

J000556-TA01a  
March 2025

Proposed Residential Development of  
47 New Dwellings

TA Centre, Marine Road, Prestatyn,  
Denbighshire

# Transport Assessment

*Prepared on behalf of:*



Wales & West Housing  
Association



Pentland House,  
Village Way  
Wilmslow, SK9 2GH  
Company no: 11465973

0161 8264631  
[www.focustp.co.uk](http://www.focustp.co.uk)

## **CONTENTS**

- 1.0 INTRODUCTION**
- 2.0 SITE LOCATION, EXISTING SITE USE & RELEVANT PLANNING POLICY**
  - 2.1 Site Location
  - 2.2 Existing Site Layout and Planning Designations
  - 2.3 Relevant Planning Policy Framework
- 3.0 REVIEW OF EXISTING LOCAL HIGHWAY NETWORK CONDITIONS**
  - 3.1 Description of the Local Highway Network to the Application Site
  - 3.2 Observed Background Local Highway Network Operating Conditions
  - 3.3 Road Safety: Review of Personal Injury Accident Records
- 4.0 SITE ACCESSIBILITY AUDIT**
  - 4.1 Introduction
  - 4.2 Access to Public Transport
  - 4.3 Accessibility to Local Facilities (Walking and Cycling)
  - 4.4 Accessibility Summary
- 5.0 REVIEW OF THE DEVELOPMENT PROPOSALS**
  - 5.1 Development Principles
  - 5.2 Highway Access Arrangements
  - 5.3 Development Car Parking & Cycle Parking
  - 5.4 Site Servicing
- 6.0 PREDICTED TRAVEL DEMAND ASSOCIATED WITH THE APPLICATION SCHEME AND ANTICIPATED DEVELOPMENT TRAFFIC IMPACT**
  - 6.1 Predicted Trip Demand Levels Associated with the Application Scheme
  - 6.2 Application Scheme Vehicle Trip Distribution & Assignment
- 7.0 KEY NETWORK ASSESSMENT PARAMETERS & IMPACT ASSESSMENT**
  - 7.1 Assessment Time Periods
  - 7.2 Scope of Network Assessment
  - 7.3 Calculation of Predicted 'Do-Nothing' Baseline Traffic Volumes
  - 7.4 Calculation of Predicted 'Do-Something' Baseline + Application Scheme Traffic Volumes
  - 7.5 Impact Assessment Criteria
  - 7.6 Link Impact Assessment (Percentage Change)
  - 7.7 Junction Operational Capacity Assessments
  - 7.8 Impact Statement
- 8.0 SUMMARY AND CONCLUSIONS**

## **TABLES (IN TEXT)**

|             |   |
|-------------|---|
| Table TA6.1 | Adjusted Average Residential Trip Rates from TRICS  |
| Table TA6.2 | Predicted Development Trip Demand (47 Dwellings)  |
| Table TA7.1 | Predicted Changes in Link Flow on Immediate Sections of the Local Highway Network to the Application Site                           |
| Table TA7.2 | Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2025 Recorded Background Traffic                    |
| Table TA7.3 | Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2027 'Do-Nothing' Baseline Scenario                 |
| Table TA7.4 | Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2027 'Do-Something' Baseline + Development Scenario |
| Table TA7.5 | Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2030 'Do-Nothing' Baseline Scenario                 |
| Table TA7.6 | Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2030 'Do-Something' Baseline + Development Scenario |

## **FIGURES**

|                |   |
|----------------|---|
| Figure TA1     | Site Location : Wider Context   |
| Figure TA2     | Site Location : Local Context   |
| Figure TA3     | Marine Road: Rolling Hourly Profile   |
| Figure TA4a&b  | 2025 Recorded AM & PM Peak Traffic Flows  |
| Figure TA5     | Location of Recorded Historical Personal Injury Traffic Accidents (2018-2022)           |
| Figure TA6     | Available Local Bus Connections from the Application Site                               |
| Figure TA7     | Rail Network  |
| Figure TA8     | 2km Walk Catchment from the Application Site  |
| Figure TA9     | Local Everyday Facilities Within an Immediate Catchment of the Application Site         |
| Figure TA10    | Identified Local Active Travel Routes In the immediate Vicinity of the Application Site |
| Figure TA11    | 5km Cycle Catchment from the Application Site   |
| Figure TA12    | Proposed Site Access Arrangement  |
| Figure TA13    | Proposed Site Access Arrangement: Available Lateral Visibility                          |
| Figure TA14    | Site Development Traffic Distribution   |
| Figure TA15a&b | Site Development Traffic Assignment   |
| Figure TA16a&b | 2027 Opening Year 'Do-Nothing' Baseline Traffic Flows                                   |
| Figure TA17a&b | 2030 Future Year 'Do-Nothing' Baseline Traffic Flows                                    |
| Figure TA18a&b | 2027 Opening Year 'Do-Something' Baseline + Application Scheme Traffic Flows            |
| Figure TA19a&b | 2030 Opening Year 'Do-Something' Baseline + Application Scheme Traffic Flows            |

## **APPENDICES**

|              |                               |
|--------------|-------------------------------|
| Appendix TA1 | Recorded Traffic Count Data   |
| Appendix TA2 | Application Scheme Masterplan |

|              |  |
|--------------|--|
| Appendix TA3 | Vehicle Swept Path Assessment  |
| Appendix TA4 | Trip Rates   |
| Appendix TA5 | Gravity Model Calculations   |
| Appendix TA6 | Locally Adjusted NTM Growth Factors  |
| Appendix TA7 | Site Access / Marine Road / Bastion Road / Victoria Road / B5120 LINSIG<br>Results |

## 1.0 INTRODUCTION

- 1.1 This Transport Assessment (TA) has been prepared by Focus Transport Planning Ltd (Focus TP) on behalf of Wales & West Housing Association Limited to consider highways and transport matters with respect to proposals for the redevelopment of the TA Centre, Marine Road, Prestatyn, Denbighshire, for the delivery of 47 new residential dwellings. The purpose of the report is to apprise the Local Planning and Highway Authority (LPA & LHA), Denbighshire County Council (DCC), of the proposed highway access arrangements to support residential redevelopment of the site and the anticipated local transport network related effects of the operation of the scheme.
- 1.2 The Application Site comprises the existing TA Centre, located to the north of Marine Road, on the edge of Prestatyn town centre, within easy walk of a range of town centre shops and services, including the route of regular bus services and train station. It is envisaged that residential development of the site could provide the opportunity to deliver up to 47 properties, via a mix of housing types, with the site to be served via a single new access point, representing a minor relocation of the existing TA Centre access.
- 1.3 The scope and nature of matters considered within this report reflects issues that have been established during preliminary pre-application discussions with officers of DCC highways department. The report therefore includes an assessment of the proposed site access strategy, including review of its operational performance and interaction with the nearby PFS access and Marine Road / Bastion Road / Victoria Road signalised junction.
- 1.4 The core structure of the remainder of this TA report is therefore as follows:
- A description of the location of the Application Site and its planning status, identification of prevailing national and local planning & highways policy and a review of other relevant local planning and highway matters.
  - A review of existing local highway network conditions - including an analysis of existing observed baseline traffic levels and historical road safety records.

- An audit of sustainable transport opportunities available in the immediate vicinity of the Application Site, including a review of local walking & cycling catchments and accessibility to public transport.
  
- A description of the main development elements proposed - including a review of proposed vehicle and pedestrian site access arrangements, car parking and large vehicle servicing.
  
- An assessment of the anticipated travel demand associated with the application scheme during critical weekday periods and the predicted local assignment of this traffic.
  
- An assessment of the practical operational effects of the redevelopment proposals over the immediate local highway network.
  
- Summary and conclusions.

## 2.0 SITE LOCATION, EXISTING SITE USE & RELEVANT PLANNING POLICY

### 2.1 Site Location

2.1.1 The Application Site is located to the north of Prestatyn town centre. A plan illustrating the strategic location of the Application Site in relation to the surrounding built up areas of Prestatyn is included as **Figure TA1** to this report, with an aerial photo plan of the existing site layout and immediate local streets included as **Figure TA2**. The aerial image shows the site in the context of the immediate local road routes of Marine Road, Bastion Road and Victoria Road.

### 2.2 Existing Site Layout and Planning Designations

#### *Existing Site Land Use*

2.2.1 The Application Site is of approximately 0.78 hectares in size and comprises the former training and defence facility (TA Centre). A mix of single and three-storey buildings occupy the site, providing offices, mess barracks and warehouse/stores, along with yard and grass areas. To the north the site is bounded by residential properties of Highbury Road and Seven Sisters Road, and residential properties of Bastion Road to the west. To the south the site is bounded by Marine Road / residential properties of Marine Road, with Prestatyn Fire Station and a recreation area located to the east. Beyond the recreation area lies Nant-Y-More, an extra care apartment scheme of 59 units, which is operated by the applicant, Wales & West Housing Association.

2.2.2 Pedestrian and vehicular access to the site is available via a gated priority-controlled junction off Marine Road, which effectively forms a staggered arrangement with the entry to a PFS, located on the opposite side of Marine Road (left-right staggered arrangement, with circa 12m separation, measured centreline to centreline). The site also shares a short (circa 11.5m) boundary with Bastion Road (no formal access at this location).

### *Planning Status*

2.2.3 The Application Site represents a former TA Centre. Whilst not currently operational, it is understood that the site could be brought back into use under extant planning consents. It is therefore evident that the Application Site could result in a level of vehicle movements associated with its former use.

## **2.3 Relevant Planning Policy Framework**

2.3.1 The following paragraphs provide a summary of transport related planning policy matters that are considered relevant to the application scheme. This review includes consideration of transport policy guidance set out in both national and local planning and transport policy documentation.

### ***National Planning Policy: Future Wales - the National Plan 2040***

2.3.2 Future Wales represents the national development plan for Wales to 2040 and was updated in February 2021. With reference to transport matters, this document seeks to ensure “a Wales where people live in places where travel is sustainable”, identifying that sustainable transport must be “embedded within development to enable easy and convenient access from one place to another”.

2.3.3 This document references the Active Travel (Wales) Act 2013 as the influence to integrating active travel with new development. The Active Travel Guidance (July 2021) has been referenced in the design of the site access which incorporates footways and dropped kerbs/tactile paving.

### ***National Planning Policy: Planning Policy Wales (PPW)***

2.3.4 PPW12 (February 2024) sets out the land use planning policies of the Welsh Government and is supported by a series of Technical Advice Notes.

2.3.5 Transport is considered in detail in Chapter 4 of PPW. The document sets out the aims “to ensure new development is located and designed in a way which minimises

the need to travel, reduces dependency on the private car and enables sustainable access to employment, local services and community facilities.”

2.3.6 The document states that this will be done by “integrating development with sustainable transport infrastructure and designing schemes in a way which maximises provision and use of sustainable forms of travel, including prioritising these modes over the private car.”

2.3.7 The document states that the planning system can assist with improving transport choice and achieve the above aims in the following ways:

- Bringing services to people to reduce the need to travel, planning for better physical and digital connectivity to support access to more local services / more home and remote working, to reduce dependency on cars.
- Allowing people and goods to move easily from door-to-door by accessible, sustainable and efficient transport via investing in reliable, efficient and affordable transport services, and ensuring that transport infrastructure is safe, accessible, well-maintained and future-proofed, to adapt to climate change.
- Use sustainable transport hierarchy to give priority to meeting the demand for travel by walking, cycling and public transport ahead of private motor vehicles.
- Encouraging people to make the change to more sustainable transport by making low-carbon sustainable transport more attractive and more affordable, and by adopting innovations.

2.3.8 Accordingly, this TS has been prepared to include the consideration of; accessibility by sustainable modes, including walking, cycling and public transport; road safety; and the impacts of the development on the local highway network.

***Technical Advice Note 18: Transport (TAN18)***

- 2.3.9 PPW is supplemented by Technical Advice Note (TAN) 18, published 31 March 2007, which provides detailed guidance on implementing the transport objectives contained in PPW.
- 2.3.10 TAN18 sets out thresholds of development at which formal transport assessment is considered as being necessary, identifying a threshold of greater than 100 dwellings for residential development schemes. Given that the application scheme only represents a development scheme of 47 dwellings, there is an argument that formal transport appraisal of the project is not required. However, this Transport Assessment report has been prepared to set out key practical aspects of the development, including accessibility by sustainable modes, along with access, parking and servicing arrangements, and also including detailed junction capacity assessments as requested by the LHA.

