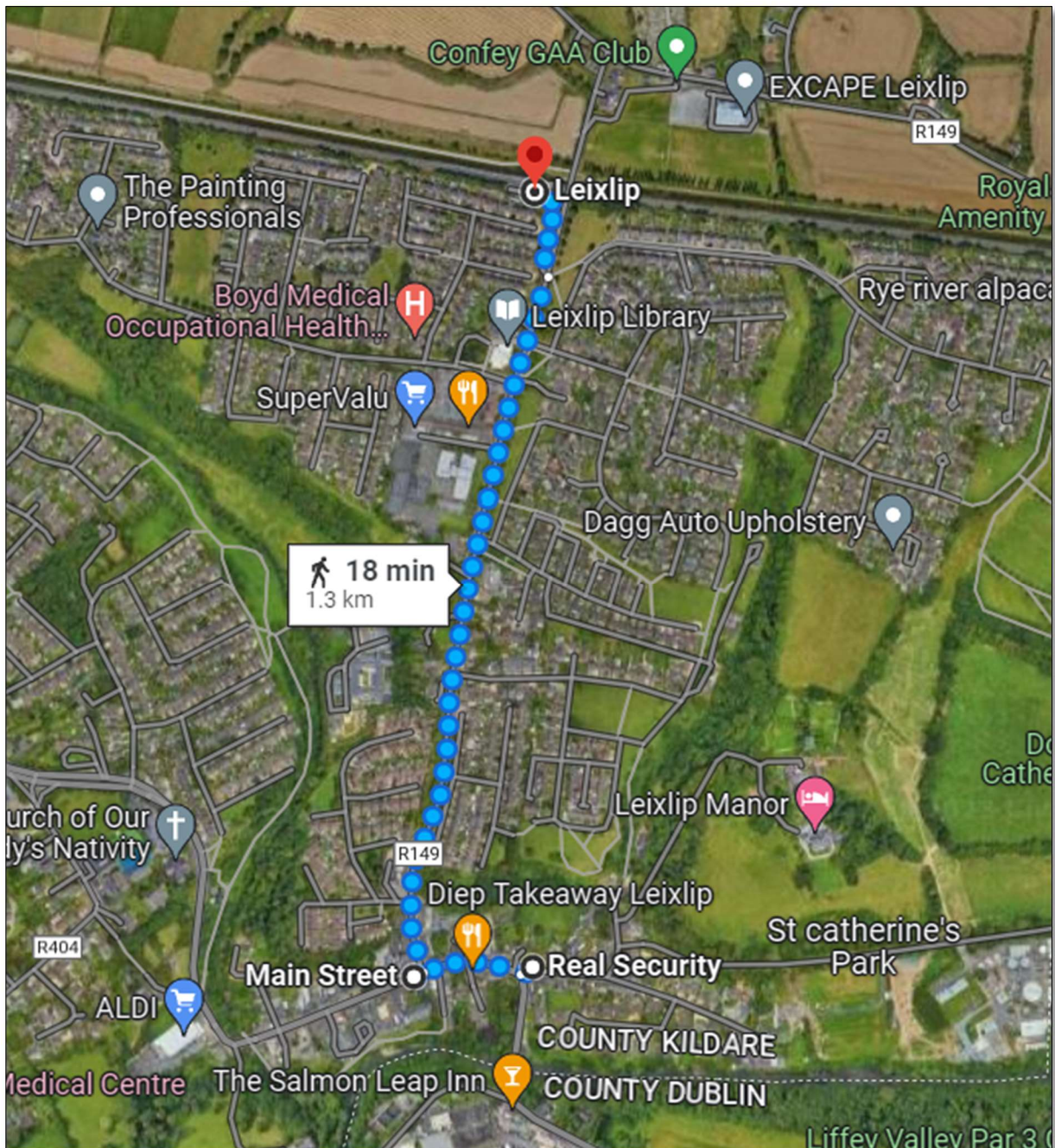


Figure 5 Walk Route to Louisa Bridge Train Station

There is interconnectivity between commuter rail and Luas services.

There are up to 32 services stopping at Louisa Bridge Train station. The commuter rail services stopping at Louisa Bridge provides access to Dublin City and interconnectivity with the Luas Green Line and Red Lines. Luas Green Line, at Broombridge Station, which operates services between Bridges Glen and Boombridge/Parnell. Sandyford Luas Stop acts as a terminus with a secondary terminus located at Bridges Glen

At peak times there are services every 3-7 minutes on the Green Line to/from Dublin centre. The other branches of the Green Line have services every 6-14 minutes.

The Red Line runs in an east-west direction through the city centre, north of the River Liffey, before travelling southwest to Tallaght, with a fork to Citywest and Saggart. At peak times there are services every 3-7 minutes on the Red Line from the City Centre to Tallaght. The other branches of the Red Line have services every 6-14 minutes.

The opening of Luas Cross City allows for transfer to the Luas Green Line allowing connectivity between Brides Glenn and Tallaght, Busaras, Hueston Train Station, Connolly Train Station and the Point via Dublin City centre.

The interconnectivity between the Luas and Dublin Bus services has improved immensely through the introduction of the Leap travel card. The Leap Card allows commuters to use all public transport modes such as Dublin Bus, Luas, DART and commuter rail services around Dublin through one single card without having to plan your journey or buy a specific ticket in advance. This flexibility will greatly enhance public transport usage at the site.

2.5 Walking and Cycling

The Oldcourt Road Main Link Street has various levels of cycle facilities along its alignment. These include off road cycle facilities. The Oldcourt Road Main Link Street has dedicated cycle facilities along this entirety.

Proposed pedestrian infrastructure in the area includes footpaths on all of the main link roads in the surrounding area. Drop kerbs are provided to facilitate people with mobility and visual impairments.

The site is well located to provide non-car access for residents and visitors of the proposed development with local access to retail, education, leisure, and public transport amenities. Public transport connections are within reasonable walking distance for commuter related trips.

3 PROPOSED DEVELOPMENT

3.1 Introduction

The development will consist of the demolition of the former ESB premises building and its associated shed at the back and the construction of 36 No. apartments.

A new, mixed-use building is proposed on the Southern Site boundary with a frontage to the Main Street. This building will contain a Community Centre to the front and an apartment to the back.

At the back of the site, the remainder of the apartments will be arranged in 3 blocks enclosing a landscaped communal garden which will incorporate picnic seating areas, bench seating and timber pergolas. The central open space will be equipped with amenity grass, bulb, shrub and feature tree planting.

On the North-Eastern corner, an allotment garden with raised beds, seating and storage for tools and equipment will be provided.

A gravity wastewater drainage system will be provided to collect domestic wastewater discharge from the proposed residential units and community centre. This will be routed to the existing public wastewater network.

Surface Water Drainage will be resolved with an underground piped stormwater network which will collect runoff from the building gutters and downpipes. Roadways and parking areas shall comprise of open concrete lined channels, kerb inlets and grid inlets all discharging into an underground piped network. Sedimentation structures (silt traps) will also be included, especially around the gravel areas within the external landscaped area.

It is proposed to develop this site based on the schedule of accommodation illustrated in the table below.

Proposed Land Uses	
Units	Size
1 – Bed	34
2 – Bed	2
Total	36

Table 2 Proposed Land Uses

The proposed layout is illustrated in Figure 6 below.

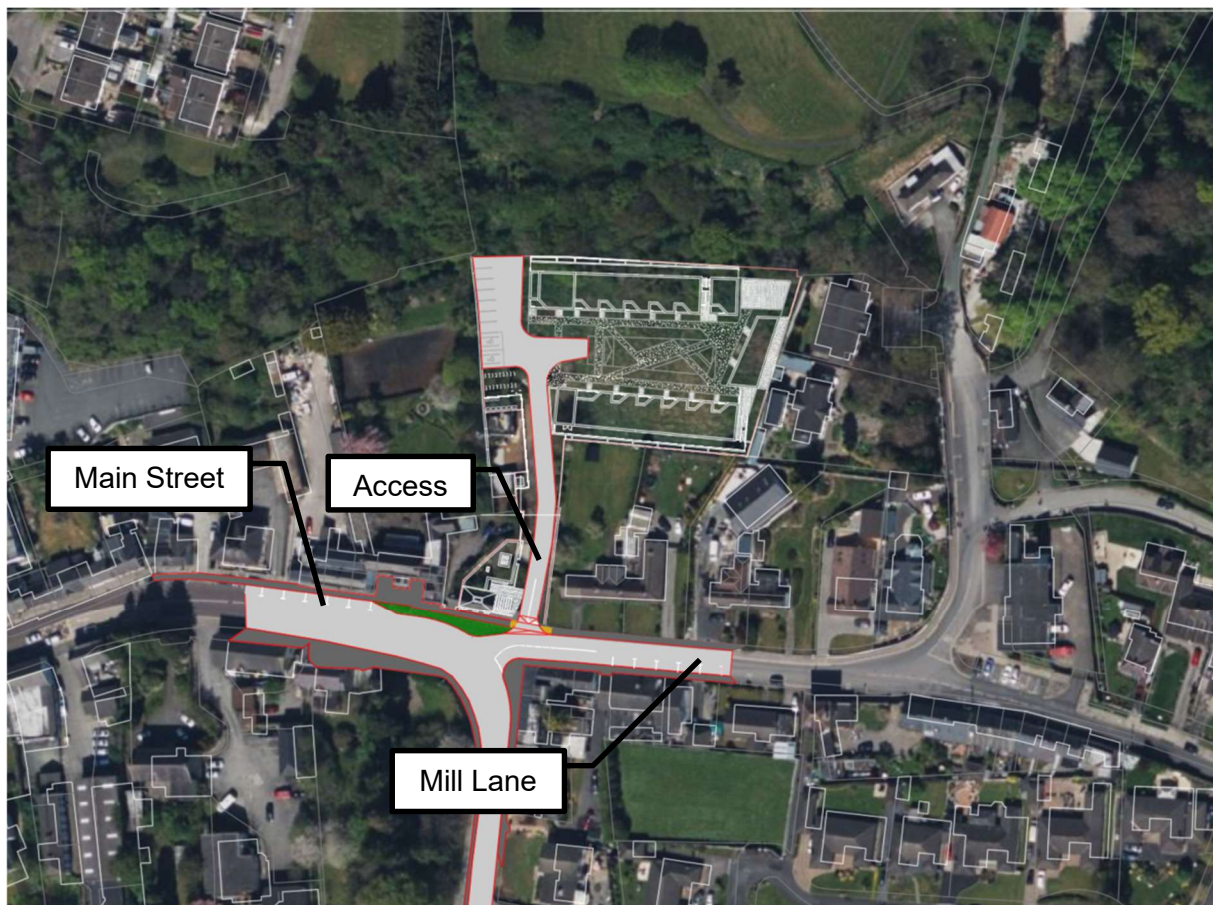


Figure 6 Proposed Layout

3.2 Site Access

Access to the site will be provided via an existing priority-controlled junction on to Mill Lane

3.3 Servicing

An AutoTrack analysis has been carried out on the internal service access to demonstrate its capability to cater for residents and service vehicles such as refuse vehicles.

The results of this analysis show that the proposed development can accommodate the anticipated service vehicles that will serve the proposed development.

Additional AutoTrack analysis was carried out for HGV movements to a sewage treatment plant located on Mill Lane.

Refer to Pinnacle Engineering Consultants Drawing No. P230400419-PIN-XX-DR-D-101-S1 and P230400419-PIN-XX-DR-D-102-S1 for further details.

3.4 Parking Provision

3.4.1 Car Parking Standards - Dwelling

Section 15.8 'Maximum Car Parking Standards' of Kildare County Development Plan 2023-2029 sets out the car parking requirements for various types of development. The applicable parking rates are outlined below.

Car Parking Standards	
Land Use	Standards
Apartment	1.5 spaces per unit + 1 visitor space per 4 apartments

Table 3 Parking Standards - Houses

The proposed development is for an Assisted Living facility where car ownership is lower compared to a typical apartment development. It is proposed to provide 6 No. standard car parking spaces and 2 No. disabled spaces.

3.4.2 Cycle Parking Standards

Table 15.4 'Minimum Cycle Parking Standards of Kildare County Development Plan 2023-2029 sets out the car parking requirements for various types of development. The applicable parking rates are outlined below.

Cycle Parking Standards	
Land Use	Standards
Apartment	1 space per unit + 1 visitor space per 2 units

Table 4 Parking Standards - Houses

A total of 36 No. cycle spaces will be provided.

3.5 Pedestrian and Cycle networks

It is a necessary part of the design framework for a residential development such as this to ensure that there is good permeability for those residents and visitors to the development who choose not to travel by car.

With this development pedestrian movement is suitably catered for by footpath connections within and adjacent to the development. These provide good linkage to the surrounding urban areas.

The internal layout demands that all visitors to the site are catered for and so pedestrian routes between dwelling areas and key nodes within the layout are well designed and clearly delineated. This applicant is very experienced in creating safe environments that satisfy resident's requirements and convenience. Accordingly, every effort has been made to ensure that vehicular access will be restricted in areas where there are likely to be the highest concentrations of pedestrian/cycle movements.

Cyclists will share road space with cars. Both cyclists and cars will be separated from pedestrians with a 100mm kerb.



Figure 7 Cyclist sharing road with cars

The internal site layout will include crossing facilities that are located along key desire lines i.e., at the development access where a raised pedestrian crossing has been provided, and which coordinate well with the circulation within the car park area to enhance the safety, visibility and convenience of those people on foot. These facilities will include features such as tactile paving and surface treatments that will benefit all users and assist those with impaired mobility.

Given the desire in current planning guidance to improve accessibility for non-car modes of travel, access by cycle is increasingly important. The key to cycle accessibility is the existence of convenient and safe links associated with secure and carefully sited cycle parking.

The design has sought to ensure that the environment created within this development will be accessible to residents and visitors with disabilities. Footpaths will be designed in accordance with the latest design criteria to ensure safe access for those that have a mobility impairment.

4 TRAFFIC GENERATION AND DISTRIBUTION

4.1 General

The methodology for assessing the traffic implications of this development involves quantifying the number and nature of trips that would be generated and reviewing these trips in the context of the prevailing conditions, the area of influence and the available infrastructure.

The nature of the development and its relative location to the catchment dictates that the modal choice to and from the site would primarily be via public transport, walking or cycling but with some elements of private car use.

Accordingly, the development will attract private car, pedestrian and cycle visitation that will need to be catered for in terms of access routes and internal design. Visitation will also include residents and visitors using public transport connections.

4.2 Trip Generation Rates

4.2.1 Introduction

The Trip Rate Information Computer System [TRICS] database has been interrogated to derive trip rates commensurate with developments of the character proposed in this case, notably a 36-unit assisted living residential development.

The use of the TRICS database has also enabled the profile of arrivals and departures throughout the day to be assessed and this has served to confirm the choice of the highest respective peak hours for use in the analyses.

This database is a well-established and constantly updated tool used in the determination of generated traffic for developments since it is a substantial source of validated empirical data on the arrival and departure rates for a range of differing types and sizes of developments in a variety of locations.

The proposed trip generation rates are outlined in sections below.

4.2.2 Assisted Living

Using the TRICS database, the trip rates for assisted living apartments was calculated.

TRICS defines Assisted Living as the following:

03/P - Assisted Living (use class C3)

Housing developments for older people that offer more support than sheltered housing, but still allow residents to live independently. Residents usually live in a self-contained flat with their own front door, but meals may be provided. Personal care and support services are generally available on-site 24 hours per day. Trip rates are calculated by Site Area, Dwellings, Housing Density or Bedrooms

These trip rates are illustrated in Table 5 below.

Peak Hour Trip Rates					
Trip Generation from TRICS		Weekday AM 08:00-09:00		Weekday PM 17:00-18:00	
Usage	Units	Arrivals	Departures	Arrivals	Departures
Assisted Living	Per Dwelling	0.079	0.047	0.054	0.086

Table 5 Peak Hour Trip Rates

4.3 Generated Flows

The schedule of accommodation, outlined in Table 6, was used to generate the number of trips the proposed development will generate based on the trip rate illustrated in Table 7.

Usage	Units
Application	
1 – Bed	34
2 – Bed	2
Total	36

Table 6 Schedule of Accommodation

For the proposed development, these figures can be seen in Table 7 below.

Peak Hour Trips					
Trip Generation from TRICS		Weekday AM 08:00-09:00		Weekday PM 17:00-18:00	
Usage	Units	Arrivals	Departures	Arrivals	Departures
Assisted Living	36	3	2	2	3
Peak Total		3	2	2	3
Two Way Total		5		5	

Table 7 Peak Hour Trips

It can be seen from the above that the total vehicle movements generated by the proposed development will be 3 arrivals and 2 departures in the AM peak (two-way total of 5). The total number of vehicle movements in the PM peak hour will be 2 arrivals and 3 departures (two-way total of 5).

4.3.1 Trip Assignment

The trips generated by the proposed development have been distributed on the surrounding road network using the directional flows on the surrounding road network. The proposed movements created by the development in the AM and PM peak hour are shown in Appendix C.

5 JUNCTION ASSESSMENT

5.1 Introduction

To assess the resultant impact on the surrounding road network, the anticipated traffic generation and distribution through the network has been applied to the traffic model in order to assess comparative flow levels at the locations that may be impacted by the proposed development.

For this assessment, it is assumed that the existing land use does not generate any traffic. The development of the site will generate AM and PM trips as illustrated in Table 5.3. Given that the brownfield site, which is currently unoccupied, no reduction has been applied to these figures.

5.2 Growth Factors

The estimated opening year for the proposed development is 2027. This has therefore been the focus of the road network assessment. These flows are shown in Appendix C and for the weekday AM and PM peaks respectively.

Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections sets out growth rates for forecasting future traffic. It is noted that in respect to Kildare, the growth during the period 2013 2030 is set at 1.014 per annum for Central Growth and decreasing to 1.0048 for the period 2030 onwards (LV rates used).

The factor used is outlined in Table 8 below.

Traffic Growth Rates		
Year	To Year	Table 5.5.1
2023	2027	1.056
2023	2032	1.1076
2023	2042	1.1556

Table 8 Growth Factors

5.3 Junction Capacity Analysis Parameters

Junction capacity analyses have been undertaken at the site access junction and at the key junctions at which existing flow data had been obtained.