***Denbighshire Local Development Plan 2006 - 2021 (DLDP)***

- 2.3.11 The Denbighshire Local Development Plan (DDP) is the adopted development plan for Denbighshire for the 15-year period 2006 - 2021. Although the adopted LDP became time expired at the end of 2021 it remains the adopted Development Plan for Denbighshire, as there have been delays in the preparation of the replacement Local Plan. DCC are at the early stages of preparing a replacement Plan for the County, with the Preferred Strategy as amended by the report to Council of 9 May 2023 having been approved to form the basis for developing the Deposit Replacement Local Development Plan 2018 to 2033 for consultation. The consultation on this Plan has now ended with responses currently being considered to inform the development of the Deposit Plan.
- 2.3.12 In advance of the adoption of a replacement Local Plan, the policies with the 2006-2021 DLDP remain the reference planning guidance when considering the suitability of new development. DLDP policies relevant to the consideration of highways and transport matters associated are as set out below:

### ***Policy RD 1 - Sustainable Development and Good Standard Design***

***Development proposals will be supported within development boundaries provided that all the following criteria are met...***

***vii) Provides safe and convenient access for disabled people, pedestrians, cyclists, vehicles and emergency vehicles together with adequate parking, services and manoeuvring space. Proposals should also consider impacts on the wider Rights of Way network surrounding the site; and***

***viii) Does not have an unacceptable effect on the local highway network as a result of congestion, danger and nuisance arising from traffic generated and incorporates traffic management/calming measures where necessary and appropriate. A transport assessment and travel plan will be required where appropriate; and***

***ix) Has regard to the adequacy of existing public facilities and services....***

### ***Policy ASA 1 - New Transport Infrastructure***

***Development proposals for the provision of new transport infrastructure and improvements to existing infrastructure facilities will be supported providing that the following criteria are met:***

- there is a need and justification for the proposal on economic and/or social grounds; and***
- there are no unacceptable effects on the natural and built environment; and***
- provision is made for safe access by all users, including cyclists, pedestrians and the mobility impaired.***

### ***Policy ASA 2 - Provision of Sustainable Transport Facilities***

***Development proposals expected to result in a need to bring forward improvements to public transport, walking or cycling infrastructure will be required to incorporate or contribute to the cost of their provision. Subject to individual assessments, schemes may be required to provide or contribute to:***

- Capacity improvements or connection to the cycle network;***
- Provision of walking and cycling links with public transport facilities;***
- Improvement of public transport services.***

### ***Policy ASA 3 - Parking Standards***

***Development proposals, including changes of use, will be expected to provide appropriate parking spaces for cars and bicycles. If the use of a property or premises requires parking infrastructure for mobility impaired people, these facilities will be taken into account when determining the amount of parking space required. Consideration will be given to the following circumstances (where they apply) in determining parking provision:***

- The site is located within a high-densely populated area;***

- *Access to and availability of public transport is secured;*
- *Parking is available within reasonable distance of the site;*
- *Alternative forms of transport are available in the area.*

2.3.13 Supporting text to policy ASA1 also notes that:

*“Major developments will have implications on existing travel patterns in an area. Locating retail, housing, education facilities and health services can cause change to travel directions, travel frequencies and the choice of means of transport. A Transport Assessment for a proposed development should assist in predicting implications and identifying measures to counteract the likelihood of negative impacts. Like non-motorised user audits, the conclusions and recommendations of a transport assessment should be incorporated into the development proposal.*

*Information with regard to transport assessment requirements and process can be found in Technical Advice Note (TAN) 18: Transport, Appendix D.”*

2.3.14 It is noted that the Draft Preferred Strategy for the replacement Local Plan states the following regarding transport and accessibility matters:

*“Proposals for new facilities, and improvements to existing facilities, which improve accessibility to employment and services, particularly by sustainable means, will be supported.*

*Developments will be expected to make provision for Active Travel and green infrastructure as part of their design, and link into wider networks.”*

2.3.15 The application scheme would help to meet the core transport and accessibility policy objectives identified in prevailing and draft future Local Plan policy, by locating the proposed residential development adjacent to existing mature residential areas and within a short walking distance of Prestatyn Town Centre shops and services, including bus stops and railway station. Furthermore, the site would be designed and developed to encourage trip making by alternative travel modes to the private car (walking / cycling / public transport).

### ***North Wales Joint Local Transport Plan 2015***

2.3.16 The North Wales Joint Local Transport Plan (LTP) was jointly prepared by the six North Wales Local Authorities. The LTP’s vision is to “remove barriers to economic growth, prosperity and well-being by delivering safe, sustainable, affordable and effective transport networks”.

2.3.17 The LTP aims to address the following key issues for North Wales:

- The ability of the strategic road and rail corridors to provide the necessary good connectivity, for people and freight, within North Wales, to the ports and to the rest of the UK to support the economy and jobs, including tourism;
- The lack of resilience of the road and rail networks to planned and unplanned events including extreme weather;
- The need for good access to and between the three Enterprise Zones in North Wales;
- The lack of viable and affordable alternatives to the car to access key employment sites and other services; and
- The need for good road links to / from the trunk road network into the rural areas to help retain the viability of local businesses and support the Welsh language and culture.

2.3.18 The LTP provides the strategic baseline for considering developments that have a transportation element within the wider area. With reference to the proposed residential development which is the subject of this TA, consideration will be made of the wider integration within the highways network and the promotion of access by sustainable travel modes.

### **3.0 REVIEW OF EXISTING LOCAL HIGHWAY NETWORK CONDITIONS**

#### **3.1 Description of the Local Highway Network to the Application Site**

3.1.1 As noted in section 2.2 to this report, access to the Application Site is currently via the A548 Marine Road, via a gated priority-controlled junction off Marine Road, which effectively forms a staggered arrangement with the entry to a PFS, located on the opposite side of Marine Road (left-right staggered arrangement, with circa 12m separation, measured centreline to centreline). The PFS exit is located circa 28m west of its entry, with 'Keep Clear' markings provided in the Marine Road carriageway.

3.1.2 Marine Road represents a two-way single carriageway route of 9m width, with 2m footways to both sides. The route is characterised by continuous frontage development. The route is street lit, having an east-west alignment and operates under 20mph speed limit. Marine Road becomes Victoria Road at a signalised crossroads junction with Bastion Road (north) / B5120 Bastion Road (south) at the southwestern corner of the Application Site and becomes Prestatyn Road circa 600m to the east of the Application Site, where the road turns through a 90-degree bend to the south, continuing towards Gronant. The A548 Victoria Road continues westwards with frontage development (predominantly residential) through Prestatyn and onwards to Rhyl.

3.1.3 Double yellow line restrictions are provided to both sides of Marine Road to the Application Site's frontage, between its signalised crossroads junction with Bastion Road (north) / B5120 Bastion Road (south) and approximately the eastern edge of the Application Site frontage. Some on-street parking has been observed at Marine Road to the east of the Application Site, in particular outside residential properties which do not benefit from off-road parking. Due to the wide width of Marine Road, such on-street parking does not impede the two-way flow of vehicles along the route.

3.1.4 As mentioned above, the A548 Marine Road / Victoria Road forms a signalled controlled crossroads junction with Bastion Road (north) / B5120 Bastion Road

(south) at the southwestern corner of the Application Site. Each approach includes signalised pedestrian crossing facilities.

3.1.5 Bastion Road (north) forms the northern approach to the crossroads junction and continues in a northerly direction to Prestatyn Central Beach. Bastion Road (north) is of 8m width with 3m wide footways to both sides, streetlighting, and operates under 20mph speed limit, with traffic calming in the form of speed cushions at 70m intervals. The B5120 Bastion Road (south) forms the southern approach and provides access to Prestatyn railway station and town centre shops and services.

### 3.2 Observed Background Local Highway Network Operating Conditions

3.2.1 Background operating conditions on key connecting links to the Application Site have been established via the undertaking of a local weekday traffic survey exercise at the existing site access / Marine Road / PFS junction and Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads junction on Tuesday 28<sup>th</sup> January 2025. This survey also included for the recording of queue lengths on the approached to the signalised crossroads junction (see **Appendix TA1** for collected traffic data).

3.2.2 Traffic flow data was collected for traditional AM & PM 'rush hour' peaks over the time periods 08:00 - 10:00 and 16:00 - 18:00. **Figure TA3** to this report illustrates total rolling hourly total recorded traffic movements across the study area. Review of this exercise, demonstrates that maximum hourly traffic levels took place during the AM peak period 08:00-09:00, with 476 two-way vehicle movements recorded at Marine Road during this time. Maximum PM peak demand occurred for the hour 16:45-17:45, showing a broadly similar level of traffic demand, i.e. 514 two-way vehicle movements. HGV / bus traffic levels were noted to be less than 1% of overall traffic during rush hour periods.

3.2.3 Recorded turning movements at the existing site access / Marine Road / PFS junction and Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads junction for the above identified maximum AM and PM peak hours are illustrated in **Figure TA4(a&b)** to this report.

3.2.4 No vehicle movements were recorded to/from the existing TA Centre access, with the access gates noted to be locked shut for the duration of the survey.

### 3.3 Road Safety: Review of Personal Injury Accident Records

3.3.1 An appraisal of the operational safety of the immediate local highway network to the Application Site has been carried out through a review of historical Personal Injury Accident (PIA) data obtained from the crashmap.co.uk database for the 5-year search period (Jan 2018 to Dec 2022 inclusive). This database includes for all accident incidents as recorded by the police & emergency services and therefore represents 'industry standard' data utilised for the calculation of accident rates and the assessment of highway safety. The specification of a five-year search period accords with study requirements recommended in good practice guidance, with the study area including for the existing site access off Marine Road and the Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads.

3.3.2 Details of the extent of the search area and the number & location of recorded accident events are illustrated in **Figure TA5** to this report.

3.3.3 Review of the recorded accident data demonstrates that no accident events have taken place at the existing site access. Further interrogation of the database identifies that no accidents have occurred at the access over at least the last 10 years.

3.3.4 Three slight class accidents have been recorded at the Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads. Review of the details of these incidents identify that two involved right turn manoeuvres and one involved a pedestrian not utilising the crossing facility.

3.3.5 Based on the above review of issues, it is ultimately concluded that there are no clear & substantive prevailing road safety issues involving traffic using immediate routes to the Application Site, that would call the redevelopment of the site for

residential land use into question. It is ultimately concluded that there is no clear requirement for the implementation of new highway safety mitigation measures to cater for predicted development traffic levels.

## 4.0 SITE ACCESSIBILITY AUDIT

### 4.1 Introduction

4.1.1 Development of the Application Site for residential land use would need to satisfy the key planning and transport related sustainability objectives of:

- Reducing the need to travel, especially by private car;
- Ensuring accessibility to a range of sustainable travel options.

4.1.2 The nature of local sustainable transport connections available within the immediate catchment of the Application Site are summarised below.

### 4.2 Access to Public Transport

4.2.1 The nearest local bus stops to the Application Site are available on the B5120 (circa 150m to the southwest of the site) and are served by bus routes 11C/11F/11M (Rhyl to Chester), providing a half hourly service in each direction. Both bus stops have shelters with seating, bus boarder kerbs and timetable information boards with the southbound stop also featuring on carriageway bus cage markings. Safe pedestrian access to these stops is available via signalised crossing facilities at the Marine Road / Bastion Road / Victoria Road signalised crossroads junction.

4.2.2 These services can also be accessed via the bus stops (circa 150m - 220m) to the east of the Application Site on Marine Road. The eastbound stop on Marine Road represents an on-road marked bus cage with bus boarder kerbs, flagpost and timetable information board, with westbound stop comprising a flagpost with boarder kerbs and timetable information board.

4.2.3 Prestatyn bus station is located just under 500m to the south of the Application Site where other local services shown on **Figure TA6** are available. These include the half hourly circular 35/36 service to/from Rhyl via Rhuddlan, Dyserth and Meilden, and the hourly route 12 from Prestatyn to Llandudno via Meilden, Rhuddlan, Bodelwyddan, Abergele and Colwyn Bay.

4.2.4 Prestatyn Rail Station is located within a circa 200m walk to the south of the Application Site. Prestatyn station is served by trains on the North Wales coastal line (Chester - Llandudno Junction - Holyhead) as shown on **Figure TA7**. Three services are available to Llandudno Junction with two of these continuing to Holyhead. Three services also operate to Chester with the services continuing to Manchester, Birmingham International and Cardiff Central via Wrexham and Shrewsbury.

### 4.3 Accessibility to Local Facilities (Walking and Cycling)

4.3.1 In addition to the above identified local public transport connections, the Application Site's location within the Prestatyn also provides the opportunity for access to local shops, services and community facilities by foot or cycle. National planning guidance notes that walking is the most important mode of travel at the local scale, offering the greatest potential to replace short distance car trips of under 2km. Guidance produced by CIHT also notes that 800m represents an 'acceptable' walking distance to community facilities and shops, with 1.2km representing a 'preferred maximum'. 2km has been identified as a suitable walk distance for regular commuting trips and journeys to / from school.

4.3.2 Local footway connections on immediate sections of Marine Road and onwards from its junction with Victoria Road / Bastion Road are of generally of good quality (typically of minimum 2m width).

4.3.3 The Application site is located to the north of the main shopping street in Prestatyn. A formal traffic signal-controlled crossing point of Marine Road is available to the west of the site access junction providing safe crossing opportunities to reach the shops and local facilities within central Prestatyn. All four arms of the traffic signal-controlled junction of Marine Road with Victoria Road and Bastion Road feature push button controlled crossing facilities with associated dropped kerbs and tactile paving provision. **Figure TA8** to this report illustrates suitable walking catchments from the site and **Figure TA9** demonstrates

the location of 'everyday' type destinations that lie within a convenient and practical walking distance, including:

- Local schools (both primary and secondary);
- Shops and services including foodstores;
- Library, cinema, churches and community centres;
- Leisure facilities, park & gym/swimming pool at Nova;
- Public houses, restaurants and take-aways.

4.3.4 **Figure TA10** to this report illustrates existing key formal active travel connections within Prestatyn which further encourage local foot access.

4.3.5 National planning guidance also notes that cycling has the potential to substitute for short car trips - particularly those journeys of 5km or less, or which could form part of a longer journey by public transport. The location of the Application site allows for practical cycling access to a range of local areas including all of the built-up area of Prestatyn and Ffrith Beach within a 2km range. The 5km cycle catchment extends to include Meilden along with parts of Rhyl to the west and Dyserth to the south (**Figure TA11**).

4.3.6 The long-distance National Cycle Route 5 (Reading to Holyhead) runs along the seafront through Prestatyn. A link route to NCR 5 runs alongside the eastern edge of Bastion Road towards the town centre by way of a shared footway / cycleway.

#### 4.4 **Accessibility Summary**

4.4.1 Overall, it is concluded that the Application Site represents a suitable location for residential development, forming part of an established town and within a practical walking distance of good frequency public transport services (bus and rail) and a variety of shops, schools, services & facilities.

4.4.2 Such locational characteristics would deliver the potential for residents of the Application Site to utilise sustainable transport for some 'everyday' journeys and therefore meet core planning objectives of promoting opportunities for the use of

alternative travel modes to the private car and managing the overall traffic impact associated with new development.

## 5.0 REVIEW OF THE DEVELOPMENT PROPOSALS

### 5.1 Development Principles

5.1.1 The application scheme represents the development of the former TA Centre, Prestatyn, for future residential land use. A masterplan illustrating the proposed general arrangements of the application scheme is included as **Appendix TA2** to this report.

5.1.2 The proposals envisage the delivery of 47 new affordable residential dwellings, providing the following schedule of units:

- 26 \* 1-bedroom apartments (common access)
- 8 \* 1-bed walk-up apartments
- 9 \* 2 bed dwellings (semi-detached & terrace);
- 4 \* 3-bedroom dwellings (semi-detached).

5.1.3 The attached masterplan also identifies the layout of proposed internal site vehicle arrangements, car parking areas and ancillary landscaping zones.

### 5.2 Highway Access Arrangements

5.2.1 Vehicle access to the application scheme is proposed to be taken via a new estate road cul-de-sac connection off Marine Road, circa 20m from the existing TA Centre access (measured junction centre to junction centre). This new site access junction has been designed to reflect typical adoptable standard roads serving small residential developments, viz: (see also **Figure TA12** to this report)

- 5.5m main carriageway width;
- 2m footways to both sides;
- 6m radii at junction with Marine Road.

5.2.2 The proposed location of the new site access junction allows for the delivery of the following sightlines from the new estate road connection (see **Figure TA12**):

- *Leading direction visibility (to right): 2.4m by 25m+*
- *Non-leading direction visibility (to right): 2.4m by 25m+*

5.2.3 Such visibility provision is considered entirely suitable for access to Marine Road, which operates under 20mph speed limit. Indeed, it is noted that visibility is available in excess of 43m, which would be suitable for speeds of 30mph.

5.2.4 The internal development estate road is to be provided with a 6m carriageway width for the initial section, with 2m footways to both sides. The initial section provides access to parking spaces along its eastern side, which would be allocated to dwellings k-p. The initial section of route continues to an adoptable standard turning head. To the west of the turning head, the access road continues as a 6m wide shared surface route, providing access to remaining dwellings and apartments. A pedestrian link is proposed to Bastion Road at the western extent on the site.

### 5.3 Development Car Parking & Cycle Parking

#### *Car Parking*

5.3.1 Guidance on suitable car parking levels to support new development in Denbighshire is set out in DCC Supplementary Planning Guidance Note “Parking Requirements in New Developments”. Review of this document identifies that the Application Site would fall within ‘Parking Zone 1’ (i.e. County Urban Areas), with parking for new residential development in these areas to be provided as follows:

- *Apartments:* 1 space per bedroom (up to a maximum of 3 spaces), 1 space per 5 dwellings for visitors.
- *Houses:* 1 space per bedroom (up to a maximum of 3 spaces), 1 space per 5 dwellings for visitors.

5.3.2 It should be noted that the DCC car parking standards are ‘maximum’ standards. The supporting text to the guidance notes that exceptions to the delivery of these maximum standards may be acceptable under the following circumstances:

- Where the implementation of these standards would cause road safety or congestion problems additional provision will be required.
- Should a particular development not justify the levels of parking indicated, the Authority may give consideration to a variation in standards relating to the nature of development, a lower level of car ownership in urban areas and those well serviced by public transport. In these circumstances, a fully reasoned assessment of the parking provision proposed (covering areas such as existing public transport or parking provision) will be the subject of negotiation with the Council.
- Local circumstances (e.g. the availability and existing capacity of nearby parking and public transport). Each planning application will be assessed on their own merits according to the size, nature, location, density, employment and traffic generation characteristics of the proposed development.

5.3.3 In the case of the application scheme, resident car parking will be provided at the following levels that are broadly in accordance with the maximum standards set out in the SPGN, viz:

- 1-bedroom walk up apartment properties: 1-2 spaces per unit.
- 1-bedroom common access apartments: 0.5 spaces per unit.
- 2-bedroom property: 2 car parking spaces.
- 3-bedroom property: 2 car parking spaces.

5.3.4 There is a slight shortfall in parking associated with the 3-bed dwellings and common access apartments when compared to DCC maximum standards, however this is considered entirely acceptable on the basis of the highly accessible nature of the Application Site, within an easy walking & cycling distance of every local facilities such as convenience shopping, town centre shops/services & Parc

Prestatyn Shopping Park / other food & drink and a local primary school, and within a short walk of bus stops and Prestatyn Railway Station, as set out in chapter 4.

- 5.3.5 Furthermore, review of local census data for the Denbighshire 002 super output area - mid layer identifies that 47% of residents in rented properties locally (houses and apartments) do not own a car or van. It is therefore evident that the proposed quantity of parking proposed to support the application scheme is entirely appropriate to meet demand.

#### *Cycle Parking*

- 5.3.6 DCC parking standards do not set out any prescribed standards for cycle parking to support new residential development, that the SPGN text does note that secure and convenient communal cycle parking areas may be required in appropriate circumstances (e.g. higher density developments with limited or no car parking). In order to encourage active travel to / from the Application Site and promote the management of car trip demand, the development proposals will include for the potential for secure cycle parking at each unit. This would be delivered by dedicated lockable cycle store features within the garden areas of the housing units and within the managed curtilage of the apartment units.

#### 5.4 **Site Servicing**

- 5.4.1 The internal road layout to the application scheme has been designed to be able to accommodate typical service vehicle movements appropriate to a residential land use. Residential schemes typically generate a relatively low level of HGV demand, with service vehicle access being mainly restricted to waste collection and ad-hoc deliveries of goods to residents. Many of these delivery movements would likely be undertaken by Transit Van / Luton Van style max 7.5t mgw vehicles and would not require a long duration of stay on site.

- 5.4.2 In recognition of the need to accommodate occasional larger service vehicle movements, the application scheme internal highway layout has been designed to include for a suitable large vehicle turning / manoeuvring head area. **Appendix**

**TA3** to this report demonstrates vehicle swept path assessment runs within the site, including the movement of large refuse collection and large delivery vehicles.

## 6.0 PREDICTED TRAVEL DEMAND ASSOCIATED WITH THE APPLICATION SCHEME AND ANTICIPATED DEVELOPMENT TRAFFIC IMPACT

### 6.1 Predicted Trip Demand Levels Associated with the Application Scheme

6.1.1 This section of the TA report seeks to identify the future level of traffic demand anticipated to be generated by the residential development proposals. These estimates have been undertaken via reference to representative residential development sites held within the industry standard TRICS development trip rate database. TRICS is a nationally regarded source of historical trip demand data and contains observed traffic data for a variety of development-type sites and, as such, can be considered to produce reliable base trip rate data.

6.1.2 The reference residential sites chosen from the TRICS database (see **Appendix TA4** to this report for full TRICS output) have been selected for general characteristics similar to the Application Site and surrounding area, viz:

- Edge of town centre, suburban area and edge of town sites only.
- Development sites of under 100 units (average 45 units).
- Not including sites in Greater London or Eire.

6.1.3 Estimates of the trip generation likely to be associated with the proposed residential development, are included in **Table TA6.1** below.

**Table TA6.1: Adjusted Average Residential Trip Rates from TRICS**

| Time Period            | Average Trip Rates (per dwelling) |        |       |
|------------------------|-----------------------------------|--------|-------|
|                        | Arrive                            | Depart | Total |
| AM Peak (08:00-09:00)  | 0.123                             | 0.303  | 0.426 |
| PM Peak (17:00-18:00)  | 0.329                             | 0.192  | 0.521 |
| 12h hour (07:00-19:00) | 2.249                             | 2.25   | 4.499 |

Trip rate (per dwelling)

6.1.4 The above manually adjusted average trip rates have been applied to the total residential development size proposed at the Application Site (47 dwellings), with the results set out in **Table TA6.2** below.

**Table TA6.2: Predicted Development Trip Demand (47 Dwellings)**

| Time Period            | Trip Demand (Average Trip Rates) |        |       |
|------------------------|----------------------------------|--------|-------|
|                        | Arrive                           | Depart | Total |
| AM Peak (08:00-09:00)  | 6                                | 14     | 20    |
| PM Peak (17:00-18:00)  | 15                               | 9      | 24    |
| 12h hour (07:00-19:00) | 106                              | 106    | 212   |

Vehicle movements

6.1.5 The above exercise demonstrates that residential development at the Application Site is not anticipated to generate a substantive level of vehicle trip demand during traditional weekday ‘rush hour periods’, with maximum two-way (in + out) vehicle demand associated with the proposals predicted to be no more than 24 vehicles per hour (during the PM peak hour). Such demand is less than 1 additional development vehicle trip movement every 2 minutes and is therefore unlikely to result in any distinguishable operational impact on prevailing local network conditions.

6.1.6 Core weekday 12hr day-time trip demand (07:00-19:00) associated with the site is anticipated to be of the order of 212 vehicle movements (106 in / 106 out), or on average just circa 18 vehicle movements per hour (in+out). Again, such traffic levels are considered to be negligible and would not be expected to give rise to a discernible change in local highway network operating conditions.

## 6.2 Application Scheme Vehicle Trip Distribution & Assignment

### *Application Scheme Vehicle Trip Distribution*

6.2.1 The distribution of predicted application scheme vehicle trip movements has been based on 2011 census journey to work information for car driver trips from the immediate local census super output area ward (Denbighshire 002), see **Appendix TA5** to this report.

6.2.2 Route assignment of trips to / from each of the wards identified by the distribution exercise has been carried out based on the fastest route option as highlighted by the Google Maps route planner and supplemented by local knowledge of typical network operating conditions / route options. Where more than one route option offering a similar journey time was identified as being available, the predicted

trips were proportioned between these options, to reflect that a choice of routes could be used for the journey.

6.2.3 Details of the individual route assignment exercise is set out in **Appendix TA5** to this report. This suggests the following combined development related light vehicle assignment over immediate routes to the Application Site (see also **Figure TA14**):

- Marine Road (east) 11%
- Victoria Road 23%
- B5120 65%
- Bastion Road (north) 1%

6.2.4 The application of these local traffic routing proportions to the predicted application scheme demand levels (all vehicles) identified in section 6.1 above is illustrated in **Figure TA15(a&b)** to this report. This suggests that, in practice, it is likely that maximum application scheme related trip demand would take place on the section of Marine Road immediately to the west of Application Site access - of the order of 18 vehicle in the AM peak (13 departures / 5 arrivals) and 22 vehicles per hour in the PM peak (8 departures / 14 arrivals).

6.2.5 Maximum hourly application scheme related traffic demand on the section of Marine Road between the Application Site access and signal junction with Bastion Road / Victoria Road / B5120 would be no more than 22 per hour two-way (or approximately 1 vehicle every 3 minutes during the PM peak, less throughout the rest of the day). Typically, one would not expect such low levels of development traffic to result in a material change in network operational performance.

## **7.0 KEY NETWORK ASSESSMENT PARAMETERS & IMPACT ASSESSMENT**

### **7.1 Assessment Time Periods**

7.1.1 In order to ensure a suitable robust assessment of the practical traffic impact of the application scheme, this TA report has sought to assess the time periods of likely maximum potential network impact. This maximum impact could be expected to occur when existing baseline flows on the immediate local highway network and predicted application scheme flows combine to give rise to the highest overall level of hourly flow. During such time periods, local network links and junctions could be expected to be operating at maximum demand conditions.

7.1.2 For the purposes of this appraisal, application scheme traffic network impact assessment has been carried out for the following time periods:

- AM Peak Period: 08:00 - 09:00
- PM Peak Period: 16:45 - 17:45\*

\*To ensure the most robust assessment of combined development traffic effects, the assessment will consider a PM peak scenario of maximum baseline traffic levels (i.e. 16:45-17:45), alongside predicted peak Application Site traffic estimates (i.e. 17:00-18:00).

7.1.3 It is anticipated that full completion and occupation of all proposed dwellings at the Application Site could be delivered in 2026/2027. The network assessment set out in this TA report is therefore based on an opening year of 2027 and an additional future year of 2030 (five years post registration of the planning application). This ensures a comprehensive assessment of impact.

### **7.2 Scope of Network Assessment**

7.2.1 In line with preliminary pre-application discussions with CBCC highways officers this TA report considers network operation of a study area including for the proposed site access junction with Marine Road and Marine Road / Bastion Road / Victoria Road / B5120 junction.

7.2.2 In addition to these key junctions, the assessment will also include an analysis of changes in link flow on key connecting approach links to these junctions.