These tests have been carried out using industry standard and approved software for the existing junctions with no development and the assumed year of opening of the development, namely 2027, and for a 5-year design horizon, namely 2032 and for a 15-year design horizon, namely 2042 with development flows added.

It may be the case at some nodes within the network that following the distribution and assignment of the traffic generated by the development, the actual proportional impact or change in traffic demand would not necessarily warrant further assessment. For the purpose of a robust assessment, all junctions have been put forward for assessment.

LinSig results are expressed in terms of queues generated and the 'Degree of Saturation' (DoS). A DoS value of 85% or below indicates that the junction is operating within capacity. A DoS value of between 85% and 100% indicates that the junction remains within capacity but is beginning to show signs of queuing and delay. A DoS value of less than 100% is desirable in urban areas during peak period traffic. However, values of greater than 100% are typical at many junctions. For the purpose of these calculations the results are reported in terms of maximising the capacity of the junction analysed.

LinSig is traditionally used for signalised junctions but can also be used for complex priority-controlled junctions such as the one modelled.

5.4 Geometric Parameters

The geometric parameters used for the junctions have been ascertained from the topographical survey details of the junctions and other relevant sources such as OS mapping. In this way a very good approximation of the relevant geometric inputs has been used.

For the proposed junction, the geometry has been obtained by reference to the initial design drawing, survey information and OS data.

The existing geometric layout Main Street, Mill Lane and the development access has been updated to accommodate the swept path of larger vehicles such as refuse vehicles entering the development and HGVs accessing Mill Lane. The alterations at this location include the following:

- Updated kerb lines
- The loss of c. 6 on street car parking spaces.
- Road cross section of Main Street reduced in size.
- Stop line on Mill Lane moved



Figure 8 Existing Layout (Left) vs Proposed Layout (Right)

Refer to Pinnacle Engineering Consultant's Drawing No. P230400419-PIN-XX-DR-D-104-S1 for more details.

5.5 Junction Capacity Analysis

The junctions, as surveyed, have been put forward for analysis with the development traffic dispersed through the network as per the current follow conditions.

The results of this analysis are presented below.

5.5.1 Site 1

Pinnacle Consulting collected traffic flows for Site 1. The flows covered the morning and evening peak hours. As part of the junction analysis the following scenarios were modelled – 2023 survey Year, 2027 Opening Year, 2032 Opening Year + 5 Years and 2042 Opening Year + 15 Years. Each year was modelled with and without development flows.

The following arm destinations are used:

- Arm A – Mill Lane
- Arm B – Site Access
- Arm C – Main Street (South)
- Arm D – Main Street (West)

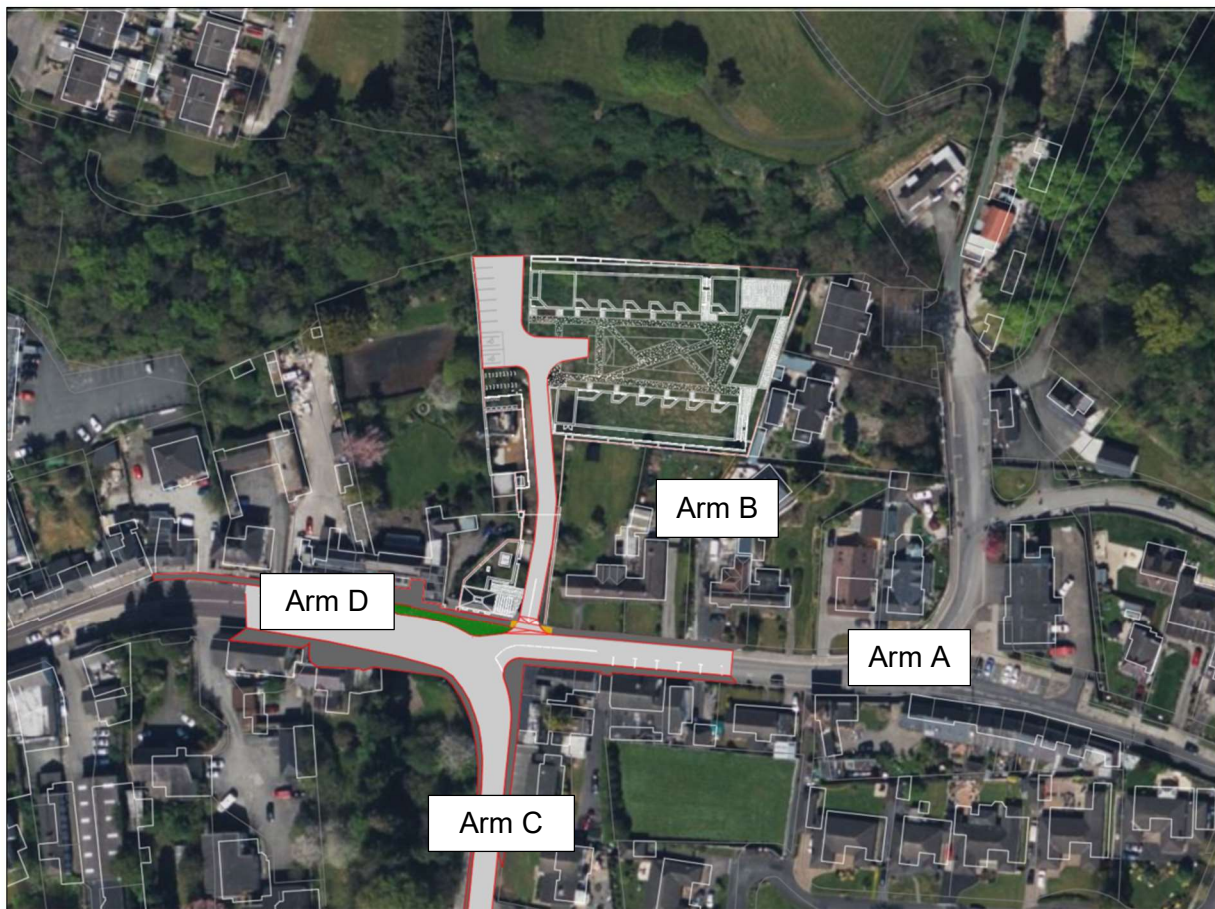


Figure 9 Site 1 – Junction Layout

This is illustrated in the LinSig Model below.

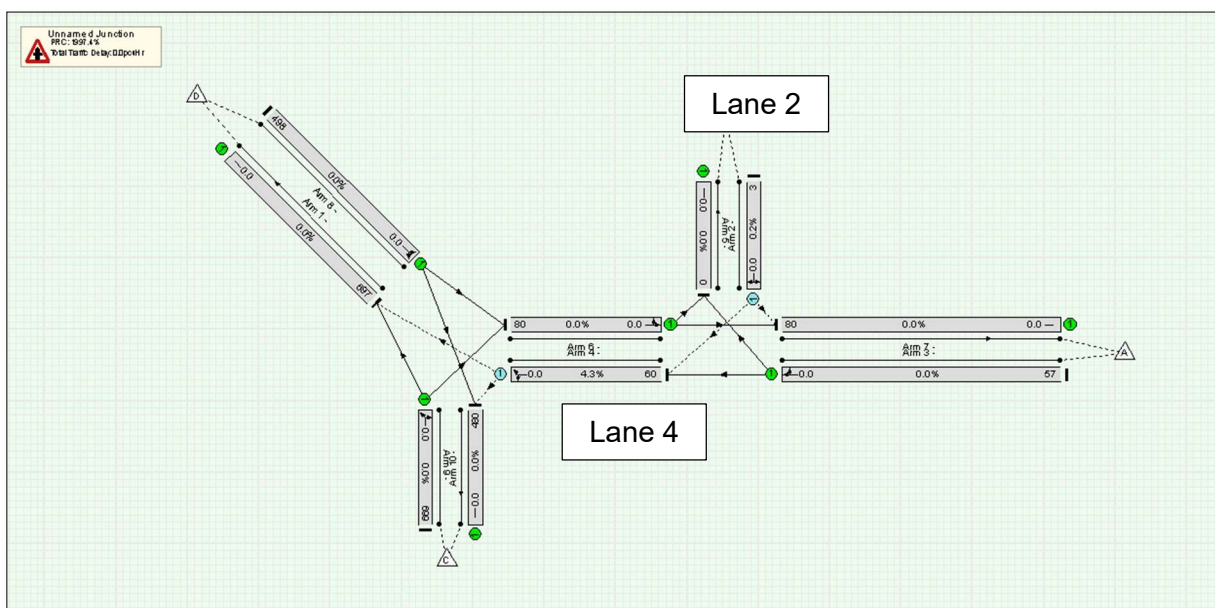


Figure 10 LinSig Layout

The results of the analysis are illustrated in Table 9 below. Lane 2 and Lane 4 are considered the minor arms of this junction layout.

	AM		PM	
	DoS (%)	Total Delay (s)	DoS	Total Delay (s)
2023				
2/1	0.0	0.0	0.0	0.0
4/1	4.0	0.0	3.7	0.0
2027 Opening Year DN				
2/1	0.0	0.0	0.0	0.0
4/1	4.4	0.0	3.9	0.0
2027 Opening Year DS				
2/1	0.1	0.0	0.2	0.0
4/1	4.5	0.0	4.1	0.0
2032 Opening Year DN				
2/1	0.0	0.0	0.0	0.0
4/1	4.7	0.0	4.1	0.0
2032 Opening Year DS				
2/1	0.1	0.0	0.2	0.0
4/1	4.8	0.0	4.3	0.0
2042 Opening Year DN				
2/1	0.0	0.0	0.0	0.0
4/1	4.7	0.0	4.2	0.0

2042 Opening Year DS				
2/1	0.1	0.0	0.2	0.0
4/1	4.8	0.0	4.4	0.0

Table 9 Site 1: Scenario 1 - Summary of Results

The modelling illustrates that the new junction operates within capacity in the AM and PM peak in all scenarios. The maximum recorded DoS is less than 5% in 2042 with development added during the AM peak period.

5.6 Conclusion

The operation of the junctions was modelled using industry standard software LinSig.

All sites were tested with the 2023 survey Year, 2027 Opening Year, 2032 Opening Year + 5 Years and 2042 Opening Year + 15 Years. Each year was modelled with and without development flows added.

A DoS value of 85% or below indicates that the junctions are operating within capacity. A DoS value of between 85% and 100% indicates that the junction remains within capacity but is beginning to show signs of queuing and delay. The max recorded DOS recorded was less than 5%.

This impact assessment has confirmed that the proposed access arrangements would adequately accommodate anticipated levels of traffic visitation and that as such the traffic generated by the development would have no material adverse impact on the operation of all junctions modelled.

It has been shown by the application of recognised assessment techniques newly generated flows and movements can be accommodated by the neighbouring junctions with marginal increase in congestion and delays expected at these junctions as a result of development traffic.

6 SUMMARY AND CONCLUSION

6.1 Summary

This Transport Statement has been prepared by Pinnacle Consulting in support of a planning application to Kildare County Council on lands located at the junction of Main Street and Mill Lane, Leixlip.

6.2 Development Proposals

A Transport Assessment has been compiled in support of a planning application to Kildare County Council for a assisted residential development comprising of 36 dwellings accessed via an existing access of Mill Lane.

The current site is a brown field site.

6.3 Development Proposals

The development will consist of the demolition of the former ESB premises building and its associated shed at the back and the construction of 36 No. apartments.

A new, mixed-use building is proposed on the Southern Site boundary with a frontage to the Main Street. This building will contain a Community Centre to the front and an apartment to the back.

At the back of the site, the remainder of the apartments will be arranged in 3 blocks enclosing a landscaped communal garden which will incorporate picnic seating areas, bench seating and timber pergolas. The central open space will be equipped with amenity grass, bulb, shrub and feature tree planting.

On the North-Eastern corner, an allotment garden with raised beds, seating and storage for tools and equipment will be provided.

A gravity wastewater drainage system will be provided to collect domestic wastewater discharge from the proposed residential units and community centre. This will be routed to the existing public wastewater network.

Surface Water Drainage will be resolved with an underground piped stormwater network which will collect runoff from the building gutters and downpipes. Roadways and parking areas shall comprise of open concrete lined channels, kerb inlets and grid inlets all discharging into an underground piped network. Sedimentation structures (silt traps) will also be included, especially around the gravel areas within the external landscaped area.

6.4 Development Access

Access will be provided via an existing priority-controlled junction on to Mill Lane.

6.5 Parking

In total, it is proposed to provide 8 car parking spaces in line with Kildare Development Plan 2023-2029 development plan standards.

A total of 36 cycle park spaces are proposed as part of the development.

6.6 Trip Generation

The proposed development will generate total vehicle movements generated 3 arrivals and 2 departures in the AM peak (two-way total of 5). The total number of vehicle movements in the PM peak hour will be 2 arrivals and 3 departures (two-way total of 5).

6.7 Operational Assessment

The results of the junction analysis undertaken demonstrates that traffic from the proposed development can be accommodated on the surrounding road network and is within reasonable limits having regard to the prevailing road conditions and development location.

6.8 Conclusion

This traffic assessment has confirmed that the proposed access arrangements would accommodate anticipated levels of traffic visitation and that as such the traffic generated by the development would have no material adverse impact on the operation of all junctions modelled.

It has been shown by the application of recognised assessment techniques that there is a slight increase in traffic levels arising from the development and the distribution of resultant flows around the adjacent road.

The results in terms of flows and movements can be accommodated by the neighbouring junctions with an anticipated slight uplift in congestion and delays at these locations.

This assessment has also considered the transportation aspects of the internal arrangements of the development and has concluded that the proposals would provide enhanced facilities and improved accessibility for all users of the site.

Where applicable, the proposed development is also fully compliant with DMURS.

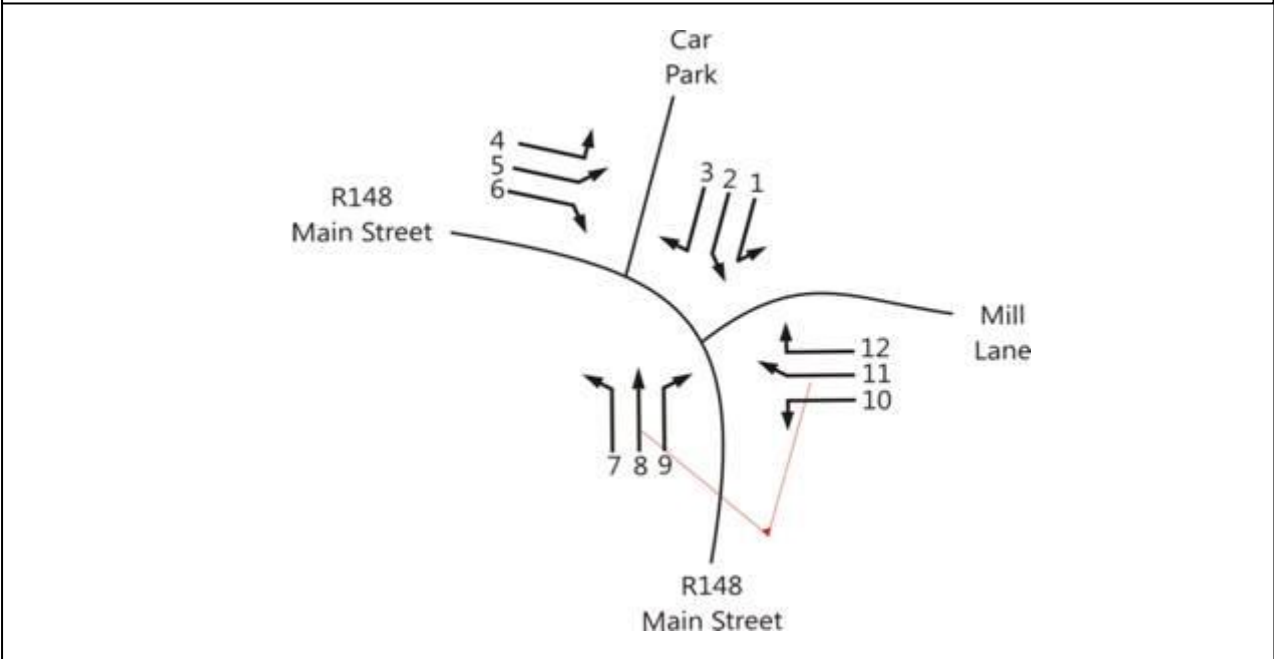
Accordingly, there are no reasons in relation to traffic and transportation aspects why this scheme should not be granted planning permission.

Appendix A Traffic Counts

Site Location



Movement Numbering



	Job number: TRA/23/130	Job Date: 25 th May 2023	Drawing No: TRA/23/130-01	traffinomics ie
	Client: Pinnacle	Job Day: Thursday	Author: SPW	

TRAFFINOMICS LIMITED

**CLUID HOUSING, LEIXLIP TRAFFIC COUNT
MANUAL CLASSIFIED JUNCTION TURNING COUNT**

**MAY 2023
TRA/23/130**

SITE: 01

DATE: 25th May 2023

LOCATION: R148 Main Street/Mill Lane

DAY: Thursday

TIME	MOVEMENT 1					TOT	PCU	MOVEMENT 2					TOT	PCU	MOVEMENT 3					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TIME	MOVEMENT 1					TOT	PCU	MOVEMENT 2					TOT	PCU	MOVEMENT 3					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/TOT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/TOT	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0

TRAFFINOMICS LIMITED

**CLUID HOUSING, LEIXLIP TRAFFIC COUNT
MANUAL CLASSIFIED JUNCTION TURNING COUNT**

**MAY 2023
TRA/23/130**

SITE: 01

DATE: 25th May 2023

LOCATION: R148 Main Street/Mill Lane

DAY: Thursday

TIME	MOVEMENT 4					TOT	PCU	MOVEMENT 5					TOT	PCU	MOVEMENT 6					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
07:00	0	0	0	0	0	0	0	1	0	0	0	0	1	1	125	31	3	1	7	167	177
07:15	0	0	0	0	0	0	0	1	0	1	0	0	2	3	147	37	2	0	6	192	199
07:30	0	0	0	0	0	0	0	3	1	0	0	0	4	4	160	33	4	0	4	201	207
07:45	0	0	0	0	0	0	0	2	1	0	0	0	3	3	145	34	1	0	9	189	199
H/TOT	0	0	0	0	0	0	0	7	2	1	0	0	10	11	577	135	10	1	26	749	781
08:00	0	0	0	0	0	0	0	2	0	0	0	0	2	2	169	29	4	0	6	208	216
08:15	0	0	0	0	0	0	0	4	2	1	0	0	7	8	166	19	1	0	3	189	193
08:30	0	0	0	0	0	0	0	9	2	1	0	0	12	13	178	14	2	0	2	196	199
08:45	0	0	0	0	0	0	0	2	0	1	0	0	3	4	135	9	0	0	5	149	154
H/TOT	0	0	0	0	0	0	0	17	4	3	0	0	24	26	648	71	7	0	16	742	762
09:00	0	0	0	0	0	0	0	5	2	1	0	0	8	9	113	12	3	0	2	130	134
09:15	0	0	0	0	0	0	0	5	0	0	0	0	5	5	119	9	4	1	0	133	136
09:30	0	0	0	0	0	0	0	6	2	0	0	0	8	8	93	17	1	0	4	115	120
09:45	0	0	0	0	0	0	0	5	0	0	0	0	5	5	107	16	2	0	4	129	134
H/TOT	0	0	0	0	0	0	0	21	4	1	0	0	26	27	432	54	10	1	10	507	523
P/TOT	0	0	0	0	0	0	0	45	10	5	0	0	60	63	1657	260	27	2	52	1998	2066

TIME	MOVEMENT 4					TOT	PCU	MOVEMENT 5					TOT	PCU	MOVEMENT 6					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
16:00	0	0	0	0	0	0	0	3	0	0	0	0	3	3	91	10	2	0	2	105	108
16:15	0	0	0	0	0	0	0	5	1	0	0	0	6	6	72	10	1	0	5	88	94
16:30	0	0	0	0	0	0	0	4	0	0	0	0	4	4	60	7	1	0	3	71	75
16:45	0	0	0	0	0	0	0	8	2	0	0	0	10	10	70	10	0	0	2	82	84
H/TOT	0	0	0	0	0	0	0	20	3	0	0	0	23	23	293	37	4	0	12	346	360
17:00	0	0	0	0	0	0	0	5	0	0	0	0	5	5	71	7	2	0	3	83	87
17:15	0	0	0	0	0	0	0	8	0	1	0	0	9	10	77	8	0	0	4	89	93
17:30	0	0	0	0	0	0	0	6	2	0	0	0	8	8	65	5	0	0	1	71	72
17:45	0	0	0	0	0	0	0	7	1	0	0	0	8	8	80	13	0	0	3	96	99
H/TOT	0	0	0	0	0	0	0	26	3	1	0	0	30	31	293	33	2	0	11	339	351
18:00	0	0	0	0	0	0	0	9	0	0	0	0	9	9	86	4	2	0	0	92	93
18:15	0	0	0	0	0	0	0	12	0	0	0	0	12	12	95	3	0	0	4	102	106
18:30	0	0	0	0	0	0	0	3	1	0	0	0	4	4	87	9	0	0	5	101	106
18:45	0	0	0	0	0	0	0	10	0	0	0	0	10	10	103	8	0	0	2	113	115
H/TOT	0	0	0	0	0	0	0	34	1	0	0	0	35	35	371	24	2	0	11	408	420
P/TOT	0	0	0	0	0	0	0	80	7	1	0	0	88	89	957	94	8	0	34	1093	1131

TRAFFINOMICS LIMITED

**CLUID HOUSING, LEIXLIP TRAFFIC COUNT
MANUAL CLASSIFIED JUNCTION TURNING COUNT**

**MAY 2023
TRA/23/130**

SITE: 01

DATE: 25th May 2023

LOCATION: R148 Main Street/Mill Lane

DAY: Thursday

TIME	MOVEMENT 7					TOT	PCU	MOVEMENT 8					TOT	PCU	MOVEMENT 9					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
07:00	38	16	2	0	1	57	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	46	15	1	0	3	65	69	0	0	0	0	0	0	0	2	0	1	0	0	3	4
07:30	66	9	1	0	3	79	83	0	0	0	0	0	0	0	7	0	0	0	0	7	7
07:45	68	11	2	0	3	84	88	0	0	0	0	0	0	0	0	1	0	1	0	2	3
H/TOT	218	51	6	0	10	285	298	0	0	0	0	0	0	0	9	1	1	1	0	12	14
08:00	70	4	3	0	2	79	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	90	8	0	0	2	100	102	0	0	0	0	0	0	0	0	0	0	2	0	2	5
08:30	82	8	2	0	3	95	99	0	0	0	0	0	0	0	3	0	0	2	0	5	8
08:45	79	10	2	0	3	94	98	0	0	0	0	0	0	0	2	2	0	0	0	4	4
H/TOT	321	30	7	0	10	368	382	0	0	0	0	0	0	0	5	2	0	4	0	11	16
09:00	65	11	2	0	6	84	91	0	0	0	0	0	0	0	6	2	0	0	0	8	8
09:15	69	16	5	0	2	92	97	0	0	0	0	0	0	0	3	0	0	2	0	5	8
09:30	60	11	0	0	2	73	75	0	0	0	0	0	0	0	3	1	0	1	0	5	6
09:45	70	7	2	1	3	83	88	0	1	0	0	0	1	1	5	0	0	0	0	5	5
H/TOT	264	45	9	1	13	332	351	0	1	0	0	0	1	1	17	3	0	3	0	23	27
P/TOT	803	126	22	1	33	985	1030	0	1	0	0	0	1	1	31	6	1	8	0	46	57

TIME	MOVEMENT 7					TOT	PCU	MOVEMENT 8					TOT	PCU	MOVEMENT 9					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
16:00	114	21	1	0	3	139	143	0	0	0	0	0	0	0	3	1	0	0	0	4	4
16:15	136	17	2	0	3	158	162	0	0	0	0	0	0	0	1	0	0	0	0	1	1
16:30	120	20	3	0	3	146	151	1	0	0	0	0	1	1	1	0	0	0	0	1	1
16:45	135	18	2	0	2	157	160	0	0	0	0	0	0	0	5	1	0	0	0	6	6
H/TOT	505	76	8	0	11	600	615	1	0	0	0	0	1	1	10	2	0	0	0	12	12
17:00	122	21	0	0	3	146	149	0	0	0	0	0	0	0	11	0	0	0	0	11	11
17:15	102	22	0	1	1	126	128	0	0	0	0	0	0	0	3	0	0	0	0	3	3
17:30	137	13	0	0	0	150	150	0	0	0	0	0	0	0	5	0	0	0	0	5	5
17:45	142	16	0	0	2	160	162	0	0	0	0	0	0	0	2	0	0	0	0	2	2
H/TOT	503	72	0	1	6	582	589	0	0	0	0	0	0	0	21	0	0	0	0	21	21
18:00	132	21	1	0	5	159	165	0	0	0	0	0	0	0	12	1	0	0	0	13	13
18:15	107	23	0	0	4	134	138	0	0	0	0	0	0	0	8	1	0	0	0	9	9
18:30	132	17	3	0	2	154	158	0	0	0	0	0	0	0	7	0	0	0	0	7	7
18:45	118	12	0	0	5	135	140	0	0	0	0	0	0	0	8	1	0	0	0	9	9
H/TOT	489	73	4	0	16	582	600	0	0	0	0	0	0	0	35	3	0	0	0	38	38
P/TOT	1497	221	12	1	33	1764	1804	1	0	0	0	0	1	1	66	5	0	0	0	71	71

TRAFFINOMICS LIMITED

**CLUID HOUSING, LEIXLIP TRAFFIC COUNT
MANUAL CLASSIFIED JUNCTION TURNING COUNT**

**MAY 2023
TRA/23/130**

SITE: 01

DATE: 25th May 2023

LOCATION: R148 Main Street/Mill Lane

DAY: Thursday

TIME	MOVEMENT 10					TOT	PCU	MOVEMENT 11					TOT	PCU	MOVEMENT 12					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
07:00	3	1	0	0	0	4	4	3	0	2	0	0	5	6	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	4	0	1	0	0	5	6	4	1	0	0	0	5	5	0	0	0	0	0	0	0
07:45	3	1	0	0	0	4	4	6	0	1	0	0	7	8	0	0	0	0	0	0	0
H/TOT	10	2	1	0	0	13	14	13	1	3	0	0	17	19	0	0	0	0	0	0	0
08:00	3	1	0	0	0	4	4	3	0	0	0	0	3	3	0	0	0	0	0	0	0
08:15	2	1	0	1	0	4	5	6	1	0	0	0	7	7	0	0	0	0	0	0	0
08:30	7	0	0	1	0	8	9	3	2	0	0	0	5	5	0	0	0	0	0	0	0
08:45	2	0	1	2	0	5	8	5	1	0	0	0	6	6	0	0	0	0	0	0	0
H/TOT	14	2	1	4	0	21	27	17	4	0	0	0	21	21	0	0	0	0	0	0	0
09:00	2	1	0	0	0	3	3	2	0	2	0	0	4	5	0	1	0	0	0	1	1
09:15	3	0	0	0	0	3	3	4	1	0	0	0	5	5	0	0	0	0	0	0	0
09:30	4	2	0	0	0	6	6	3	0	0	0	0	3	3	0	0	0	0	0	0	0
09:45	5	1	1	3	0	10	14	2	2	0	0	0	4	4	0	0	0	0	0	0	0
H/TOT	14	4	1	3	0	22	26	11	3	2	0	0	16	17	0	1	0	0	0	1	1
P/TOT	38	8	3	7	0	56	67	41	8	5	0	0	54	57	0	1	0	0	0	1	1

TIME	MOVEMENT 10					TOT	PCU	MOVEMENT 11					TOT	PCU	MOVEMENT 12					TOT	PCU
	CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS			CAR	LGV	OGV1	OGV2	BUS		
16:00	4	2	0	0	0	6	6	4	2	0	0	0	6	6	0	0	0	0	0	0	0
16:15	0	1	0	0	0	1	1	2	1	0	0	0	3	3	0	0	0	0	0	0	0
16:30	4	1	1	1	0	7	9	3	0	0	0	0	3	3	0	0	0	0	0	0	0
16:45	2	0	0	0	0	2	2	8	2	0	0	0	10	10	0	0	0	0	0	0	0
H/TOT	10	4	1	1	0	16	18	17	5	0	0	0	22	22	0	0	0	0	0	0	0
17:00	4	0	0	0	0	4	4	6	0	1	0	0	7	8	0	0	0	0	0	0	0
17:15	3	0	0	0	0	3	3	3	0	0	0	0	3	3	0	0	0	0	0	0	0
17:30	3	0	0	0	0	3	3	6	3	1	0	0	10	11	0	0	0	0	0	0	0
17:45	5	1	0	0	0	6	6	4	2	0	0	0	6	6	0	0	0	0	0	0	0
H/TOT	15	1	0	0	0	16	16	19	5	2	0	0	26	27	0	0	0	0	0	0	0
18:00	2	0	0	0	0	2	2	2	0	0	0	0	2	2	0	0	0	0	0	0	0
18:15	9	0	0	0	0	9	9	10	1	0	0	0	11	11	0	0	0	0	0	0	0
18:30	3	0	0	0	0	3	3	6	1	0	0	0	7	7	0	0	0	0	0	0	0
18:45	4	0	0	0	0	4	4	14	0	0	0	0	14	14	0	0	0	0	0	0	0
H/TOT	18	0	0	0	0	18	18	32	2	0	0	0	34	34	0	0	0	0	0	0	0
P/TOT	43	5	1	1	0	50	52	68	12	2	0	0	82	83	0	0	0	0	0	0	0

TIME	PCU's Through Junction
07:00	247
07:15	274
07:30	311
07:45	304
H/TOT	1136
08:00	308
08:15	319
08:30	332
08:45	274
H/TOT	1232
09:00	250
09:15	253
09:30	218
09:45	252
H/TOT	973
P/TOT	3341

TIME	PCU's Through Junction
16:00	270
16:15	267
16:30	243
16:45	272
H/TOT	1051
17:00	264
17:15	240
17:30	249
17:45	284
H/TOT	1036
18:00	284
18:15	285
18:30	285
18:45	292
H/TOT	1145
P/TOT	3232

Appendix B TRICS

DRAFT

Calculation Reference: AUDIT-800401-230622-0634

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : P - ASSISTED LIVING
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	BC BOURNEMOUTH CHRISTCHURCH & POOLE	1 days
	TB TORBAY	1 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
	PB PETERBOROUGH	1 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
10	WALES	
	CF CARDIFF	1 days
11	SCOTLAND	
	AD ABERDEEN CITY	1 days
17	ULSTER (NORTHERN IRELAND)	
	TY TYRONE	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 11 to 79 (units:)
Range Selected by User: 11 to 79 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 27/09/22

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

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	3 days
Thursday	2 days
Friday	4 days

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

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

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

Selected Locations:

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

Selected Location Sub Categories:

Residential Zone	7
Built-Up Zone	2
No Sub Category	4

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	9 days - Selected
Servicing vehicles Excluded	4 days - Selected

Secondary Filtering selection:

Use Class:

C3	13 days
----	---------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	4 days
20,001 to 25,000	3 days
25,001 to 50,000	5 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	6 days
250,001 to 500,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	6 days
1.6 to 2.0	1 days

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

Travel Plan:

Yes	1 days
No	12 days

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

PTAL Rating:

No PTAL Present	13 days
-----------------	---------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	AC-03-P-01 CHESTER WAY NORTHWICH	ASSISTED LIVING		CHESHIRE WEST & CHESTER
	Edge of Town Centre Built-Up Zone Total No of Dwellings:		58	
	Survey date: FRIDAY		14/06/19	Survey Type: MANUAL
2	AD-03-P-01 ST MACHAR DRIVE ABERDEEN OLD ABERDEEN Neighbourhood Centre (PPS6 Local Centre) No Sub Category Total No of Dwellings:	ASSISTED LIVING	24	ABERDEEN CITY
	Survey date: WEDNESDAY		20/11/19	Survey Type: MANUAL
3	BC-03-P-01 SAINT STEPHEN'S ROAD BOURNEMOUTH	ASSISTED LIVING		BOURNEMOUTH CHRISTCHURCH & POOLE
	Edge of Town Centre No Sub Category Total No of Dwellings:		66	
	Survey date: TUESDAY		27/09/22	Survey Type: MANUAL
4	CF-03-P-01 ILEX CLOSE CARDIFF LLANISHEN Neighbourhood Centre (PPS6 Local Centre) Built-Up Zone Total No of Dwellings:	ASSISTED LIVING & RET. FLATS	61	CARDIFF
	Survey date: TUESDAY		11/05/21	Survey Type: MANUAL
5	LE-03-P-01 NOTTINGHAM ROAD LOUGHBOROUGH	ASSISTED LIVING		LEICESTERSHIRE
	Edge of Town Centre No Sub Category Total No of Dwellings:		47	
	Survey date: WEDNESDAY		20/10/21	Survey Type: MANUAL
6	NF-03-P-01 MOUNTBATTEN DRIVE NORWICH	ASSISTED LIVING		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		40	
	Survey date: FRIDAY		08/11/19	Survey Type: MANUAL
7	NF-03-P-02 LAKENFIELDS NORWICH LAKENHAM Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	ASSISTED LIVING	40	NORFOLK
	Survey date: FRIDAY		22/11/19	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	NY-03-P-01 FENNELL GROVE RIPON	ASSISTED LIVING		NORTH YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	40		
	Survey date: TUESDAY	24/05/22	Survey Type: MANUAL	
9	PB-03-P-01 THISTLE DRIVE PETERBOROUGH STANGROUND	ASSISTED LIVING		PETERBOROUGH
	Edge of Town Residential Zone Total No of Dwellings:	79		
	Survey date: MONDAY	26/09/22	Survey Type: MANUAL	
10	TB-03-P-01 GARFIELD ROAD PAIGNTON	ASSISTED LIVING		TORBAY
	Edge of Town Centre Residential Zone Total No of Dwellings:	11		
	Survey date: FRIDAY	29/03/19	Survey Type: MANUAL	
11	TW-03-P-01 KENTON ROAD NEWCASTLE UPON TYNE	ASSISTED LIVING		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	42		
	Survey date: THURSDAY	07/10/21	Survey Type: MANUAL	
12	TY-03-P-01 LIMEKILN LANE COOKSTOWN	ASSISTED LIVING		TYRONE
	Edge of Town Centre No Sub Category Total No of Dwellings:	32		
	Survey date: THURSDAY	14/03/19	Survey Type: MANUAL	
13	WS-03-P-01 DURRINGTON LANE WORTHING	ASSISTED LIVING		WEST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	54		
	Survey date: WEDNESDAY	18/05/22	Survey Type: MANUAL	

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.061	13	46	0.029	13	46	0.090
08:00 - 09:00	13	46	0.079	13	46	0.047	13	46	0.126
09:00 - 10:00	13	46	0.140	13	46	0.113	13	46	0.253
10:00 - 11:00	13	46	0.141	13	46	0.140	13	46	0.281
11:00 - 12:00	13	46	0.120	13	46	0.123	13	46	0.243
12:00 - 13:00	13	46	0.126	13	46	0.120	13	46	0.246
13:00 - 14:00	13	46	0.131	13	46	0.143	13	46	0.274
14:00 - 15:00	13	46	0.101	13	46	0.140	13	46	0.241
15:00 - 16:00	13	46	0.101	13	46	0.098	13	46	0.199
16:00 - 17:00	13	46	0.086	13	46	0.094	13	46	0.180
17:00 - 18:00	13	46	0.054	13	46	0.086	13	46	0.140
18:00 - 19:00	13	46	0.045	13	46	0.056	13	46	0.101
19:00 - 20:00	1	61	0.098	1	61	0.082	1	61	0.180
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.283			1.271			2.554