### 7.3 Calculation of Predicted ‘Do-Nothing’ Baseline Traffic Volumes

7.3.1 Background network traffic conditions for the future modelled years has been calculated via the application of locally adjusted National Transport Model (NTM) forecasts to the observed baseline January 2025 traffic survey information. NTEM growth factors have been based on estimates for the immediate local census area of Denbighshire 002 (see also **Appendix TA6**). These locally adjusted growth factors are set out below:

*2025 - 2027 Growth Factors*

Weekday AM Peak - 1.0212

Weekday PM Peak - 1.0201

*2025 - 2030 Growth Factors*

Weekday AM Peak - 1.0513

Weekday PM Peak - 1.0493

7.3.2 The application of these local growth factors to the 2025 background survey traffic movements to generate 2027 Opening Year & 2030 Future Year Baseline network estimates is summarised in **Figure TA16(a&b)** & **Figure 17(a&b)** to this report.

### 7.4 Calculation of Predicted ‘Do-Something’ Baseline + Application Scheme Traffic Volumes

7.4.1 2027 Opening Year & 2030 Future Year ‘Do-Something’ Baseline + Application Scheme traffic volumes have been calculated by the addition of the predicted development traffic (see section 6.3) to the Baseline ‘Do-Nothing’ estimates set out in section 7.3. above, viz:

- **Figure TA18(a&b)** 2027 ‘Do-Something’ Traffic = 2027 Baseline (**Figure TA16**) + Application Scheme Development Traffic (**Figure TA15**).

- **Figure TA19(a&b)** 2030 ‘Do-Something’ Traffic = 2030 Baseline (**Figure TA17**) + Application Scheme Development Traffic (**Figure TA15**).

## 7.5 Impact Assessment Criteria

7.5.1 Network operational conditions and the anticipated traffic impact associated with residential development at the Application Site have been considered by reference to the following matters:

- Comparison of ‘Do-Nothing’ and ‘Do-Something’ network demand flows (link impact - percentage change); and,
- Detailed network capacity modelling using appropriate industry standard computer modelling software and agreed model parameters.

## 7.6 Link Impact Assessment (Percentage Change)

7.6.1 Traditionally the review of highway link impact suggests that more detailed assessment is typically only required, should traffic flow changes exceed the following guideline thresholds:

- Traffic to / from the development exceeds 10% of existing two-way traffic on the adjoining highway; or,
- Where traffic to / from the development exceeds 5% of the existing two-way traffic flow on the adjoining highways at locations where traffic congestion exists within the assessment period or in other sensitive locations.

7.6.2 March 2007 Welsh Government Guidance TAN18 Annex E (para E4) provides some further advice re: likely material increases in traffic demand, when specifically reviewing occasions under which additional analysis might be required for developments affecting the Welsh Strategic Road Network. In this case TAN18 guidance states:

***“When assessing whether or not to consult the Assembly...local planning authorities must give full consideration to the effects of a development’s traffic would have at a junction, particularly in respect of the additional***

*turning movements created. As a broad guide the Assembly Government would regard an increase in turning movements in the order of 5% as material in most cases, that is, a 5% increase of traffic using any link of the junction. Where the capacity of the junction is, or is near to, being exceeded, a smaller percentage increase on a link would normally be material.”*

7.6.3 It is therefore concluded that a 5% threshold represents a reasonable ‘starting point’ for further assessment of link impact on the immediate local highway network, albeit the use of such a threshold should of course, be viewed in the context of the predicted total development traffic levels - section 6.1 to this report having already identified that total development traffic demand on any of the identified main study links could be expected to be of the order of just 1 additional vehicle movement every circa two minutes.

7.6.4 **Table TA7.1** to this report provides a comparison of predicted 2027 Opening Year AM & PM peak traffic flows between the ‘Do-Nothing’ (no development at the Application Site) and ‘Do-Something’ (with development) scenarios on key links across the study area network. This assessment has been undertaken for the 2027 Opening Year scenario - as this ensures the potential for maximum development traffic related percentage change, when compared to Baseline ‘Do-Nothing’ flows.

**Table TA7.1 - Predicted Changes in Link Flow on Immediate Sections of the Local Highway Network to the Application Site**

| Link                            | 2027 Opening Year<br>AM Peak Period |               |             | 2027 Opening Year<br>PM Peak Period |               |             |
|---------------------------------|-------------------------------------|---------------|-------------|-------------------------------------|---------------|-------------|
|                                 | Do<br>Nothing                       | Do<br>Somethi | %<br>Change | Do<br>Nothing                       | Do<br>Somethi | %<br>Change |
| Bastion Road                    | 297                                 | 297           | 0.1%        | 338                                 | 338           | 0.1%        |
| A548 Victoria Road              | 750                                 | 745           | 0.6%        | 790                                 | 784           | 0.7%        |
| B5120                           | 530                                 | 517           | 2.5%        | 547                                 | 531           | 3.0%        |
| Marine Road west of site access | 521                                 | 503           | 3.5%        | 572                                 | 550           | 4.0%        |
| Marine Road east of site access | 479                                 | 477           | 0.5%        | 501                                 | 498           | 0.5%        |

Two-way flow totals

7.6.5 Review of this exercise demonstrates that predicted changes in network traffic demand associated with the application scheme over the wider highway network can be expected to be limited. All local links are predicted to experience increases of well below 5% of Baseline ‘Do-Nothing’ traffic. Maximum impact is predicted at Marine Road, west of the site access, which is forecast to result in a percentage change of 3.5-4.0%, as a result of increases of circa 18 vehicles in the AM peak hour

and 22 vehicles in the PM peak hour. Impact at the B5120 would be 2.5%-3.0% resulting from an increase in 13 and 16 two-way vehicles movements in the AM and PM peaks respectively. All other network links are predicted to experience a flow change of less than 1% of baseline traffic.

7.6.6 Typically, one would not expect development related traffic flow increases of the nature identified to result in a material change in network operational performance that would be discernible on a day-to-day basis.

## 7.7 Junction Operational Capacity Assessments

7.7.1 Notwithstanding the conclusions of the above link flow exercise, detailed junction capacity assessments have been undertaken at proposed site access and Marine Road / Bastion Road / Victoria Road / B5120 signalised junction.

7.7.2 Network capacity assessment of these junctions has been undertaken using industry standard LINSIG for traffic signal junctions. LINSIG also allows the modelling of priority-controlled junctions. Owing to the proximity of the proposed new site access junction to the Marine Road / Bastion Road / Victoria Road / B5120 junction, these have been treated as linked junctions, along with the nearby PFS entry and exit junctions. The LINSIG model have been constructed utilising junction layout / model input data provided to FTP by DCC, and verified by a site visit.

7.7.3 LINSIG software presents network modelling results in terms of a percentage 'Degree of Saturation' (DoS) value and corresponding predicted traffic queues for each modelled link. For traffic signal-controlled junctions, it is generally accepted that degrees of saturation of 90% or less on individual links represent satisfactory link operation, with values above this threshold representing 'variable operation' and therefore increasing the potential for regular congestion and delay.

7.7.4 LINSIG also provides a further reference value, Practical Reserve Capacity (PRC), which provides an overall indicative measure of the general operation of a junction within the network. PRC values of 0% or above are generally considered to

represent acceptable junction operating conditions, with values of less than 0% (negative PRC) indicating a propensity for more variable junction operation and the potential for some congestion and queue build up.

- 7.7.5 It should be noted that negative junction PRC values can be obtained when a number of individual junction arms are operating at less than 100% degree of saturation, i.e. the point where theoretical operating capacity is reached on an approach arm, and therefore the PRC value provides only a general guide to overall junction performance.
- 7.7.6 **Table TA7.2** to this report sets out the results of LINSIG junction model runs at the site access / Marine Road / Bastion Road / Victoria Road / B5120 junctions for a 2025 background year test, using peak hour turning movements recorded at the junction during the January 2025 traffic survey exercise. This allows for an effective ‘validation’ of the model predictions, when compared to observed junction performance. Review of these LINSIG model results (full model printouts included in **Appendix TA7**) identifies predicted queuing levels of circa 4-7 pcus over the junction approaches and individual approach arm degrees of saturation of between 60% - 70%. The modelled queuing is broadly similar to observed operation of the junction.
- 7.7.7 It is therefore considered that the LINSIG model represents a good starting point for ‘Do-Nothing’ v ‘Do-Something’ comparative analysis to determine the extent of application scheme traffic impact.

**Table TA7.2 - Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2025 Recorded Background Traffic**

| Movement                                       | AM Peak (08:00 - 09:00) |       |           | PM Peak (16:45 - 17:45) |       |           |
|--|-------------------------|-------|-----------|-------------------------|-------|-----------|
|  | Flow (PCU)              | DoS   | MMQ (PCU) | Flow (PCU)              | DoS   | MMQ (PCU) |
| J1: Victoria Road / Marine Road / Bastion Road |                         |       |           |                         |       |           |
| 1/1 Victoria Road Left Ahead                   | 269                     | 41.8% | 4.6       | 232                     | 33.9% | 3.7       |
| 1/2 Victoria Road Right                        | 255                     | 62.2% | 4.8       | 223                     | 58.7% | 4.0       |
| 2/1 Bastion Road (N) Left Ahead                | 143                     | 59.4% | 3.5       | 112                     | 58.3% | 2.9       |
| 2/2 Bastion Road (N) Right                     | 38                      | 15.3% | 0.8       | 49                      | 24.6% | 1.1       |
| 3/1 Marine Road Ahead Left                     | 202                     | 58.8  | 4.5       | 286                     | 73.3% | 6.8       |
| 3/2 Marine Road Right                          | 10                      | 3.4%  | 0.2       | 23                      | 6.9%  | 0.4       |
| 4/1 Bastion Road (S) Left Ahead                | 93                      | 48.3% | 2.3       | 138                     | 72.5% | 4.0       |
| 4/2 Bastion Road (S) Right                     | 28                      | 13.7% | 0.6       | 30                      | 14.7% | 0.7       |
| 7/1 Marine Road- Exit Ahead                    | 298                     | 15.6% | 0.1       | 237                     | 12.4% | 0.1       |
| PRC  | 44.6%                   |       |           | 22.8%                   |       |           |

7.7.8 Results of the Baseline ‘Do-Nothing’ & Baseline + Development (‘Do-Something’) LINSIG model runs under both 2027 Opening Year and 2030 Future Year scenarios are summarised in Tables TA7.3 - TA7.6 respectively below, with corresponding detailed model output attached as Appendix TA12.

**Table TA7.3 - Site Access / Marine Road / Bastion Road / Victora Road / B5120 LINSIG Results: 2027 ‘Do-Nothing’ Baseline Scenario**

| Movement                                       | AM Peak (08:00 - 09:00) |       |           | PM Peak (16:45 - 17:45) |       |           |
|--|-------------------------|-------|-----------|-------------------------|-------|-----------|
|  | Flow (PCU)              | DoS   | MMQ (PCU) | Flow (PCU)              | DoS   | MMQ (PCU) |
| J1: Victoria Road / Marine Road / Bastion Road |                         |       |           |                         |       |           |
| 1/1 Victoria Road Left Ahead                   | 275                     | 42.7% | 4.7       | 237                     | 34.6% | 3.8       |
| 1/2 Victoria Road Right                        | 260                     | 63.8% | 4.9       | 227                     | 63.5% | 4.2       |
| 2/1 Bastion Road (N) Left Ahead                | 146                     | 60.7% | 3.6       | 115                     | 59.9% | 3.0       |
| 2/2 Bastion Road (N) Right                     | 39                      | 15.7% | 0.8       | 50                      | 25.1% | 1.1       |
| 3/1 Marine Road Ahead Left                     | 207                     | 60.2% | 4.7       | 292                     | 74.9% | 7.0       |
| 3/2 Marine Road Right                          | 10                      | 3.4%  | 0.2       | 23                      | 6.9%  | 0.4       |
| 4/1 Bastion Road (S) Left Ahead                | 95                      | 49.3% | 2.3       | 141                     | 74.1% | 4.2       |
| 4/2 Bastion Road (S) Right                     | 29                      | 14.2% | 0.6       | 31                      | 15.2% | 0.7       |
| 7/1 Marine Road- Exit Ahead                    | 305                     | 15.9% | 0.1       | 243                     | 12.7% | 0.1       |
| PRC  | 41.0%                   |       |           | 20.2%                   |       |           |

**Table TA7.4 - Site Access / Marine Road / Bastion Road / Victora Road / B5120  
LINSIG Results: 2027 'Do-Something' Baseline + Development Scenario**

| Movement                                       | AM Peak (08:00 - 09:00) |       |           | PM Peak (16:45 - 17:45) |       |           |
|--|-------------------------|-------|-----------|-------------------------|-------|-----------|
|  | Flow (PCU)              | DoS   | MMQ (PCU) | Flow (PCU)              | DoS   | MMQ (PCU) |
| J1: Victoria Road / Marine Road / Bastion Road |                         |       |           |                         |       |           |
| 1/1 Victoria Road Left Ahead                   | 276                     | 41.3% | 4.6       | 240                     | 35.1% | 3.9       |
| 1/2 Victoria Road Right                        | 260                     | 62.7% | 4.8       | 227                     | 63.5% | 4.2       |
| 2/1 Bastion Road (N) Left Ahead                | 146                     | 67.4% | 3.9       | 115                     | 59.9% | 3.0       |
| 2/2 Bastion Road (N) Right                     | 39                      | 17.4% | 0.8       | 50                      | 25.1% | 1.1       |
| 3/1 Marine Road Ahead Left                     | 219                     | 59.6% | 4.8       | 300                     | 76.8% | 7.4       |
| 3/2 Marine Road Right                          | 10                      | 3.2%  | 0.2       | 24                      | 7.2%  | 0.4       |
| 4/1 Bastion Road (S) Left Ahead                | 95                      | 49.3% | 2.3       | 141                     | 74.1% | 4.2       |
| 4/2 Bastion Road (S) Right                     | 32                      | 15.7% | 0.8       | 41                      | 20.1% | 0.9       |
| 7/1 Marine Road- Exit Ahead                    | 309                     | 16.1% | 0.1       | 256                     | 13.4% | 0.1       |
| J2: Marine Road / Site Access                  |                         |       |           |                         |       |           |
| 1/1 Eastbound Internal Left Ahead Right        | 309                     | 16.6% | 0.1       | 256                     | 14.4% | 0.1       |
| 2/1 Site Access Right Left                     | 15                      | 1.7%  | 0.0       | 9                       | 1.0%  | 0.0       |
| 3/1 Marine Road Ahead Right Left               | 204                     | 10.5% | 0.1       | 286                     | 14.8% | 0.1       |
| 4/1 PFA Exit Left Right                        | 20                      | 1.8%  | 0.0       | 38                      | 3.6%  | 0.0       |
| 5/1 Westbound Internal Ahead                   | 216                     | 12.5% | 0.1       | 316                     | 18.3% | 0.1       |
| 5/2 Westbound Internal Ahead                   | 13                      | 0.7%  | 0.0       | 8                       | 0.4%  | 0.0       |
|  | 33.4                    |       |           | 17.2%                   |       |           |