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

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

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Parameter summary

Trip rate parameter range selected: 11 - 79 (units:)
Survey date range: 01/01/15 - 27/09/22
Number of weekdays (Monday-Friday): 13
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.000	13	46	0.000	13	46	0.000
08:00 - 09:00	13	46	0.003	13	46	0.002	13	46	0.005
09:00 - 10:00	13	46	0.005	13	46	0.007	13	46	0.012
10:00 - 11:00	13	46	0.010	13	46	0.010	13	46	0.020
11:00 - 12:00	13	46	0.007	13	46	0.007	13	46	0.014
12:00 - 13:00	13	46	0.003	13	46	0.003	13	46	0.006
13:00 - 14:00	13	46	0.012	13	46	0.012	13	46	0.024
14:00 - 15:00	13	46	0.005	13	46	0.005	13	46	0.010
15:00 - 16:00	13	46	0.005	13	46	0.005	13	46	0.010
16:00 - 17:00	13	46	0.005	13	46	0.005	13	46	0.010
17:00 - 18:00	13	46	0.005	13	46	0.005	13	46	0.010
18:00 - 19:00	13	46	0.000	13	46	0.000	13	46	0.000
19:00 - 20:00	1	61	0.000	1	61	0.000	1	61	0.000
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.060			0.061			0.121

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.000	13	46	0.000	13	46	0.000
08:00 - 09:00	13	46	0.003	13	46	0.003	13	46	0.006
09:00 - 10:00	13	46	0.003	13	46	0.002	13	46	0.005
10:00 - 11:00	13	46	0.000	13	46	0.002	13	46	0.002
11:00 - 12:00	13	46	0.000	13	46	0.000	13	46	0.000
12:00 - 13:00	13	46	0.000	13	46	0.000	13	46	0.000
13:00 - 14:00	13	46	0.000	13	46	0.000	13	46	0.000
14:00 - 15:00	13	46	0.002	13	46	0.002	13	46	0.004
15:00 - 16:00	13	46	0.002	13	46	0.002	13	46	0.004
16:00 - 17:00	13	46	0.000	13	46	0.000	13	46	0.000
17:00 - 18:00	13	46	0.000	13	46	0.000	13	46	0.000
18:00 - 19:00	13	46	0.000	13	46	0.000	13	46	0.000
19:00 - 20:00	1	61	0.000	1	61	0.000	1	61	0.000
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.010			0.011			0.021

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.000	13	46	0.000	13	46	0.000
08:00 - 09:00	13	46	0.000	13	46	0.000	13	46	0.000
09:00 - 10:00	13	46	0.000	13	46	0.000	13	46	0.000
10:00 - 11:00	13	46	0.002	13	46	0.002	13	46	0.004
11:00 - 12:00	13	46	0.000	13	46	0.000	13	46	0.000
12:00 - 13:00	13	46	0.000	13	46	0.000	13	46	0.000
13:00 - 14:00	13	46	0.000	13	46	0.000	13	46	0.000
14:00 - 15:00	13	46	0.002	13	46	0.002	13	46	0.004
15:00 - 16:00	13	46	0.000	13	46	0.000	13	46	0.000
16:00 - 17:00	13	46	0.000	13	46	0.000	13	46	0.000
17:00 - 18:00	13	46	0.000	13	46	0.000	13	46	0.000
18:00 - 19:00	13	46	0.000	13	46	0.000	13	46	0.000
19:00 - 20:00	1	61	0.000	1	61	0.000	1	61	0.000
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.004			0.004			0.008

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.008	13	46	0.005	13	46	0.013
08:00 - 09:00	13	46	0.005	13	46	0.000	13	46	0.005
09:00 - 10:00	13	46	0.003	13	46	0.000	13	46	0.003
10:00 - 11:00	13	46	0.002	13	46	0.005	13	46	0.007
11:00 - 12:00	13	46	0.003	13	46	0.000	13	46	0.003
12:00 - 13:00	13	46	0.000	13	46	0.002	13	46	0.002
13:00 - 14:00	13	46	0.000	13	46	0.005	13	46	0.005
14:00 - 15:00	13	46	0.000	13	46	0.000	13	46	0.000
15:00 - 16:00	13	46	0.003	13	46	0.000	13	46	0.003
16:00 - 17:00	13	46	0.000	13	46	0.000	13	46	0.000
17:00 - 18:00	13	46	0.000	13	46	0.003	13	46	0.003
18:00 - 19:00	13	46	0.000	13	46	0.002	13	46	0.002
19:00 - 20:00	1	61	0.000	1	61	0.000	1	61	0.000
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.022			0.046

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING
CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.056	13	46	0.025	13	46	0.081
08:00 - 09:00	13	46	0.066	13	46	0.040	13	46	0.106
09:00 - 10:00	13	46	0.104	13	46	0.079	13	46	0.183
10:00 - 11:00	13	46	0.103	13	46	0.109	13	46	0.212
11:00 - 12:00	13	46	0.091	13	46	0.089	13	46	0.180
12:00 - 13:00	13	46	0.106	13	46	0.096	13	46	0.202
13:00 - 14:00	13	46	0.094	13	46	0.118	13	46	0.212
14:00 - 15:00	13	46	0.082	13	46	0.108	13	46	0.190
15:00 - 16:00	13	46	0.091	13	46	0.082	13	46	0.173
16:00 - 17:00	13	46	0.072	13	46	0.077	13	46	0.149
17:00 - 18:00	13	46	0.039	13	46	0.072	13	46	0.111
18:00 - 19:00	13	46	0.044	13	46	0.054	13	46	0.098
19:00 - 20:00	1	61	0.066	1	61	0.066	1	61	0.132
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.014			1.015			2.029

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

LGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.003	13	46	0.002	13	46	0.005
08:00 - 09:00	13	46	0.005	13	46	0.002	13	46	0.007
09:00 - 10:00	13	46	0.027	13	46	0.025	13	46	0.052
10:00 - 11:00	13	46	0.025	13	46	0.017	13	46	0.042
11:00 - 12:00	13	46	0.022	13	46	0.027	13	46	0.049
12:00 - 13:00	13	46	0.017	13	46	0.019	13	46	0.036
13:00 - 14:00	13	46	0.024	13	46	0.012	13	46	0.036
14:00 - 15:00	13	46	0.010	13	46	0.024	13	46	0.034
15:00 - 16:00	13	46	0.003	13	46	0.007	13	46	0.010
16:00 - 17:00	13	46	0.008	13	46	0.012	13	46	0.020
17:00 - 18:00	13	46	0.010	13	46	0.008	13	46	0.018
18:00 - 19:00	13	46	0.002	13	46	0.002	13	46	0.004
19:00 - 20:00	1	61	0.033	1	61	0.016	1	61	0.049
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.189			0.173			0.362

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

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

TRIP RATE for Land Use 03 - RESIDENTIAL/P - ASSISTED LIVING

MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

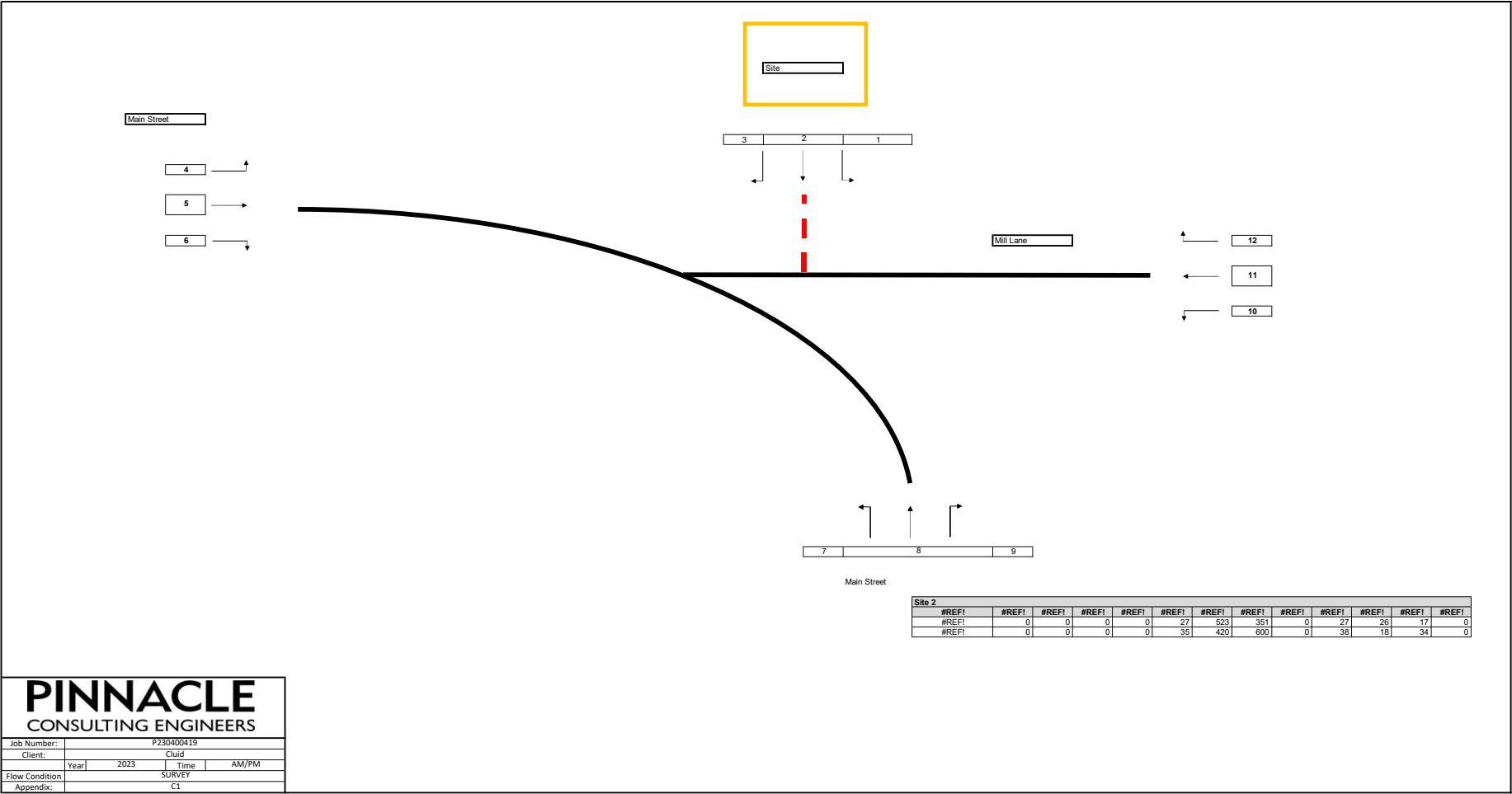
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	13	46	0.002	13	46	0.002	13	46	0.004
08:00 - 09:00	13	46	0.002	13	46	0.000	13	46	0.002
09:00 - 10:00	13	46	0.000	13	46	0.000	13	46	0.000
10:00 - 11:00	13	46	0.002	13	46	0.000	13	46	0.002
11:00 - 12:00	13	46	0.000	13	46	0.000	13	46	0.000
12:00 - 13:00	13	46	0.000	13	46	0.002	13	46	0.002
13:00 - 14:00	13	46	0.002	13	46	0.002	13	46	0.004
14:00 - 15:00	13	46	0.000	13	46	0.000	13	46	0.000
15:00 - 16:00	13	46	0.000	13	46	0.002	13	46	0.002
16:00 - 17:00	13	46	0.000	13	46	0.000	13	46	0.000
17:00 - 18:00	13	46	0.000	13	46	0.000	13	46	0.000
18:00 - 19:00	13	46	0.000	13	46	0.000	13	46	0.000
19:00 - 20:00	1	61	0.000	1	61	0.000	1	61	0.000
20:00 - 21:00	1	61	0.000	1	61	0.000	1	61	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

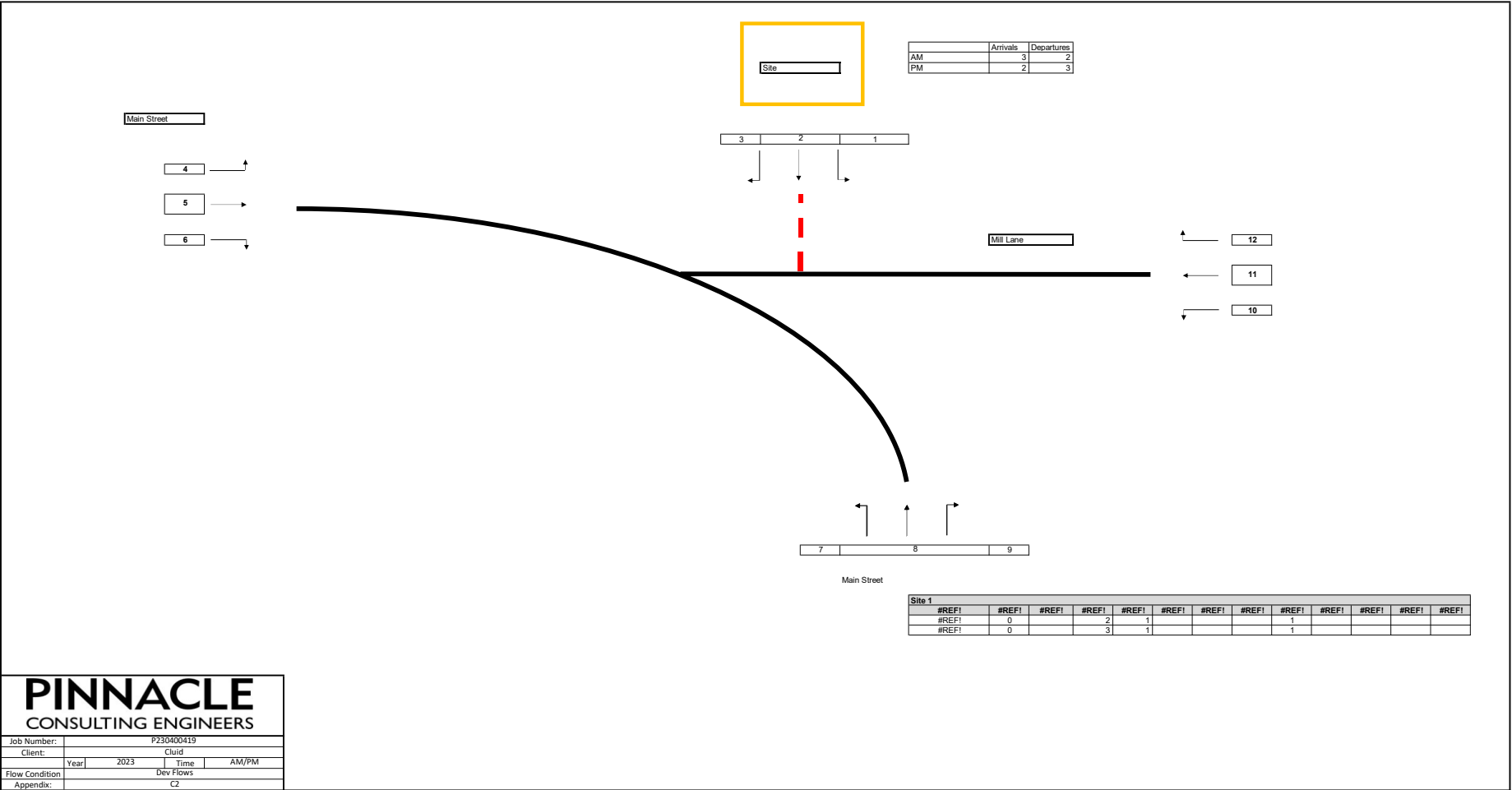
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

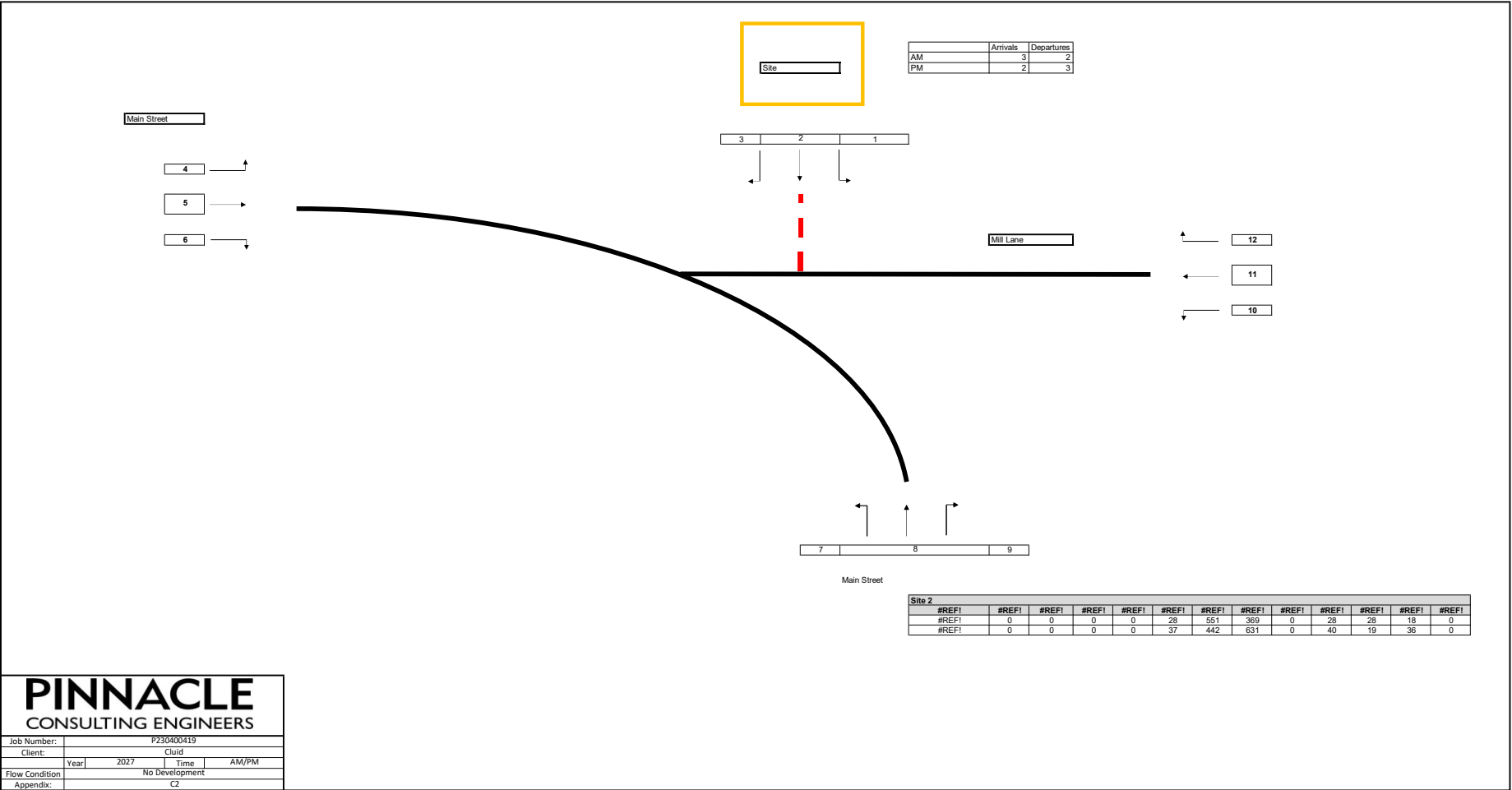
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected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