**Table TA7.5 - Site Access / Marine Road / Bastion Road / Victora Road / B5120  
LINSIG Results: 2030 'Do-Nothing' Baseline Scenario**

| Movement                                       | AM Peak (08:00 - 09:00) |       |           | PM Peak (16:45 - 17:45) |       |           |
|--|-------------------------|-------|-----------|-------------------------|-------|-----------|
|  | Flow (PCU)              | DoS   | MMQ (PCU) | Flow (PCU)              | DoS   | MMQ (PCU) |
| J1: Victoria Road / Marine Road / Bastion Road |                         |       |           |                         |       |           |
| 1/1 Victoria Road Left Ahead                   | 283                     | 43.9% | 4.9       | 244                     | 35.7% | 3.9       |
| 1/2 Victoria Road Right                        | 268                     | 65.7% | 5.1       | 234                     | 65.5% | 4.4       |
| 2/1 Bastion Road (N) Left Ahead                | 151                     | 62.8% | 3.8       | 117                     | 60.9% | 3.1       |
| 2/2 Bastion Road (N) Right                     | 40                      | 16.1% | 0.8       | 51                      | 25.6% | 1.1       |
| 3/1 Marine Road Ahead Left                     | 213                     | 66.4% | 5.1       | 300                     | 76.9% | 7.4       |
| 3/2 Marine Road Right                          | 11                      | 4.0%  | 0.2       | 24                      | 7.3%  | 0.4       |
| 4/1 Bastion Road (S) Left Ahead                | 98                      | 50.9% | 2.4       | 145                     | 76.2% | 4.4       |
| 4/2 Bastion Road (S) Right                     | 29                      | 14.2% | 0.6       | 31                      | 15.2% | 0.7       |
| 7/1 Marine Road- Exit Ahead                    | 313                     | 16.3% | 0.1       | 248                     | 13.0% | 0.1       |
| PRC  | 35.5%                   |       |           | 17.1%                   |       |           |

**Table TA7.6 - Site Access / Marine Road / Bastion Road / Victora Road / B5120  
LINSIG Results: 2030 'Do-Something' Baseline + Development Scenario**

| Movement                                       | AM Peak (08:00 - 09:00) |       |           | PM Peak (16:45 - 17:45) |       |           |
|--|-------------------------|-------|-----------|-------------------------|-------|-----------|
|  | Flow (PCU)              | DoS   | MMQ (PCU) | Flow (PCU)              | DoS   | MMQ (PCU) |
| J1: Victoria Road / Marine Road / Bastion Road |                         |       |           |                         |       |           |
| 1/1 Victoria Road Left Ahead                   | 285                     | 42.6% | 4.8       | 247                     | 36.1% | 4.0       |
| 1/2 Victoria Road Right                        | 268                     | 65.4% | 5.0       | 234                     | 65.5% | 4.4       |
| 2/1 Bastion Road (N) Left Ahead                | 151                     | 69.8% | 4.1       | 118                     | 61.5% | 3.1       |
| 2/2 Bastion Road (N) Right                     | 40                      | 17.9% | 0.9       | 51                      | 25.6% | 1.1       |
| 3/1 Marine Road Ahead Left                     | 225                     | 61.2% | 5.0       | 308                     | 78.8% | 7.8       |
| 3/2 Marine Road Right                          | 11                      | 3.6%  | 0.2       | 24                      | 7.3%  | 0.4       |
| 4/1 Bastion Road (S) Left Ahead                | 98                      | 50.9% | 2.4       | 145                     | 76.2% | 4.4       |
| 4/2 Bastion Road (S) Right                     | 33                      | 16.2% | 0.7       | 42                      | 20.6% | 0.9       |
| 7/1 Marine Road- Exit Ahead                    | 319                     | 16.7% | 0.1       | 263                     | 13.8% | 0.1       |
| J2: Marine Road / Site Access                  |                         |       |           |                         |       |           |
| 1/1 Eastbound Internal Left Ahead Right        | 318                     | 17.2% | 0.1       | 262                     | 14.7% | 0.1       |
| 2/1 Site Access Right Left                     | 15                      | 1.7%  | 0.0       | 9                       | 1.0%  | 0.0       |
| 3/1 Marine Road Ahead Right Left               | 210                     | 10.8% | 0.1       | 294                     | 15.2% | 0.1       |
| 4/1 PFA Exit Left Right                        | 21                      | 1.9%  | 0.0       | 39                      | 3.7%  | 0.0       |
| 5/1 Westbound Internal Ahead                   | 223                     | 12.9% | 0.1       | 325                     | 18.9% | 0.1       |
| 5/2 Westbound Internal Ahead                   | 13                      | 0.7%  | 0.0       | 8                       | 0.4%  | 0.0       |
| PRC  | 29.0%                   |       |           | 14.2%                   |       |           |

7.7.9 Review of the LINSIG model results suggests that the practical operational effects of the addition of predicted application scheme related development demand at the junction is likely to be limited in nature, generally relating to reductions in overall junction PRC of circa 3 - 7%, when compared to baseline 'Do-Nothing' scenarios. In practice this translates to changes in individual junction arm degrees of saturation of the order of typically 2% and only marginal increases in predicted mean-max queuing (less than 1 pcu). Maximum change in approach arm PRC is predicted to take place on the Marin Road approach to the junction under 2030 PM peak conditions, with the degree of saturation on this link predicted to rise by 5.2% when compared to baseline conditions, with an associated increase in mean-max queue of circa 5 pcus. This relates to the effects of a development flow increase of 12 vehicles over the peak hour period on this approach arm. Changes in junction

operational performance under more realistic average trip rate development demand are predicted to be lower still.

7.7.10 On the basis of this detailed capacity modelling, it is concluded that practical development related traffic effects at the junction during critical AM & PM ‘rush hour’ peak periods could not be classified as being severe in nature and there is no evidence that would suggest a requirement for application scheme funded capacity or safety improvements at this location. Indeed, it is important to note that the proposed residential development would replace the extant TA Centre use. Although currently not operational, it could be reopened under extant consents and would likely result in a similar level of trip demand to the proposed residential development.

## 7.8 Impact Statement

7.8.1 Based on the above network capacity analysis, it is concluded that the delivery of the proposed residential scheme of 47 dwellings at the proposed TA Centre would not result in a material / severe impact on local network operation. Predicted development traffic increases on immediate section of Marine Road could be expected to be less than 1 additional vehicle movement every two minutes and the impact of such levels of traffic demand at key local junctions would be negligible. It is therefore concluded that the local highway network to the Application Site is capable of accommodating development traffic levels and that there is no requirement for the implementation of application scheme funded capacity improvements.

## 8.0 SUMMARY AND CONCLUSIONS

- 8.1 This Transport Assessment (TA) has been prepared by Focus Transport Planning Ltd (Focus TP) on behalf of Wales & West Housing Association Limited to consider highways and transport matters with respect to proposals for the redevelopment of the TA Centre, Marine Road, Prestatyn, Denbighshire, for the delivery of residential dwellings. The purpose of the report is to apprise the Local Planning and Highway Authority (LPA & LHA), Denbighshire County Council (DCC), of the proposed highway access arrangements to support residential redevelopment of the site and the anticipated local transport network related effects of the operation of the scheme. The Application Site comprises the existing TA Centre, located to the north of Marine Road, on the edge of Prestatyn Town Centre, within easy walk of a range of town centre shops and services, including the route of regular bus services and train station. It is envisaged that residential development of the site could provide the opportunity to deliver up to 47 properties, via a mix of housing types, with the site to be served via a single new access point, representing a minor relocation of the existing TA Centre access.
- 8.2 The proposal scheme was the subject of an informal pre-application discussions with the LHA in Winter 2024/25, which identified no material highway concerns. This TA report nevertheless includes an assessment of the proposed site access strategy, including review of its operational performance and interaction with the nearby PFS access and Marine Road / Bastion Road / Victoria Road signalised junction.

### *Site Location & Relevant Planning Status*

- 8.3 The Application Site is of approximately 0.78hectares in size and comprises the former training and defence facility (TA Centre), to the north of Prestatyn Town Centre. A mix of single and three-storey buildings occupy the site, providing offices, mess barracks and warehouse/stores, along with yard and grassland areas. Pedestrian and vehicular access to the site is available via a gated priority-controlled junction off Marine Road, which effectively forms a staggered arrangement with the entry to a PFS, located on the opposite side of Marine Road.

- 8.4 Whilst not currently operational, it is understood that the site could be brought back into use under extant planning consents. It is therefore evident that the Application Site could result in a level of vehicle movements associated with its former use.

*Existing Local Highway Network Conditions*

- 8.5 Marine Road represents a two-way single carriageway route of 9m width, with 2m footways to both sides. The route is characterised by continuous frontage development, is street lit, and operates under 20mph speed limit. Double yellow line restrictions are provided to both sides of Marine Road to the Application Site's frontage, between its signalised crossroads junction with Bastion Road (north) / B5120 Bastion Road (south) and approximately the eastern edge of the Application Site frontage.
- 8.6 Marine Road forms the western approach to a signalled controlled crossroads junction with Bastion Road (north) / B5120 Bastion Road (south) / Victoria Road (west) at the southwestern corner of the Application Site.
- 8.7 Bastion Road (north) continues in a northerly direction to Prestatyn Central Beach, whilst the B5120 Bastion Road (south) forms the southern approach and provides access to Prestatyn railway station and town centre shops and services.
- 8.8 Background operating conditions on key connecting links to the Application Site have been established via the undertaking of a local weekday traffic survey exercise existing site access / Marine Road / PFS junction and Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads junction in January 2025. Review of this exercise demonstrates that maximum hourly traffic levels took place during the AM peak period 08:00 - 09:00, with 476 two-way vehicle movements recorded at Marine Road during this time. Maximum PM peak demand occurred for the hour 16:45 - 17:45, showing a broadly similar level of traffic demand, i.e. 514 two-way vehicle movements. HGV / bus

traffic levels were noted to be less than 1% of overall traffic during rush hour periods.

- 8.9 An appraisal of the operational safety of the immediate local highway network to the Application Site has been carried out through a review of historical Personal Injury Accident (PIA) data obtained from the crashmap.co.uk database for the 10-year search period (Jan 2018 to Dec 2022 inclusive). Review of the recorded accident data demonstrates that no accident events have taken at the existing site access junction. Three slight class accidents have been recorded at the Marine Road / Victoria Road / Bastion Road (north) / B5120 Bastion Road (south) signalised crossroads. Review of the details of these incidents identify that two involved right turn manoeuvres and one involved a pedestrian not utilising the crossing facility. Given this review it is concluded that there are no clear & substantive prevailing road safety issues that would call the development of the Application Site for residential land use into question.

#### *Site Accessibility*

- 8.10 It is considered that the Application Site represents a suitable location for residential development, being location within an established town and within a practical walking distance of good frequency public transport services (bus and rail) and a variety of shops, schools, services & facilities.
- 8.11 Such locational characteristics will deliver the potential for residents of the Application Site to utilise sustainable transport for some 'everyday' journeys and therefore meet core planning objectives of promoting opportunities for the use of alternative travel modes to the private car and managing the overall traffic impact associated with new development.

#### *Review of Key Development Scheme Principles*

- 8.12 The application scheme represents the development of the former TA Centre, Prestatyn, for future residential land use, delivering 47 new affordable dwellings across a range of house types and sizes.

- 8.13 Vehicle access to the application scheme is proposed to be taken via a new estate road cul-de-sac connection off Marine Road, circa 20m from the existing TA Centre access (measured junction centre to junction centre). This new site access junction has been designed to reflect typical adoptable standard roads serving small residential developments.
- 8.14 The proposed location of the new site access junction allows for the delivery of sightlines suitable for the nature of the connecting section of Marine Road.
- 8.15 The internal development estate road is to be provided at an adaptable 5.5m carriageway width, with 2.0m footways to both sides of the road corridor, along with a private shared surface section of 6.0m width. The internal development internal highway layout has been designed to promote 20mph operation.
- 8.16 Parking is proposed to be provided broadly in accordance with DCC maximum standards, viz:
- 1-bedroom walk up apartment properties: 1-2 spaces per unit.
  - 1-bedroom common access apartments: 0.5 spaces per unit.
  - 2-bedroom property: 2 car parking spaces.
  - 3-bedroom property: 2 car parking spaces.
- 8.17 Such level of provision is considered entirely acceptable on the basis of the highly accessible nature of the Application Site, within an easy walking & cycling distance of every local facilities such as convenience shopping, town centre shops/services & Parc Prestatyn Shopping Park / other food & drink and a local primary school, and within a short walk of bus stops and Prestatyn Railway Station. Furthermore, review of local census data for the Denbighshire 002 super output area - mid layer identifies that 47% of residents in rented properties locally do not own a car or van. It is therefore evident that the proposed quantity of parking proposed to support the application scheme is entirely appropriate to meet demand.

- 8.18 The internal road layout to the application scheme has been designed to be able to accommodate typical service vehicle movements appropriate to a residential land use, including suitable turning heads.

*Predicted Development Trip Demand & Network Assignment*

- 8.19 Estimates of predicted traffic demand associated with the application scheme have been undertaken via reference to trip rates derived from the TRICS database. Review of this exercise suggests that the application scheme would only be expected to result in rush hour peak traffic levels of circa 20 / 24 vehicles per hour (in + out) or less than 1 vehicle every 2 minutes.

- 8.20 Development traffic has been assigned to the immediate highway network based on the results of a gravity model based on 2011 census journey to work information for car driver trips from the immediate local census super output area ward. This assignment exercise suggests that it is likely that maximum application scheme related trip demand would take place on the section of Marine Road to the immediate west of the Application Site access - of the order of 18 vehicle in the AM peak (13 departures / 5 arrivals) and 22 vehicles per hour in the PM peak (8 departures / 14 arrivals).

*Development Traffic Impact Assessment*

- 8.21 Operational capacity assessments have been undertaken for key immediate sections of the local highway network to the Application Site. These results demonstrate that the delivery of the proposed residential scheme of 47 dwellings at the former TA Centre would not result in a material / severe impact on local network operation. Predicted development traffic increases on immediate section of Marine Road could be expected to be less than 1 additional vehicle movement every two minutes and the impact of such levels of traffic demand at key local junctions would be negligible, as demonstrated by local junction impact assessment.

8.22 Given the above review of issues, it is considered that Application Site development traffic impact could be expected to only be of generally limited scale and would not result in 'severe' network operational effects that would require the provision of additional network capacity or safety improvements.

### *Summary & Conclusions*

- 8.23 Overall, it is concluded that the development of the Application Site for residential land use would not result in a material impact on the existing and future operation of the immediate local highway network. The proposals are not anticipated to result in a significant increase in development flows on local links, with key immediate routes capable of accommodating future development traffic volumes without operational or environmental capacity concerns. The location of the Application Site is also considered to offer practical opportunities to encourage the use of alternative travel modes to the private car for a range of 'everyday' journeys, with the proposals considered suitable to meet key transport objectives re: encouraging sustainable development.
- 8.24 Based on the review of issues set out in this report, Focus TP would have no hesitation in commending the scheme to the Council with respect to highways and transport matters.





Figure TA1

Site Location: Wider Context

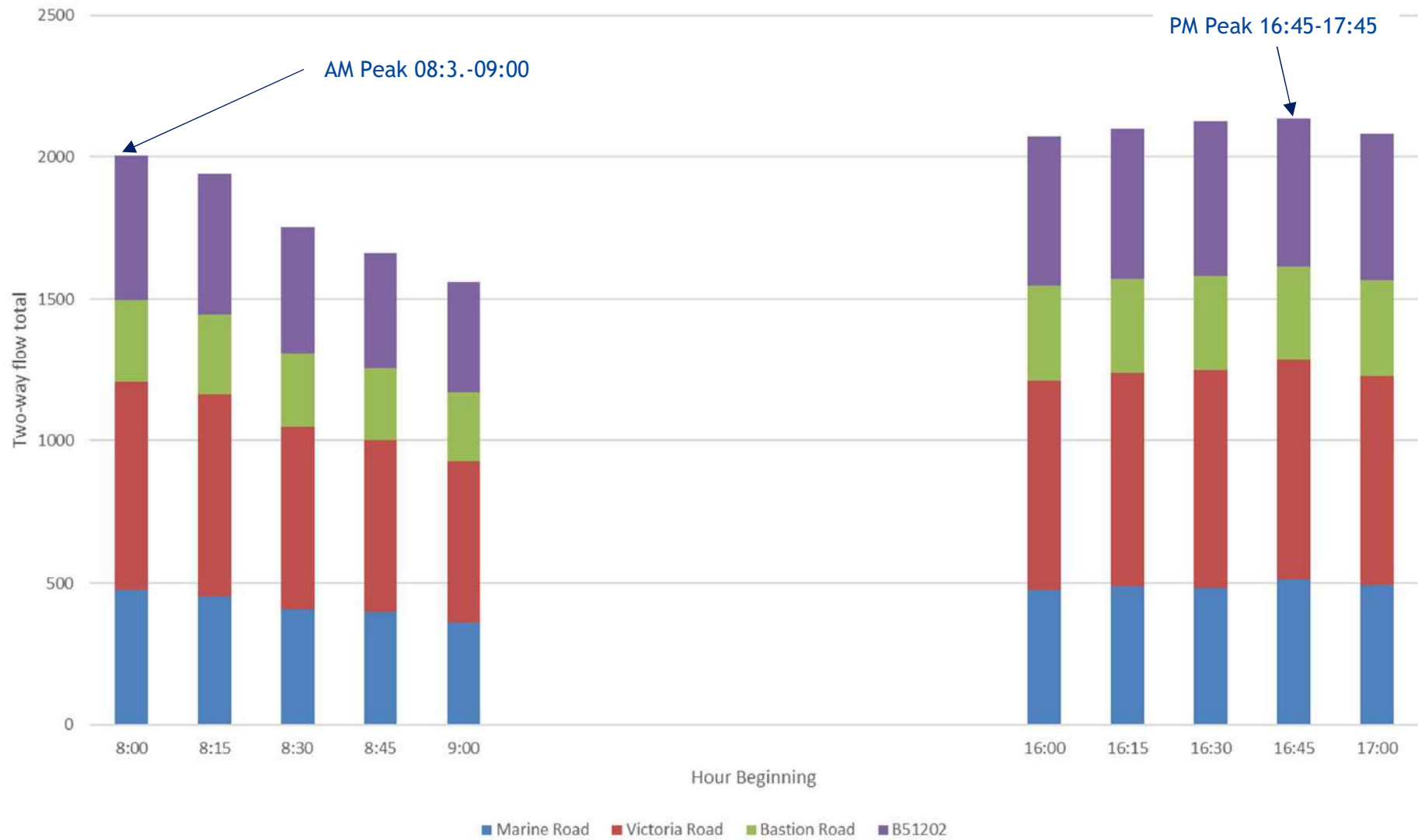
J000556

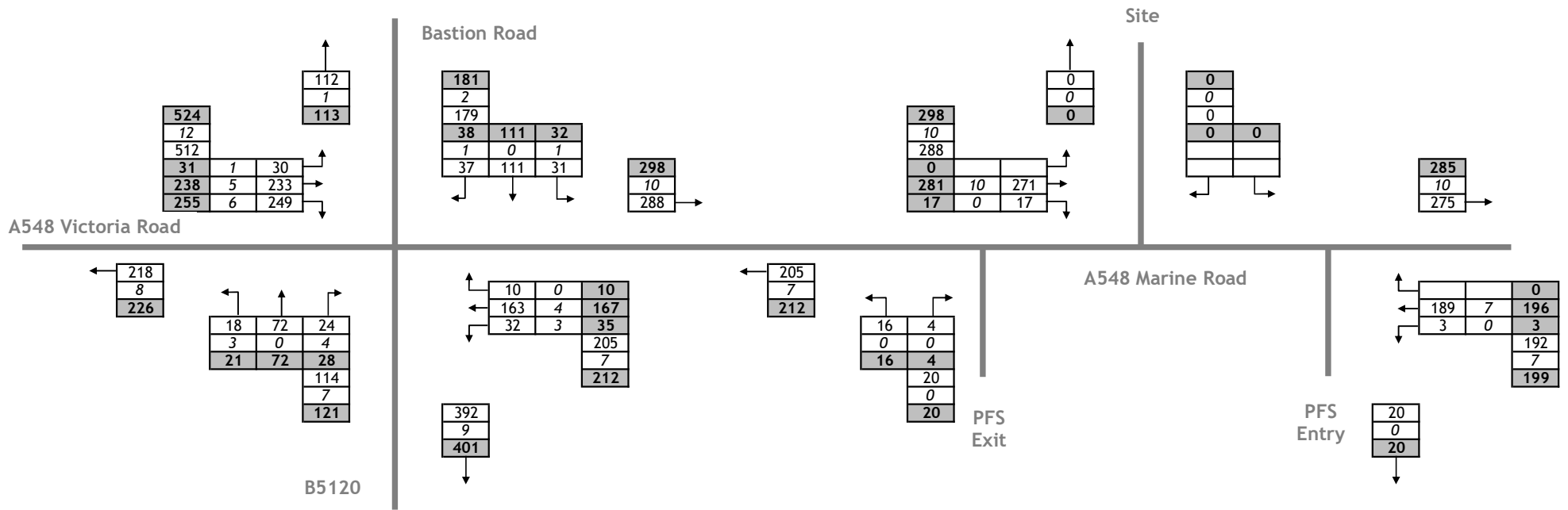
TA Centre, Prestatyn

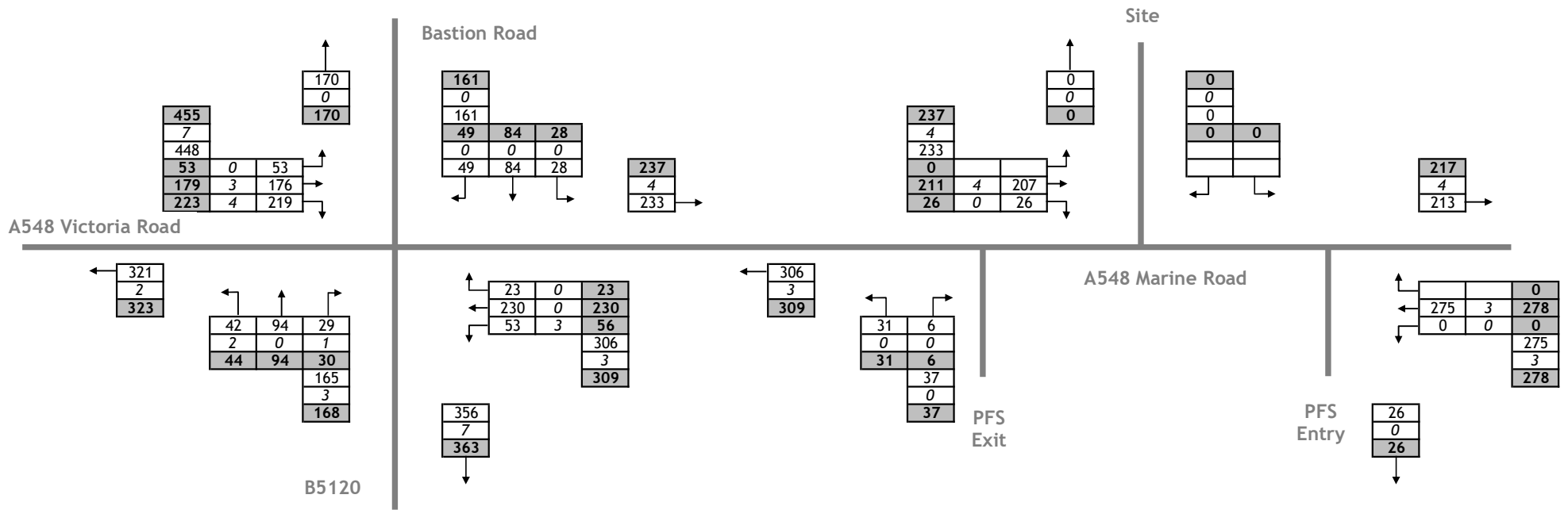
March 2025



**Two-way Rolling Hourly Profile 28th January 2025**  
**Marine Road / Bastion Road / Victoria Rod / B51202 Prestatyn**







**Key**

|    |            |
|----|------------|
| 10 | Total Vehs |
| 5  | HGVs       |
| 15 | PCUs       |