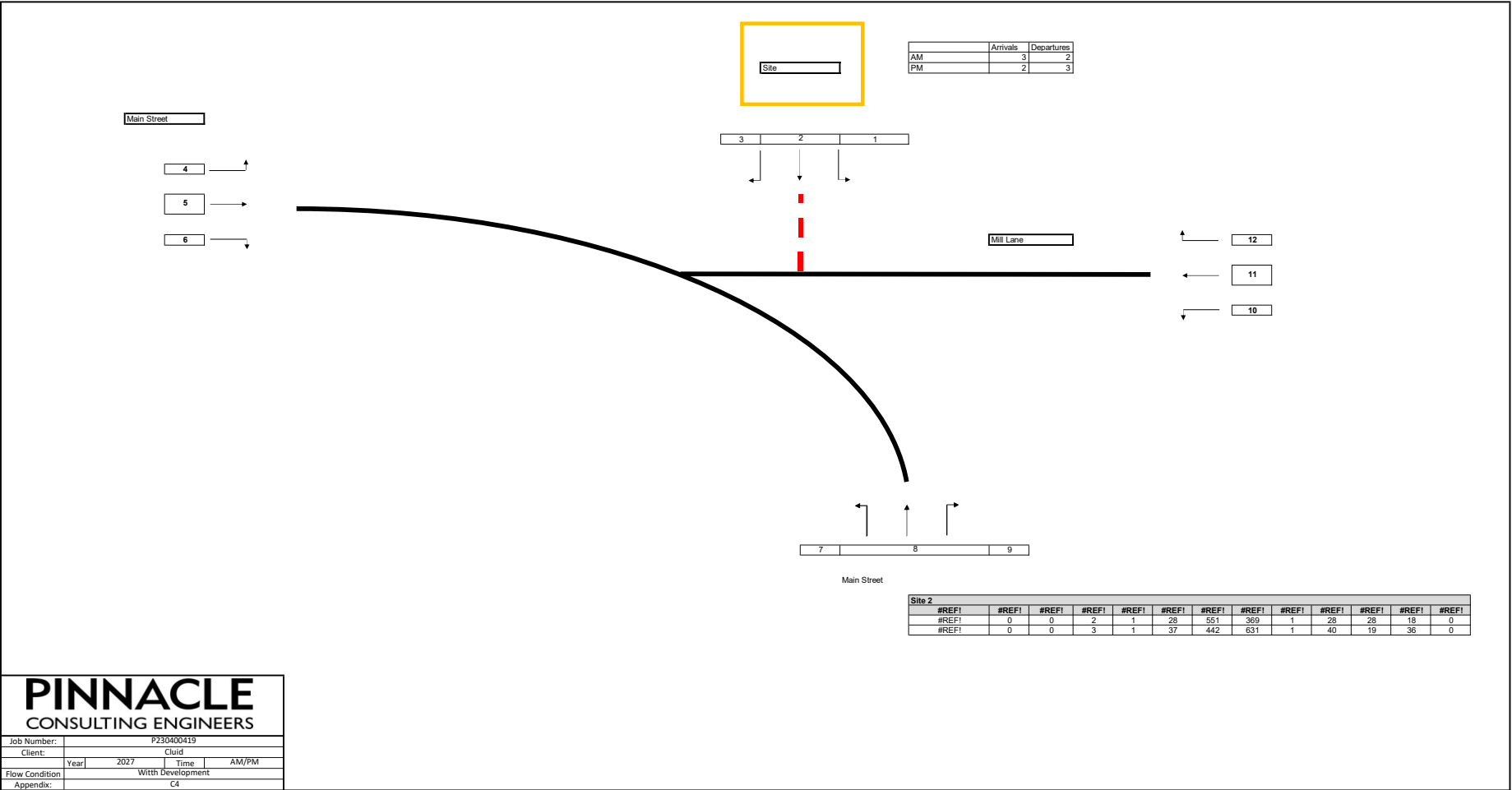
Appendix C Flow Diagrams

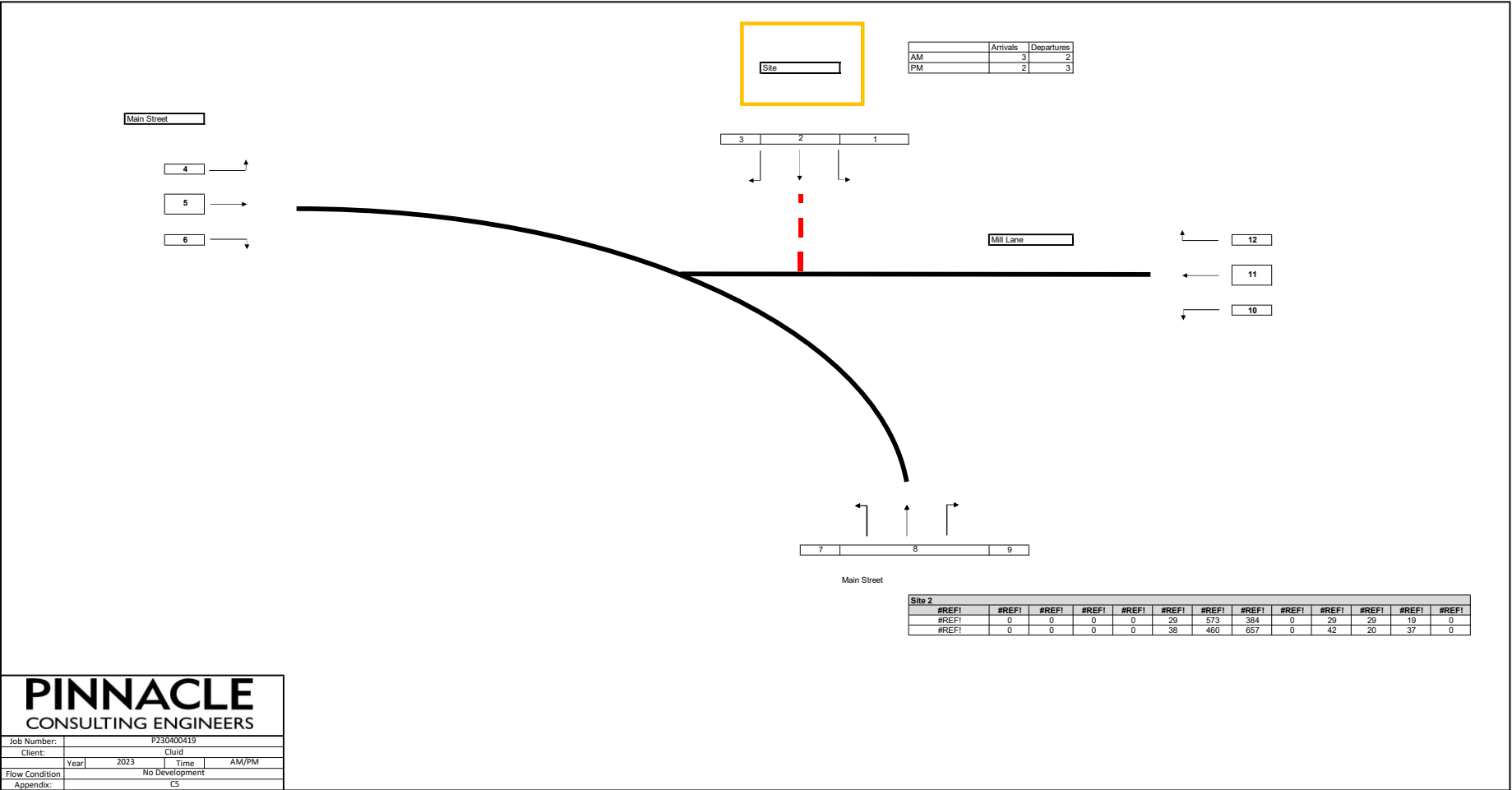
DRAFT





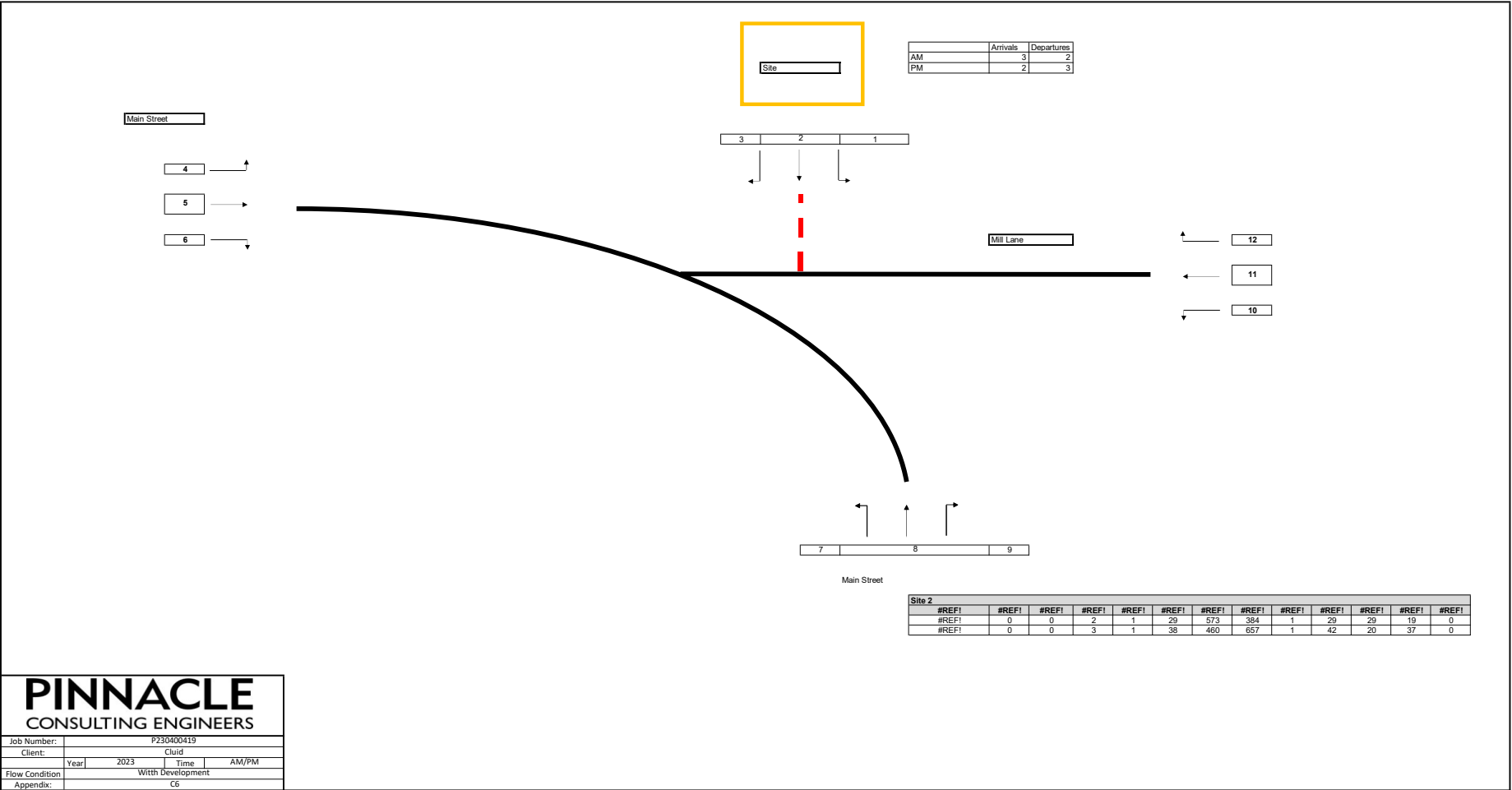


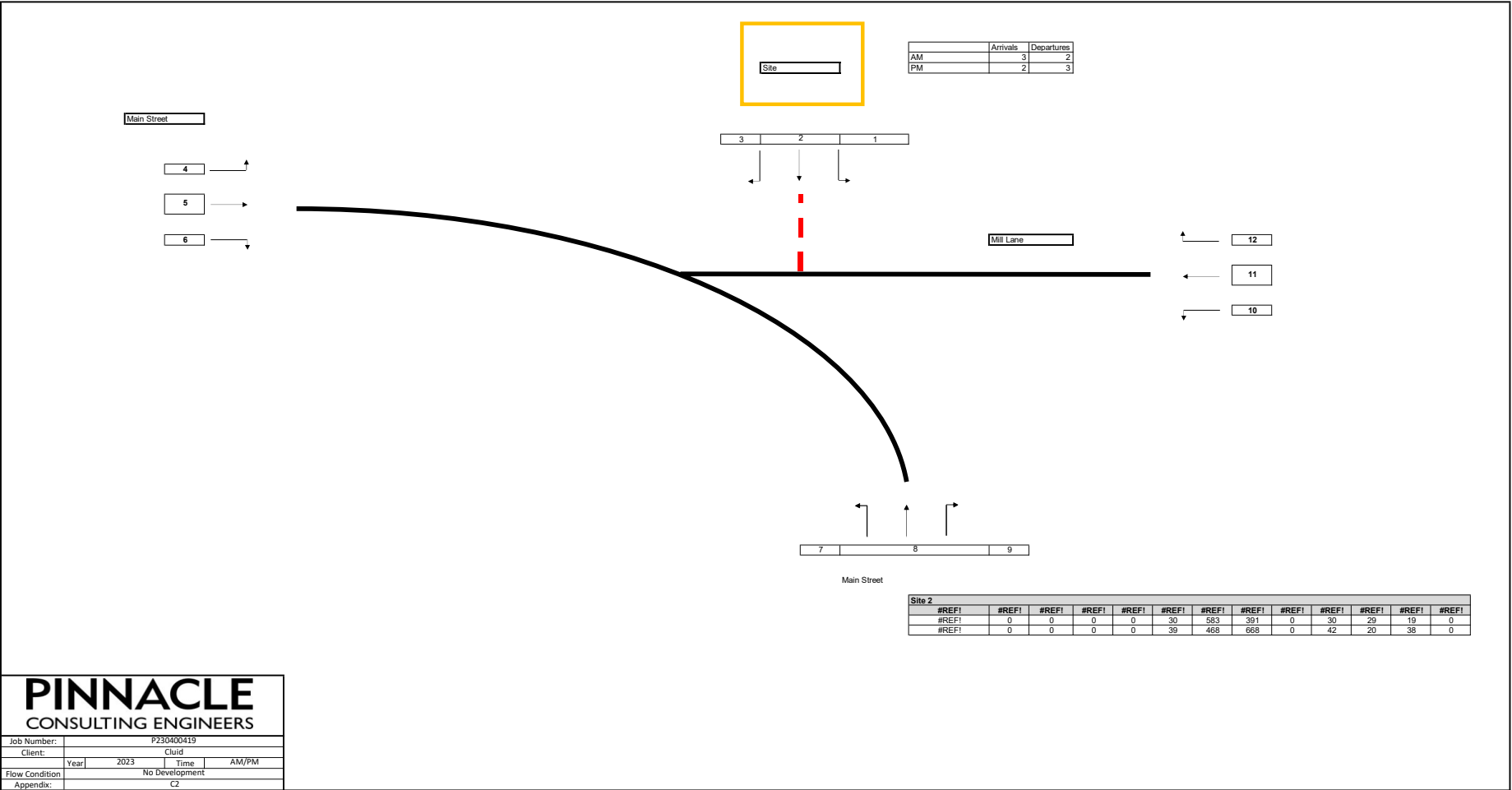


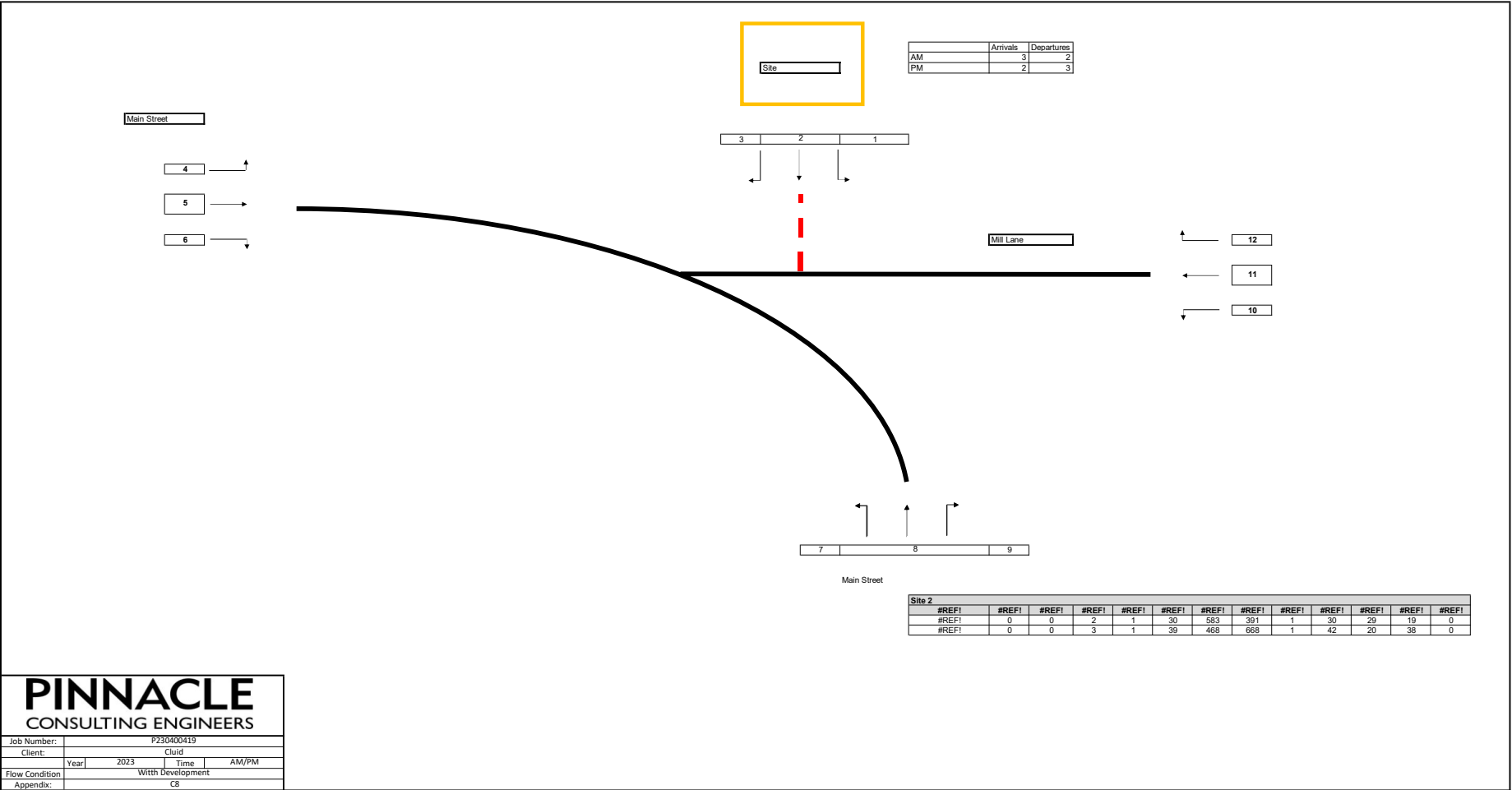


PINNACLE
CONSULTING ENGINEERS

Job Number:	P230400419		
Client:	Cluid		
	Year	2023	Time AM/PM
Flow Condition	No Development		
Appendix:	CS		







Appendix D Modelling Results

DRAFT

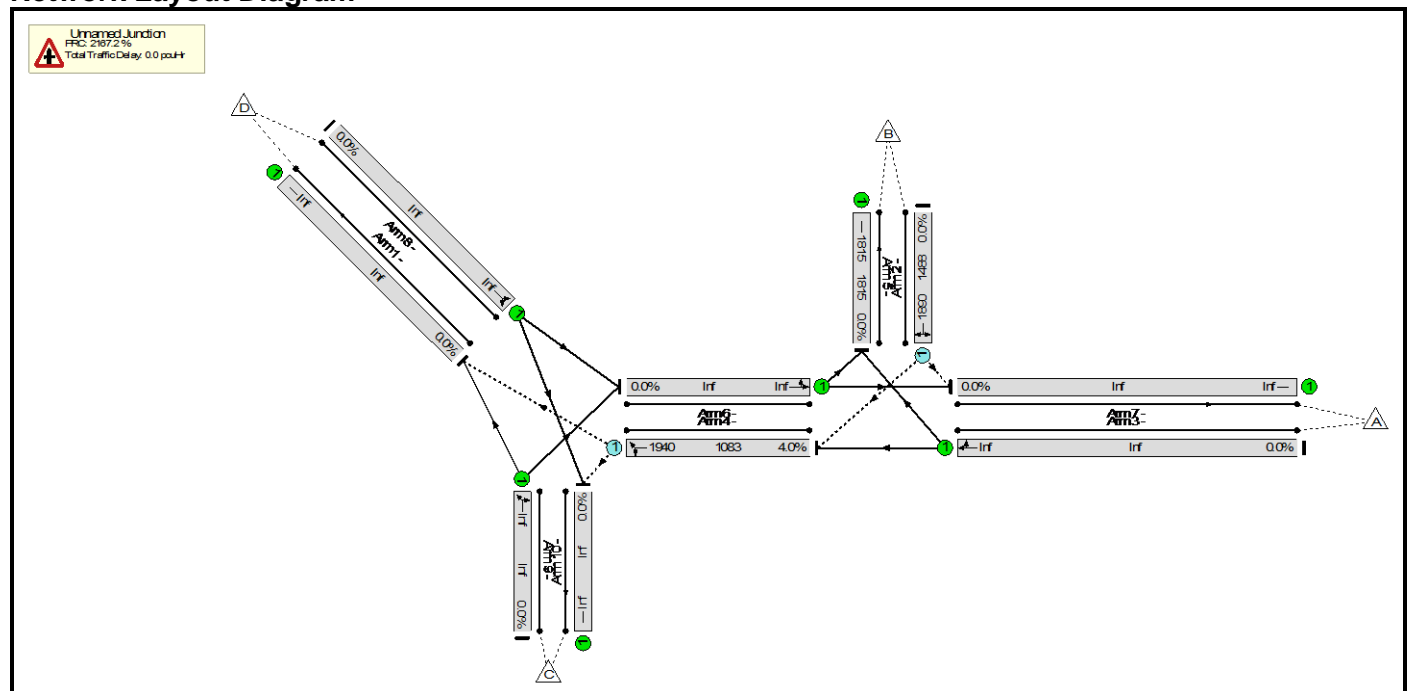
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	P230400419 LEIXLIP, Cluid Housing.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: '2023 Survey AM' (FG1: '2023 Survey AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



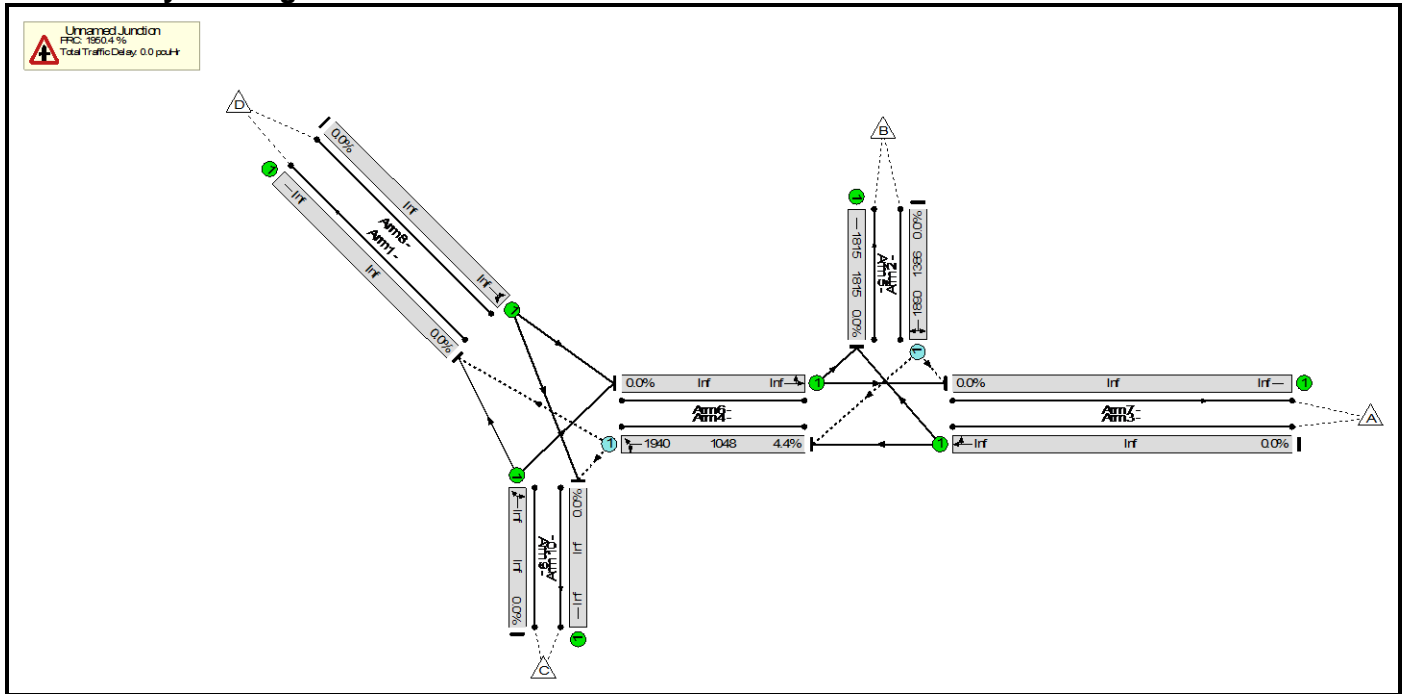
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.0%	26	17	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.0%	26	17	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	0	1890	1488	0.0%	0	0	0	0.0	0.0	0.0
4/1	Ahead Left	O	-		-	-	-	43	1940	1083	4.0%	26	17	0	0.0	1.7	0.0
5/1		U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
			C1	PRC for Signalled Lanes (%):				0.0	Total Delay for Signalled Lanes (pcuHr):			0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):				2167.2	Total Delay Over All Lanes(pcuHr):			0.02					

Basic Results Summary

Scenario 2: '2027 ND AM' (FG2: '2027 ND AM', Plan 1: 'Network Control Plan 1')

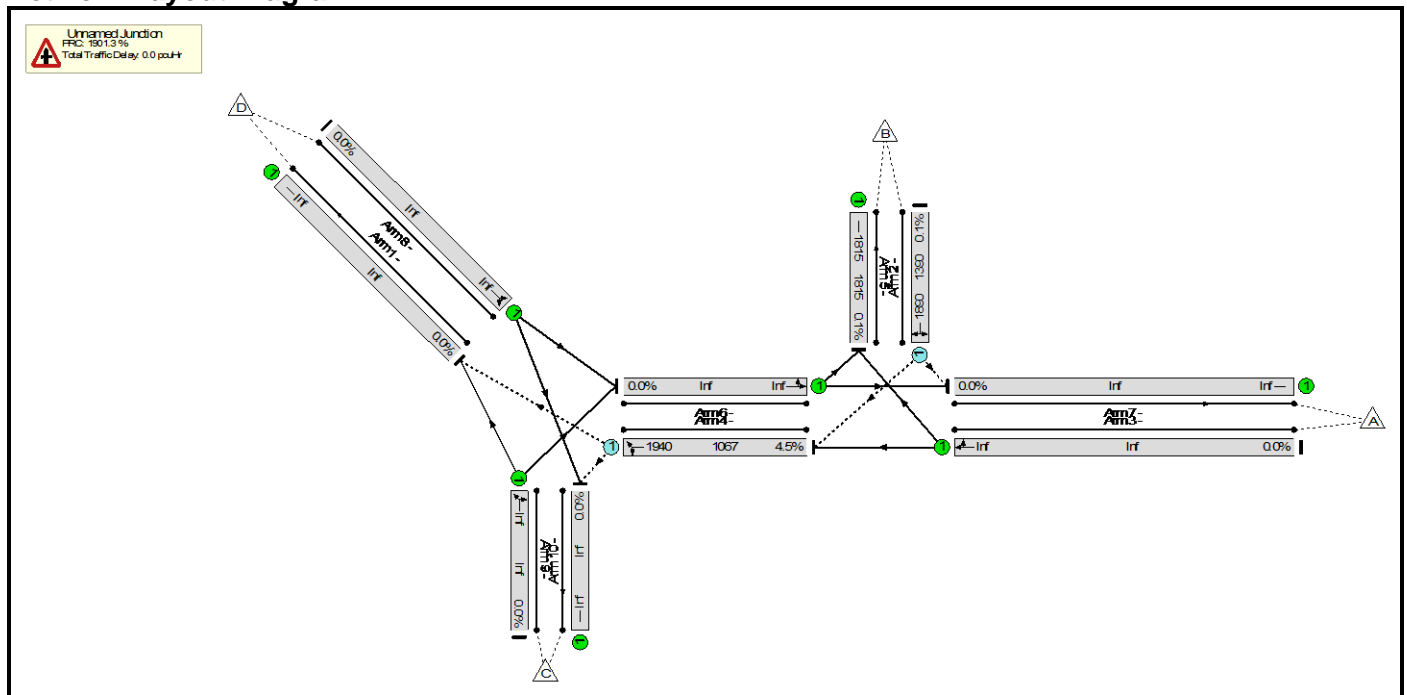
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.4%	28	18	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.4%	28	18	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	0	1890	1386	0.0%	0	0	0	0.0	0.0	0.0
4/1	Ahead Left	O	-		-	-	-	46	1940	1048	4.4%	28	18	0	0.0	1.8	0.0
5/1		U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 90 PRC Over All Lanes (%): 1950.4 Total Delay Over All Lanes(pcuHr): 0.02																	

Network Layout Diagram



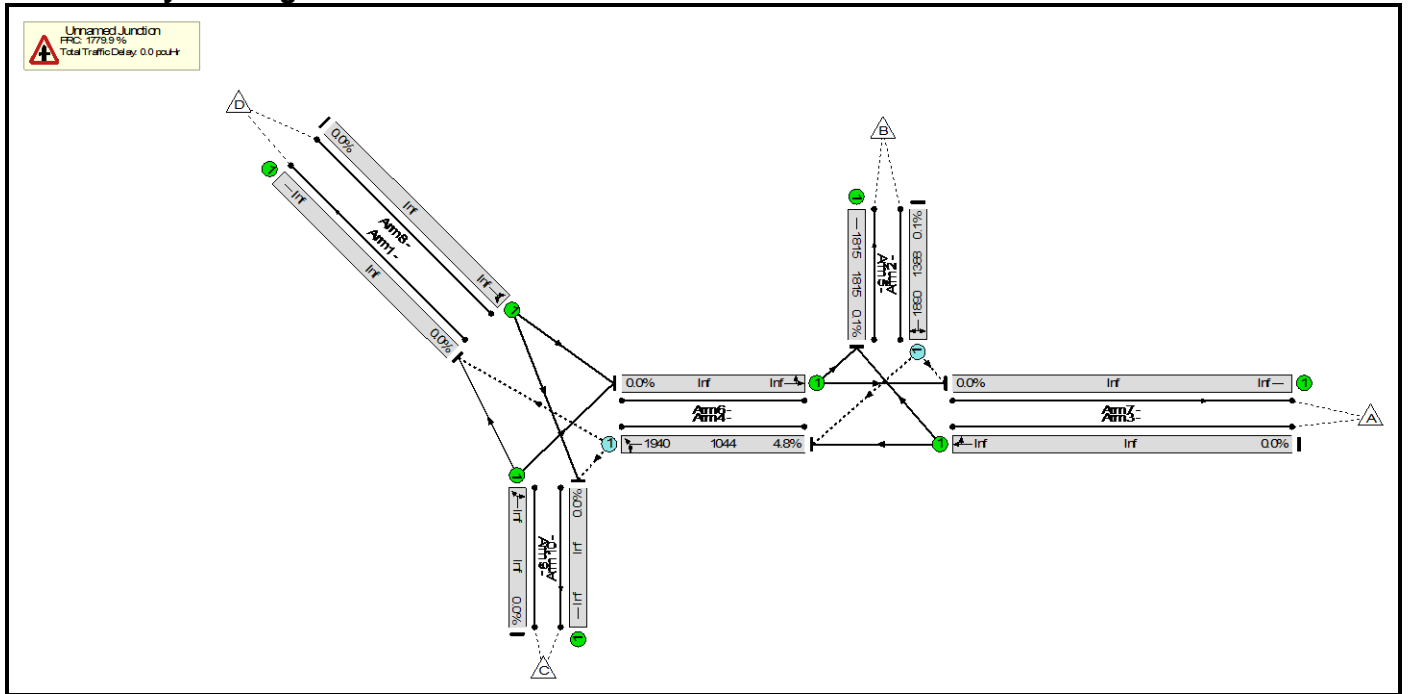
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.5%	30	20	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.5%	30	20	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	2	1890	1390	0.1%	2	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	48	1940	1067	4.5%	28	20	0	0.0	1.8	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 90 PRC Over All Lanes (%): 1901.3 Total Delay Over All Lanes(pcuHr): 0.02																	

Basic Results Summary

Scenario 4: '2032 ND AM' (FG4: '2032 ND AM', Plan 1: 'Network Control Plan 1')

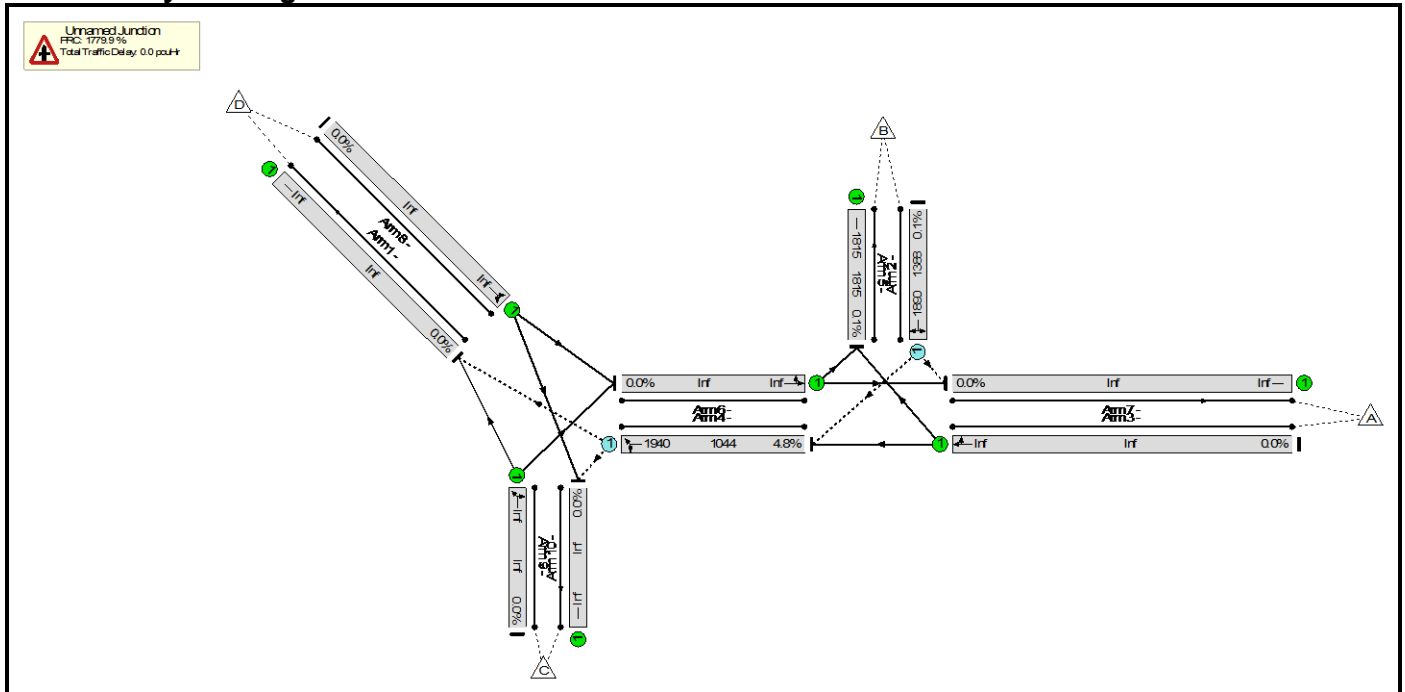
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	2	1890	1388	0.1%	2	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	50	1940	1044	4.8%	29	21	0	0.0	1.8	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 90 PRC Over All Lanes (%): 1779.9 Total Delay Over All Lanes(pcuHr): 0.03																	