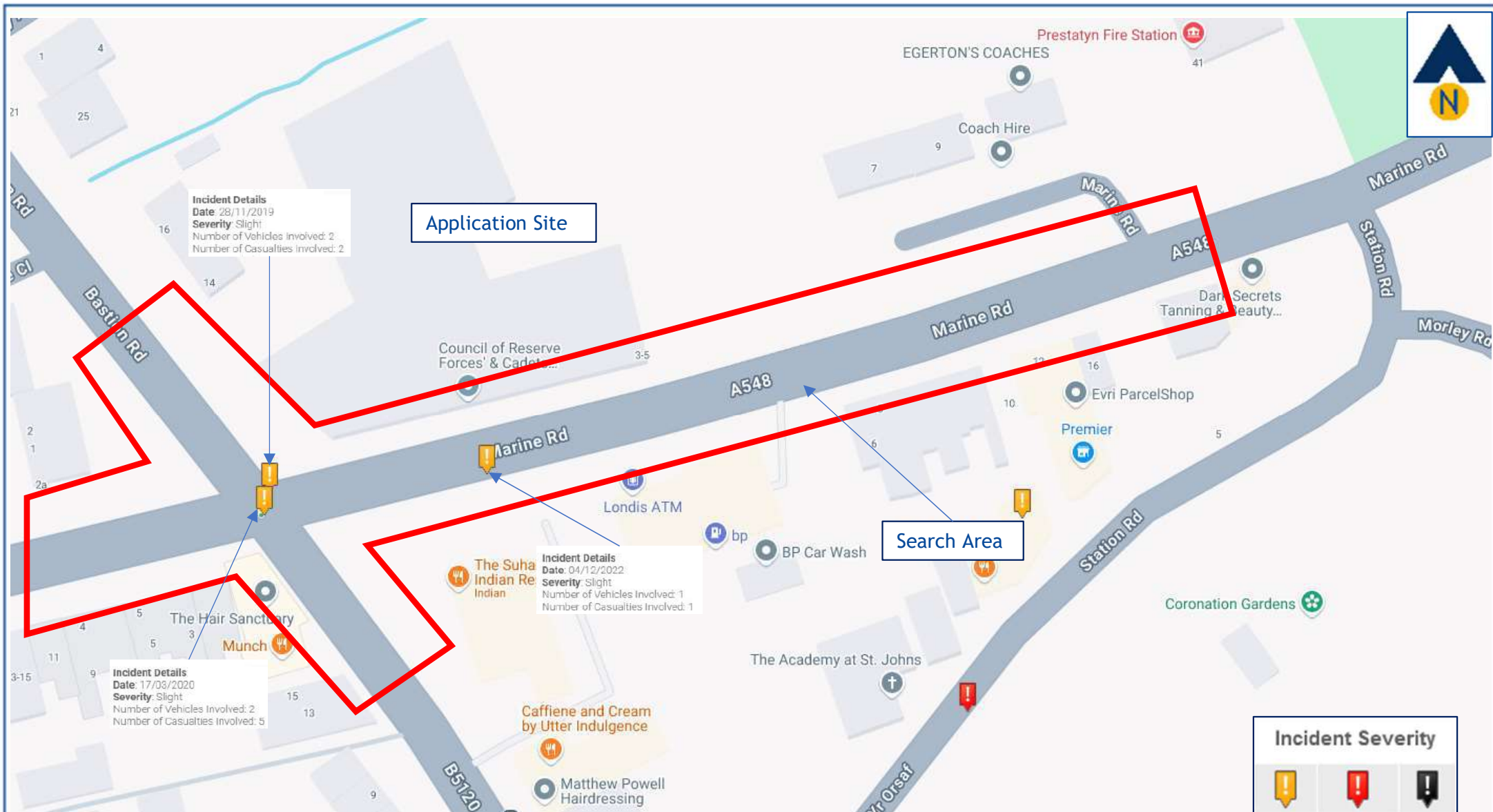


Figure TA5

**Recorded Personal Injury Accident Events  
(2018 - 2022)**

J000556

TA Centre, Prestatyn

March 2025

general Monday to Friday  
daytime frequency

**11C,11M** - every 30 minutes

**12** - every 12 minutes

**13** - every 60 minutes

**35,36** - every 30 minutes

**51,51B** - every 30 minutes

**83,83A** - every 30 minutes

**84,84A** - every 30 minutes

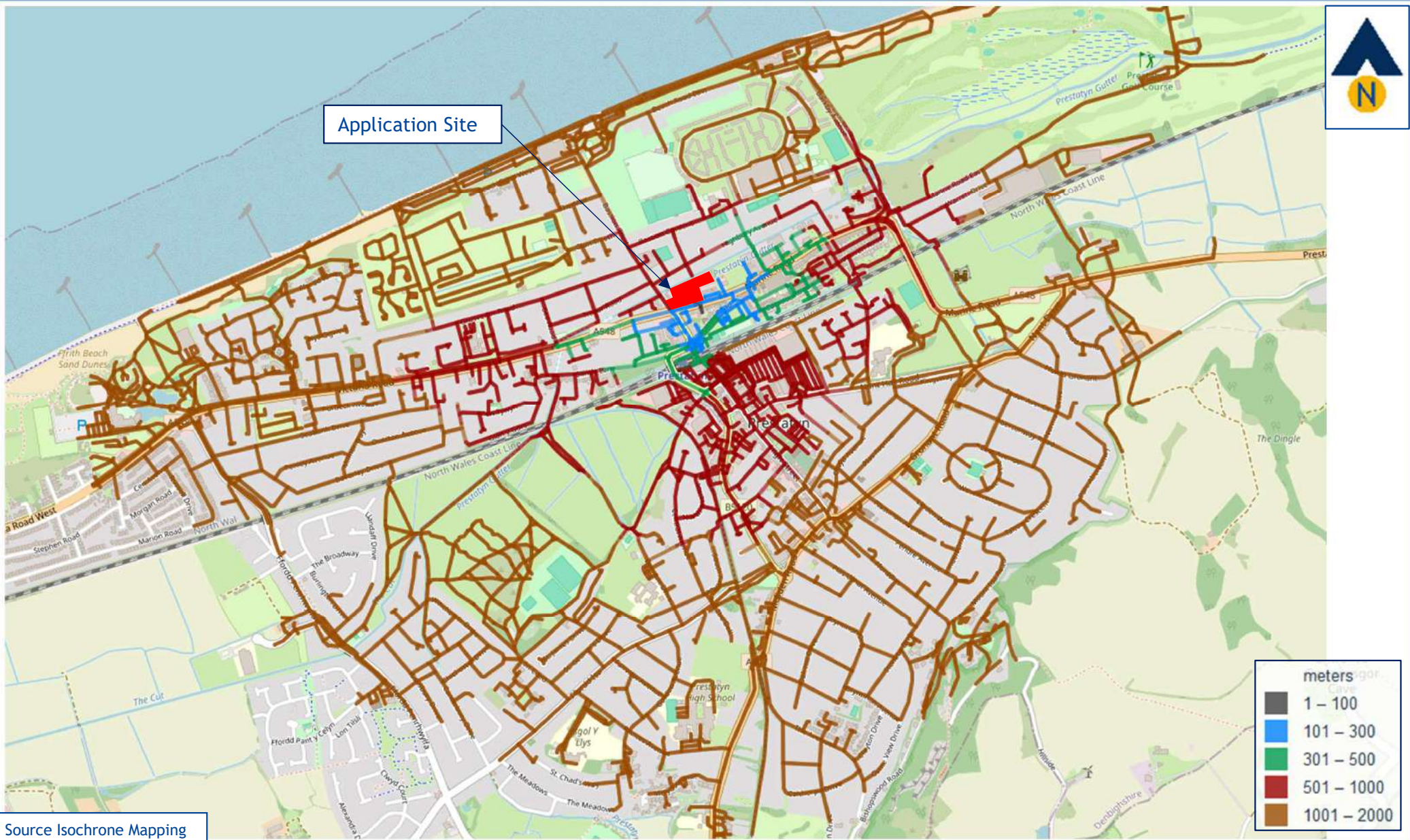


Contains Ordnance Survey data  
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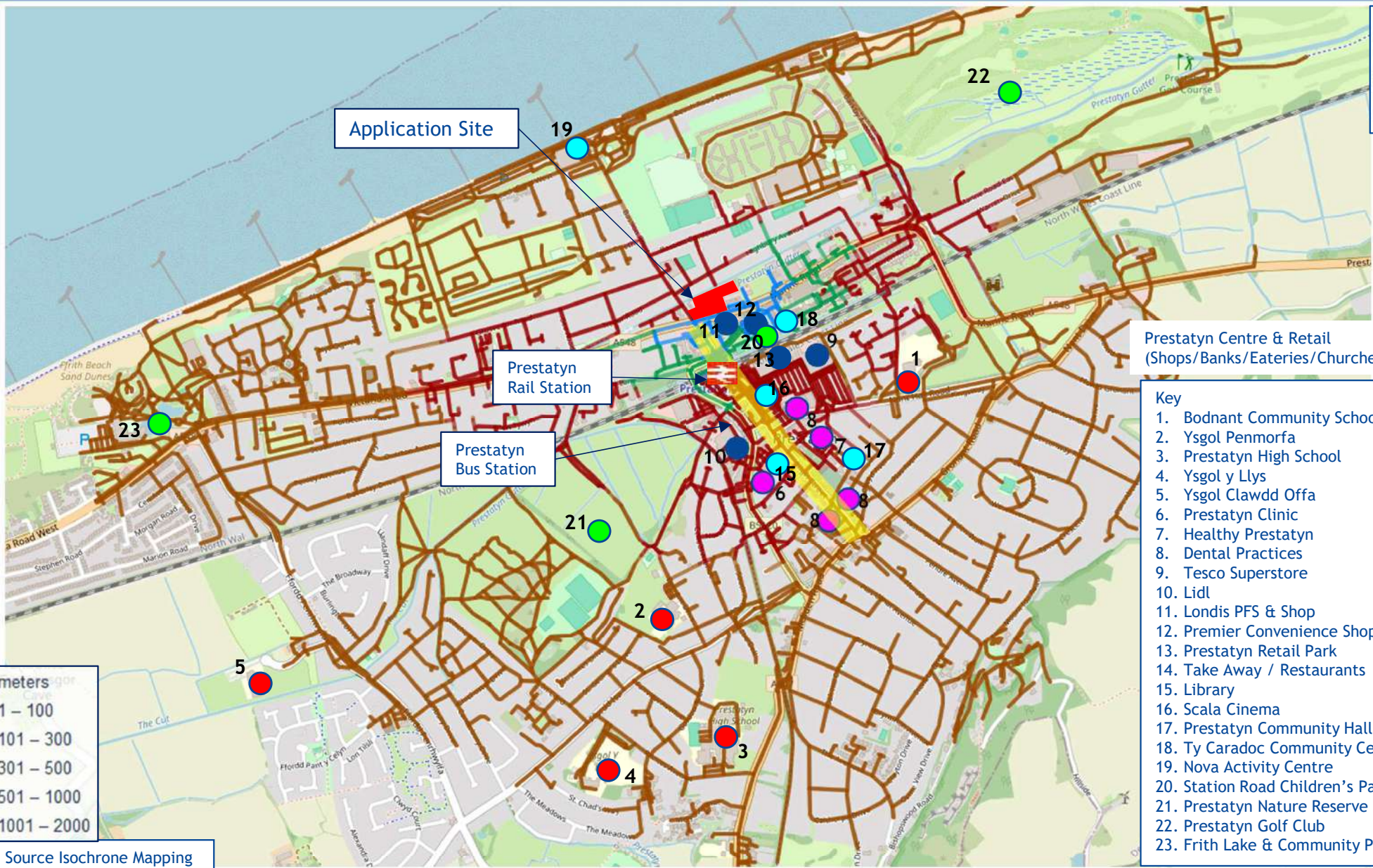


Figure TA6 Available Local Bus Connections from the Application Site





Open Source Isochrone Mapping

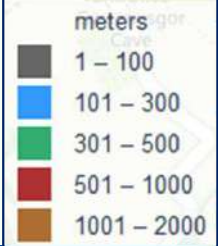


Application Site

Prestatyn Rail Station

Prestatyn Bus Station

Prestatyn Centre & Retail  
(Shops/Banks/Eateries/Churches)



- Key
1. Bodnant Community School
  2. Ysgol Penmorfa
  3. Prestatyn High School
  4. Ysgol y Llys
  5. Ysgol Clawdd Offa
  6. Prestatyn Clinic
  7. Healthy Prestatyn
  8. Dental Practices
  9. Tesco Superstore
  10. Lidl
  11. Londis PFS & Shop
  12. Premier Convenience Shop
  13. Prestatyn Retail Park
  14. Take Away / Restaurants
  15. Library
  16. Scala Cinema
  17. Prestatyn Community Hall & Hub
  18. Ty Caradoc Community Centre
  19. Nova Activity Centre
  20. Station Road Children's Park
  21. Prestatyn Nature Reserve
  22. Prestatyn Golf Club
  23. Frith Lake & Community Park