Network Layout Diagram



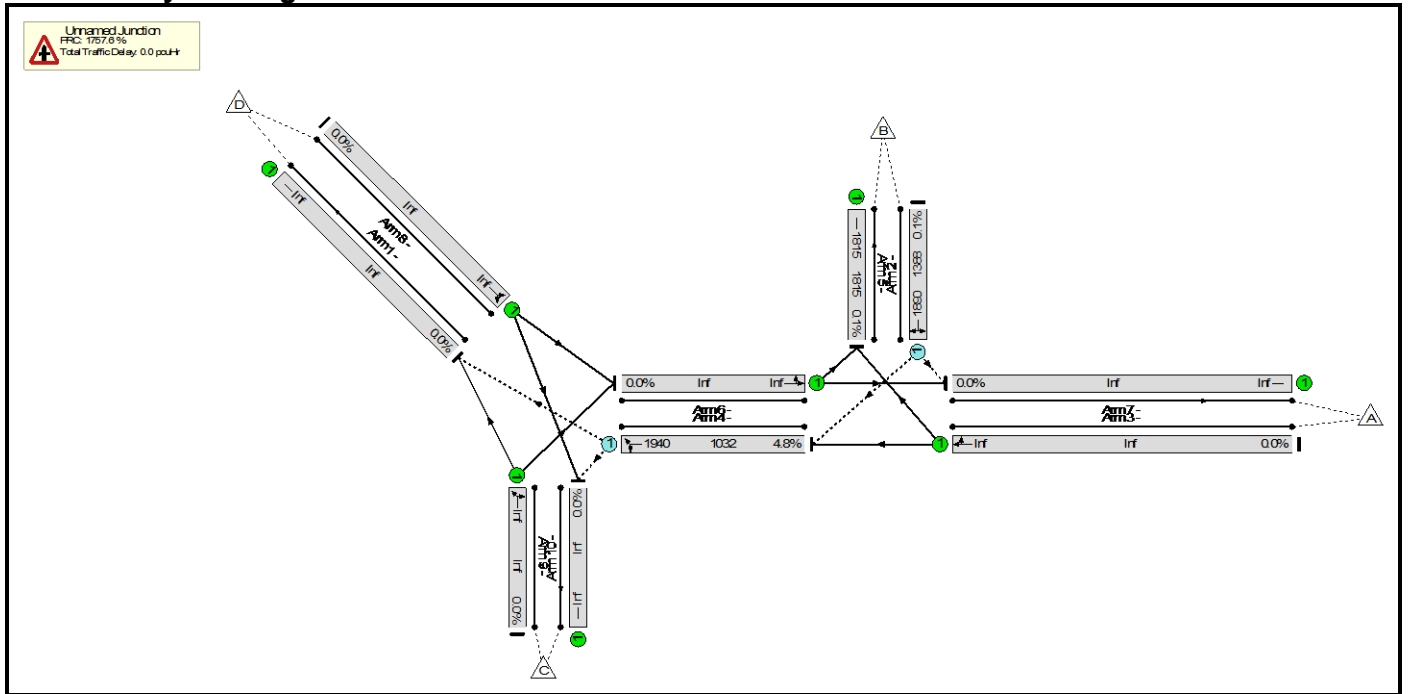
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	2	1890	1388	0.1%	2	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	50	1940	1044	4.8%	29	21	0	0.0	1.8	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1				PRC for Signalled Lanes (%):			0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):			1779.9	Total Delay Over All Lanes(pcuHr):				0.03					

Basic Results Summary

Scenario 6: '2042 ND AM' (FG6: '2042 ND AM', Plan 1: 'Network Control Plan 1')

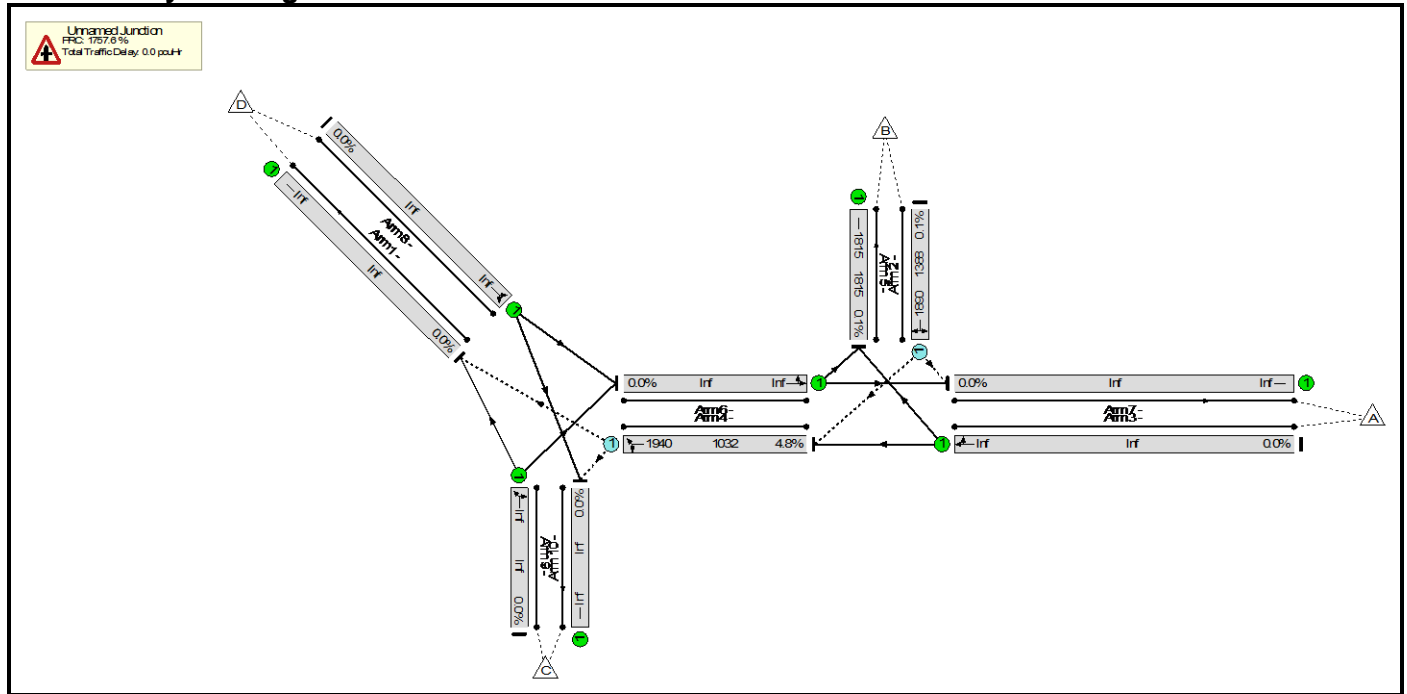
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	2	1890	1388	0.1%	2	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	50	1940	1032	4.8%	29	21	0	0.0	1.8	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1				PRC for Signalled Lanes (%):			0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):			1757.6	Total Delay Over All Lanes(pcuHr):				0.03					

Network Layout Diagram



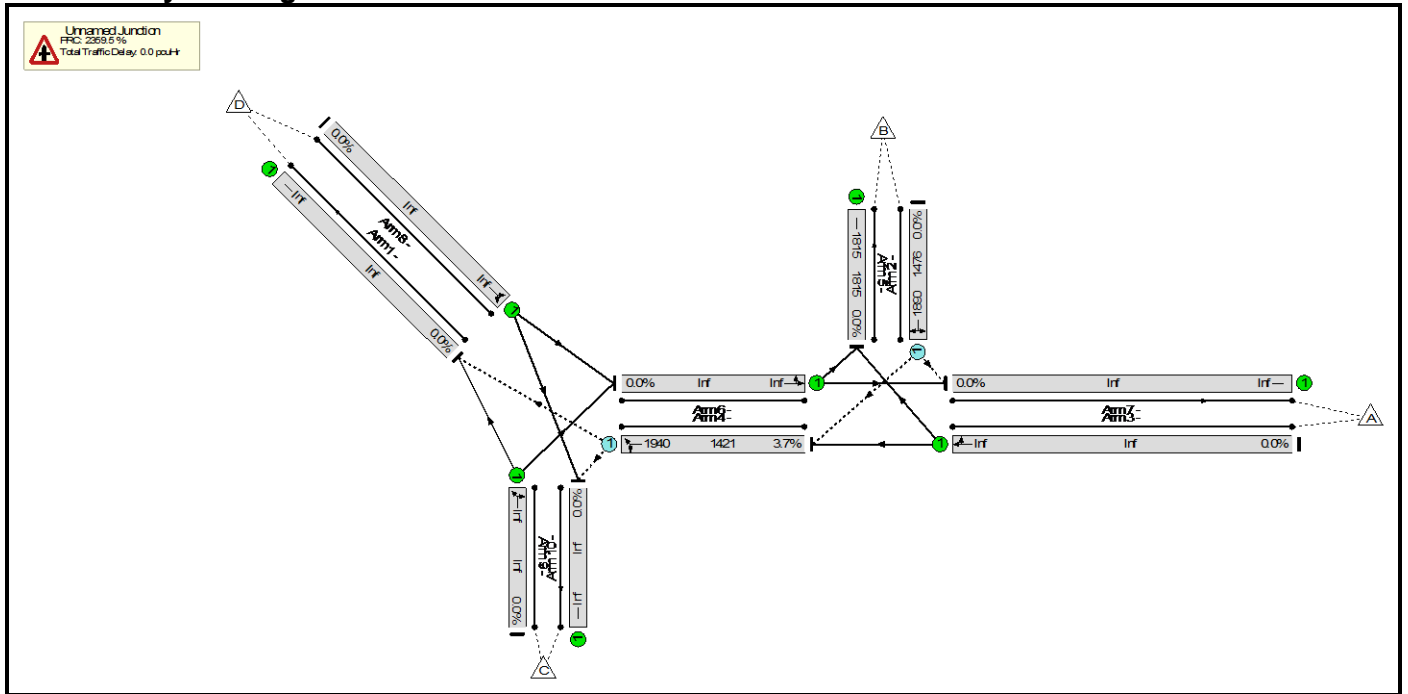
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.8%	31	21	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	2	1890	1388	0.1%	2	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	50	1940	1032	4.8%	29	21	0	0.0	1.8	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1				PRC for Signalled Lanes (%):			0.0		Total Delay for Signalled Lanes (pcuHr):			0.00		Cycle Time (s): 90			
				PRC Over All Lanes (%):			1757.6		Total Delay Over All Lanes(pcuHr):			0.03					

Basic Results Summary

Scenario 8: '2023 Survey PM' (FG8: '2023 Survey PM', Plan 1: 'Network Control Plan 1')

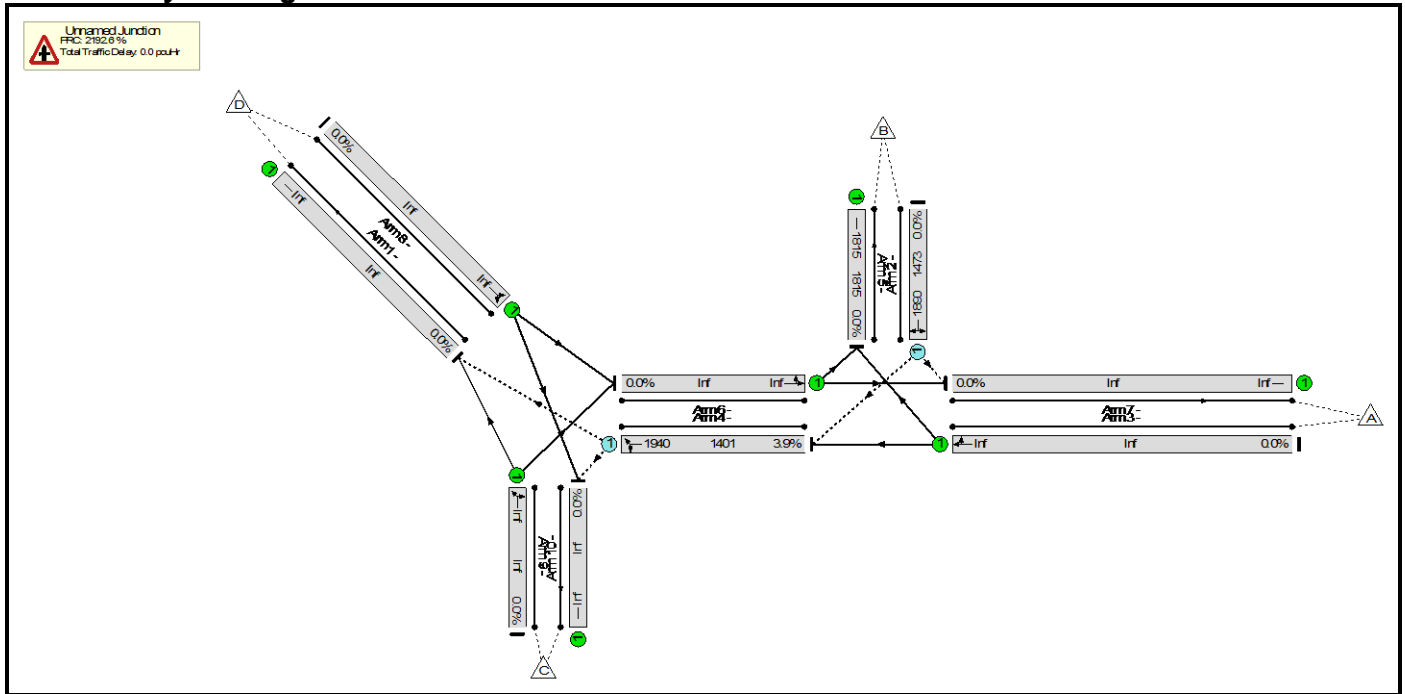
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	3.7%	18	34	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	3.7%	18	34	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	0	1890	1476	0.0%	0	0	0	0.0	0.0	0.0
4/1	Ahead Left	O	-		-	-	-	52	1940	1421	3.7%	18	34	0	0.0	1.3	0.0
5/1		U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 90 PRC Over All Lanes (%): 2359.5 Total Delay Over All Lanes(pcuHr): 0.02																	

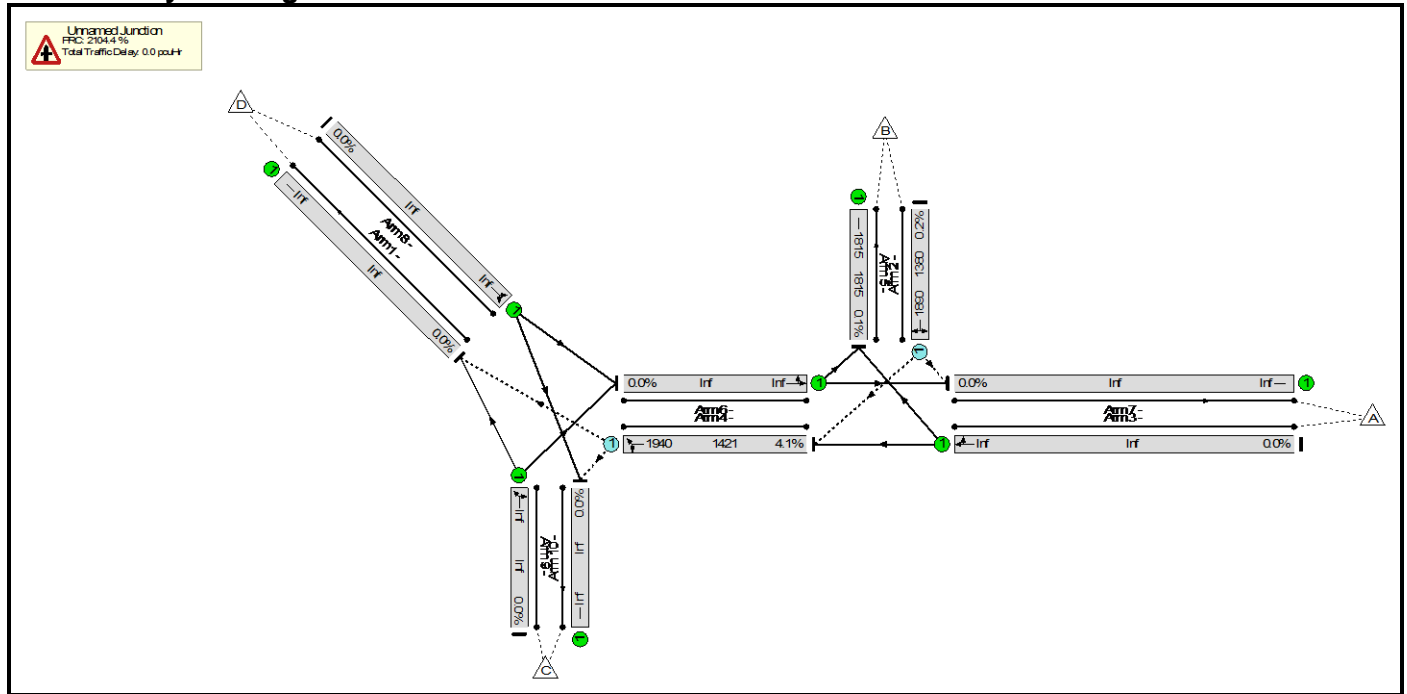
Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	3.9%	19	36	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	3.9%	19	36	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	0	1890	1473	0.0%	0	0	0	0.0	0.0	0.0
4/1	Ahead Left	O	-		-	-	-	55	1940	1401	3.9%	19	36	0	0.0	1.3	0.0
5/1		U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
C1				PRC for Signalled Lanes (%):			0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):			2192.6	Total Delay Over All Lanes(pcuHr):				0.02					

Network Layout Diagram



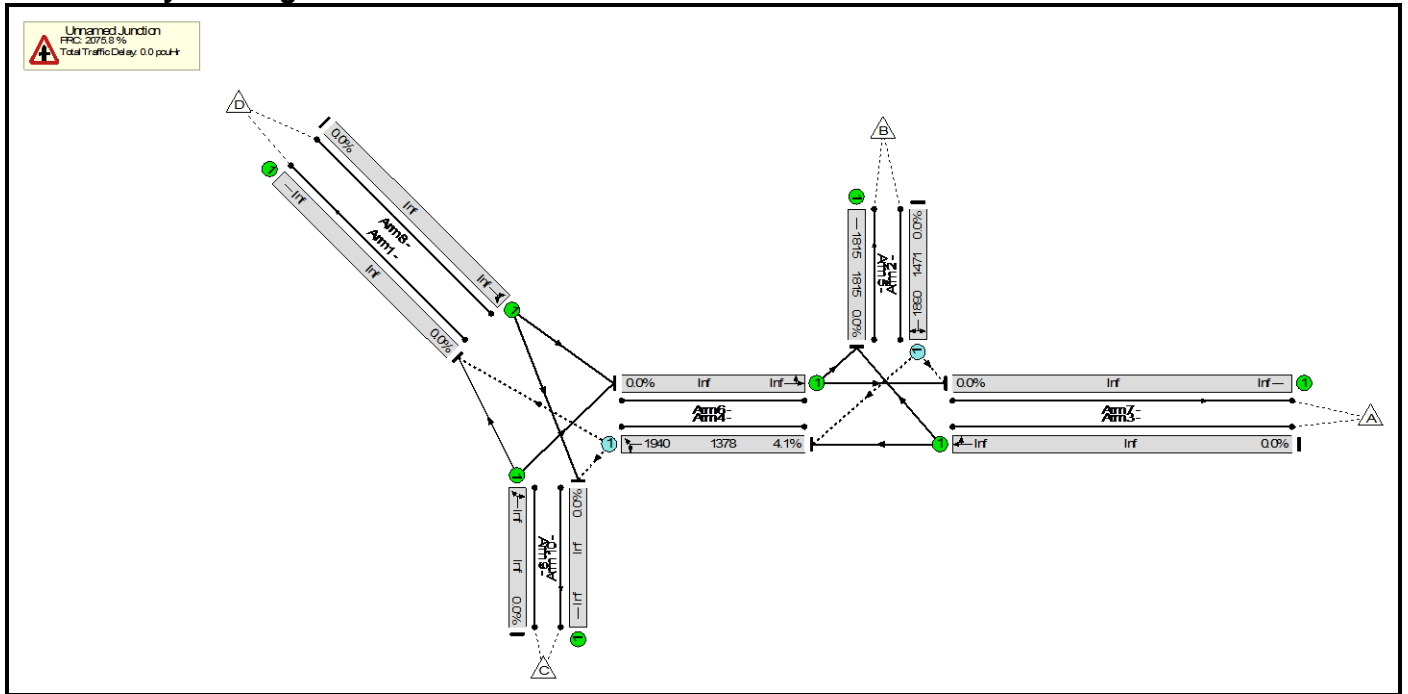
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.1%	22	39	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.1%	22	39	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	3	1890	1380	0.2%	3	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	58	1940	1421	4.1%	19	39	0	0.0	1.3	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1				PRC for Signalled Lanes (%):			0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):			2104.4	Total Delay Over All Lanes(pcuHr):				0.02					

Basic Results Summary

Scenario 11: '2032 ND PM' (FG11: '2032 ND PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



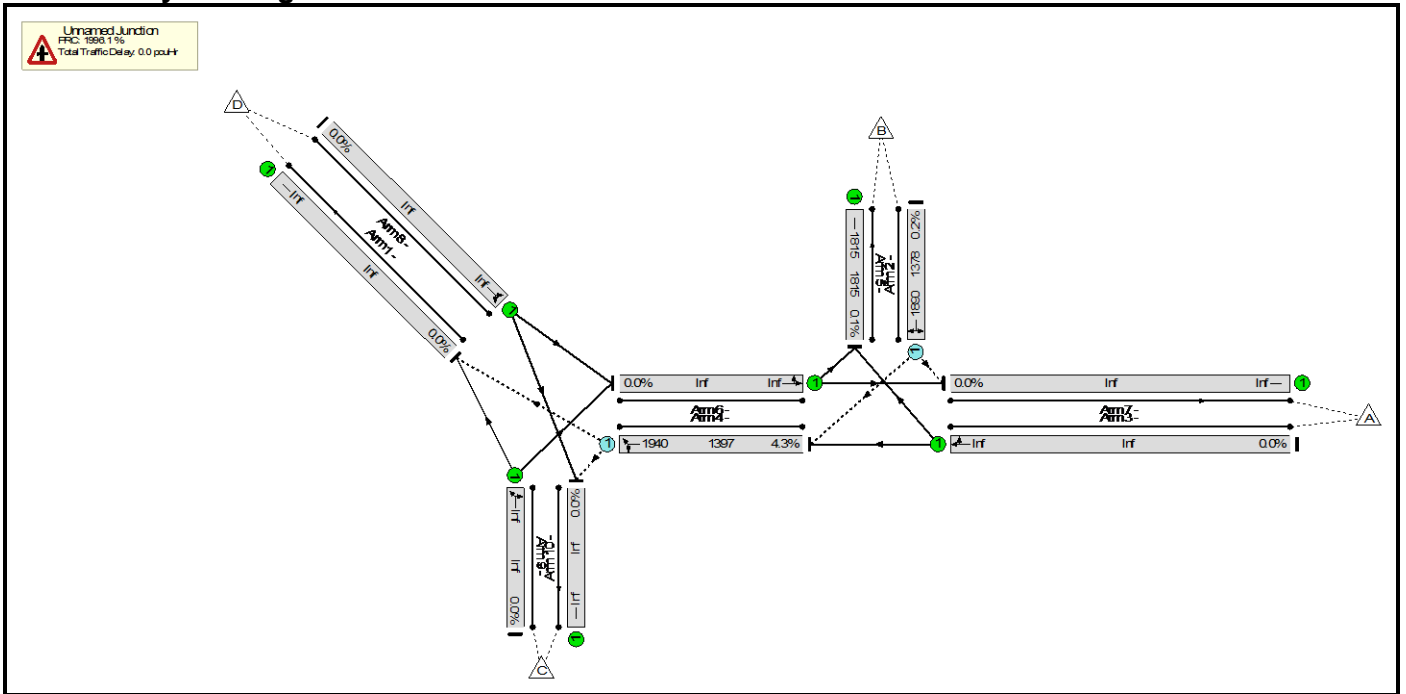
Network Results

[illegible]

Basic Results Summary

Scenario 12: '2032 WD PM' (FG12: '2032 WD PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



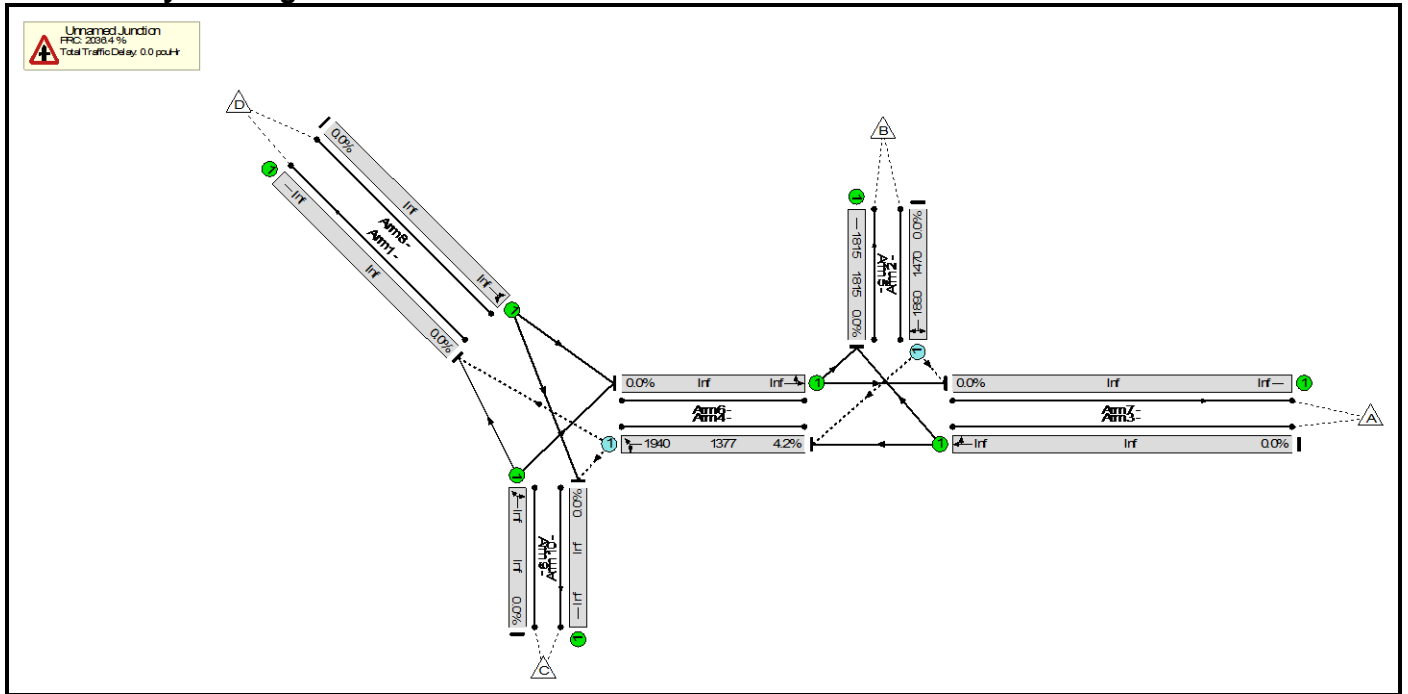
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.3%	23	40	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.3%	23	40	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	3	1890	1378	0.2%	3	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	60	1940	1397	4.3%	20	40	0	0.0	1.3	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
				C1	PRC for Signalled Lanes (%): 0.0 PRC Over All Lanes (%): 1996.1			Total Delay for Signalled Lanes (pcuHr): 0.00 Total Delay Over All Lanes(pcuHr): 0.02				Cycle Time (s): 90					

Basic Results Summary

Scenario 13: '2042 ND PM' (FG13: '2042 ND PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



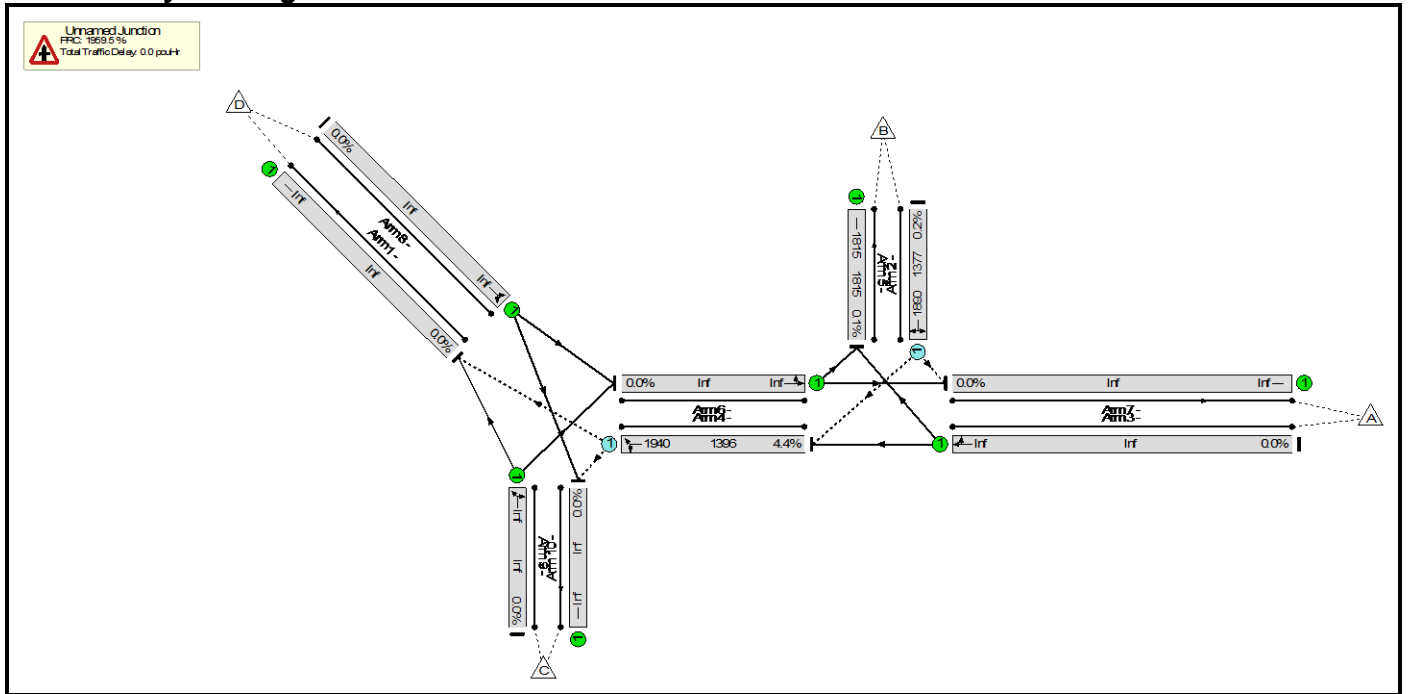
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.2%	20	38	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.2%	20	38	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	0	1890	1470	0.0%	0	0	0	0.0	0.0	0.0
4/1	Ahead Left	O	-		-	-	-	58	1940	1377	4.2%	20	38	0	0.0	1.4	0.0
5/1		U	-		-	-	-	0	1815	1815	0.0%	-	-	-	0.0	0.0	0.0
C1				PRC for Signalled Lanes (%): 0.0 PRC Over All Lanes (%): 2036.4				Total Delay for Signalled Lanes (pcuHr): 0.00 Total Delay Over All Lanes(pcuHr): 0.02				Cycle Time (s): 90					

Basic Results Summary

Scenario 14: '2042 WD PM' (FG14: '2042 WD PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	4.4%	23	41	0	0.0	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	4.4%	23	41	0	0.0	-	-
2/1	Right Left	O	-		-	-	-	3	1890	1377	0.2%	3	0	0	0.0	1.3	0.0
4/1	Ahead Left	O	-		-	-	-	61	1940	1396	4.4%	20	41	0	0.0	1.3	0.0
5/1		U	-		-	-	-	2	1815	1815	0.1%	-	-	-	0.0	1.0	0.0
C1				PRC for Signalled Lanes (%):			0.0	Total Delay for Signalled Lanes (pcuHr):				0.00	Cycle Time (s): 90				
				PRC Over All Lanes (%):			1959.5	Total Delay Over All Lanes(pcuHr):				0.02					



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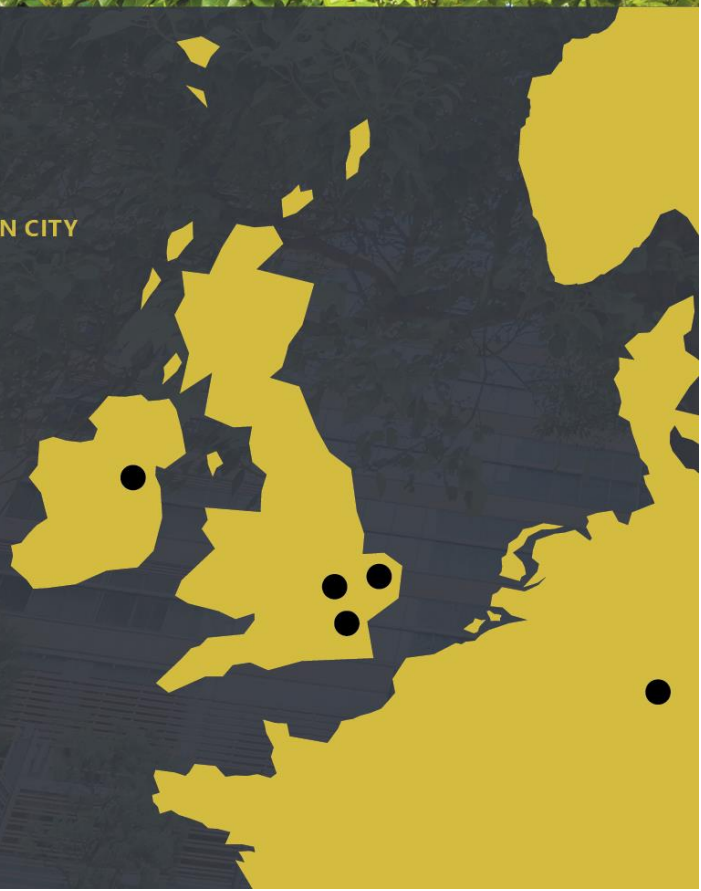
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Appendix B TRICS

Appendix C Flow Diagrams

Appendix D Modelling Results



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