Open Source Isochrone Mapping

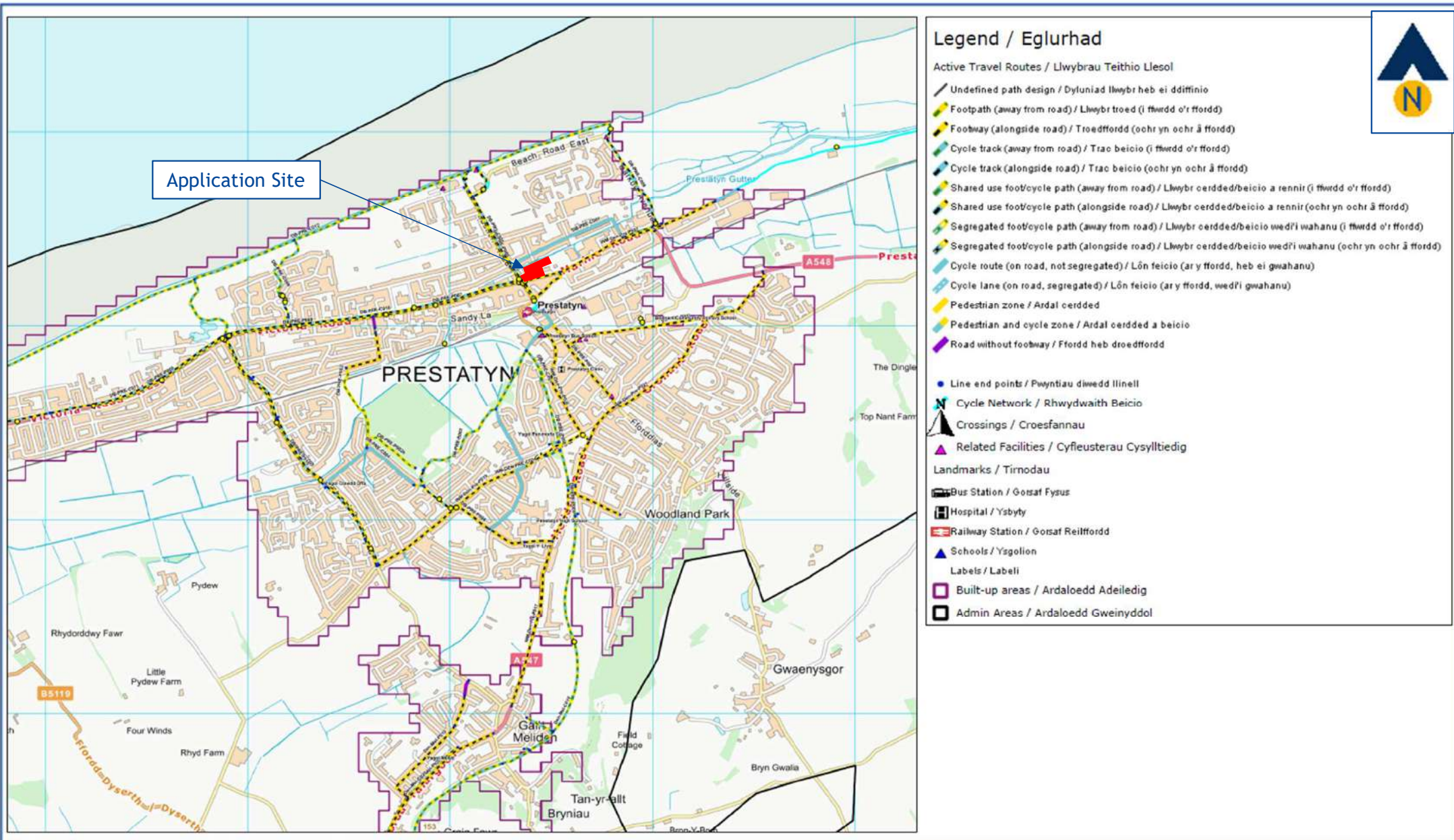
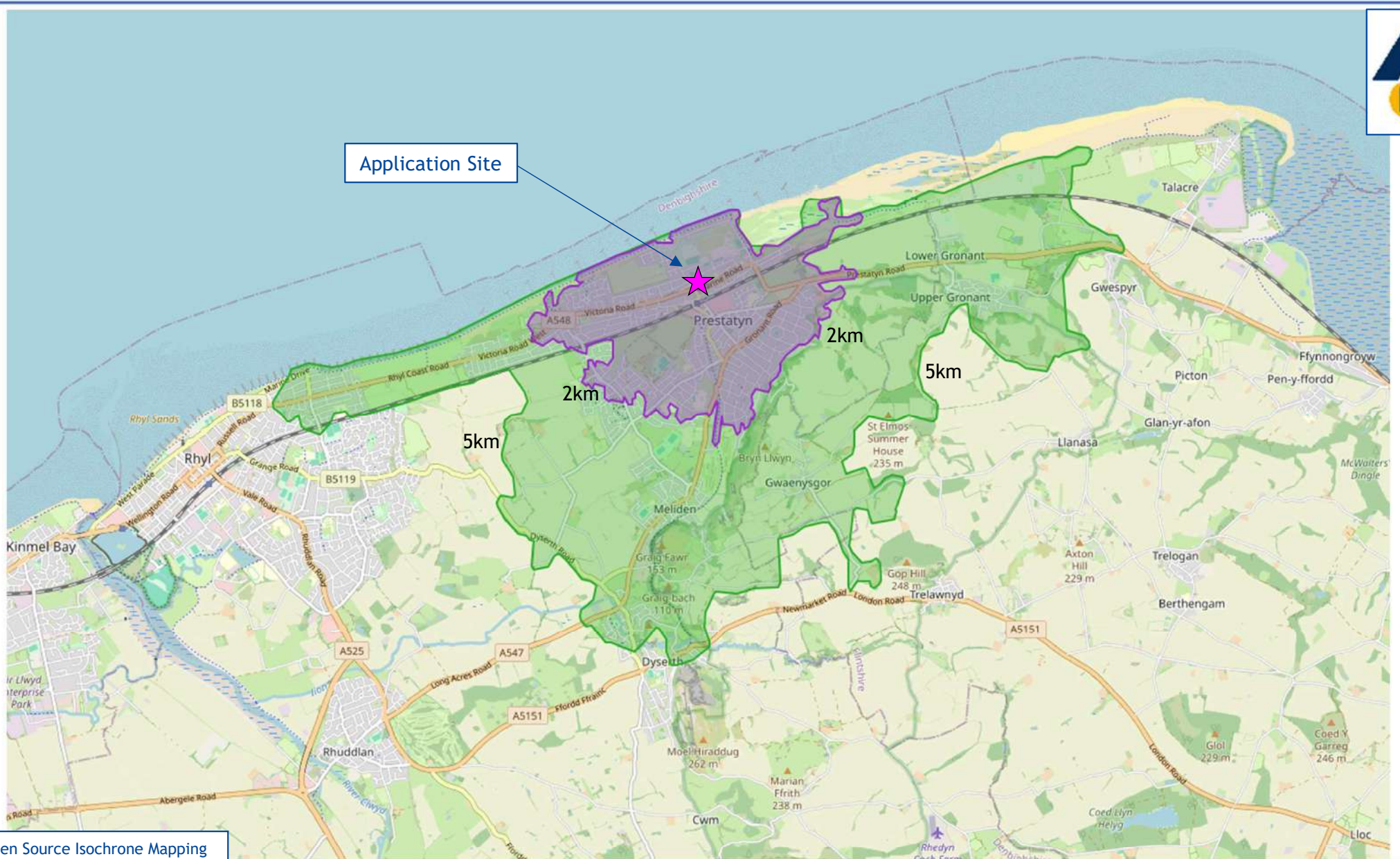


Figure TA10

Identified Local Active Travel Routes In the Immediate Vicinity to the Application Site



Application Site



Open Source Isochrone Mapping



**Figure TA11** 2km & 5km Cycle Catchments from the Application Site

J000556 TA Centre, Prestatyn March 2025



Revision:  
A

Client:  
Wales & West Housing Association Limited

Project:  
Proposed Residential Development  
TA Centre, Prestatyn

Drawing Title:  
Proposed Site Access Arrangement  
Figure TA12

Drawing Number:  
J000556/SK101

Date:  
07.03.2025

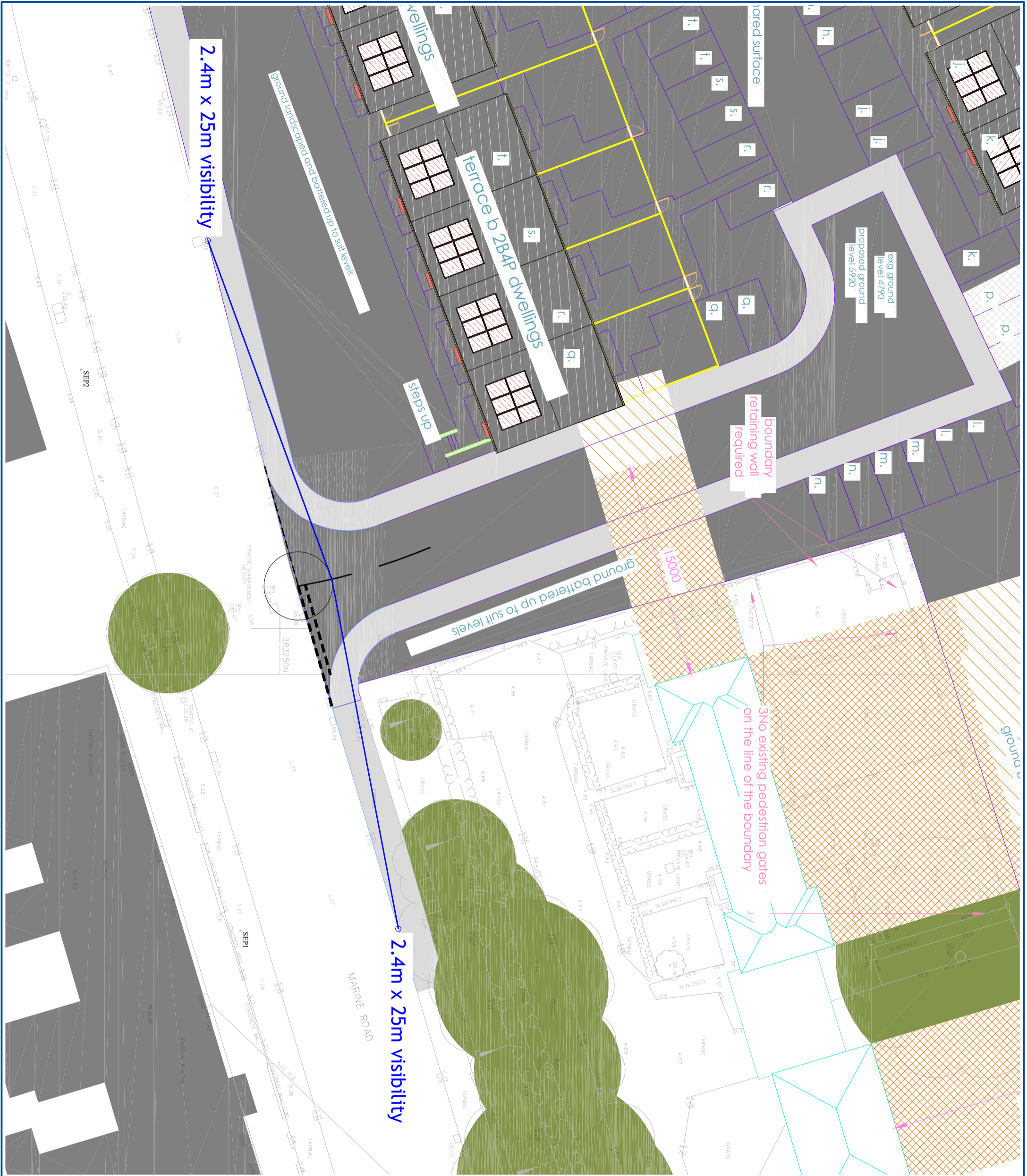
Scale:  
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Drawn By:  
KG

Checked By:  
KG

Status: Information

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This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.



Revision:  
A

Client:  
Wales & West Housing Association Limited

Project:  
Proposed Residential Development  
TA Centre, Prestatyn

Drawing Title:  
Proposed Site Access Visibility  
Figure TA13

Drawing Number:  
J000556/SK102

Date:  
07.03.2025

Drawn By:  
KG

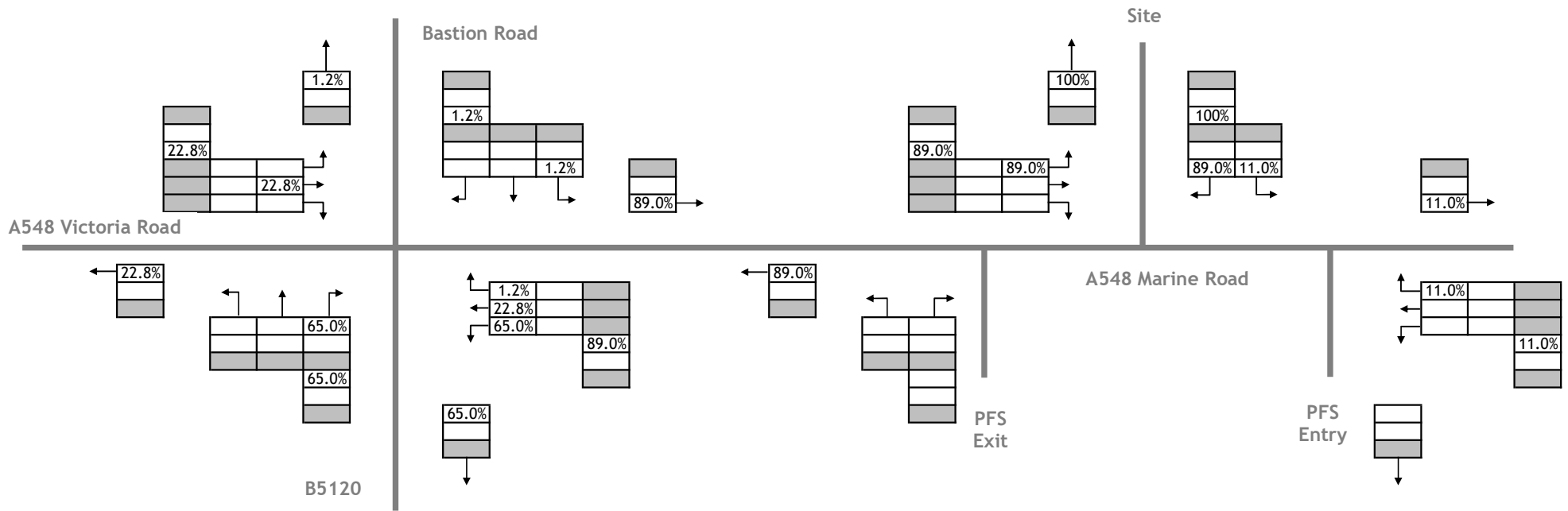
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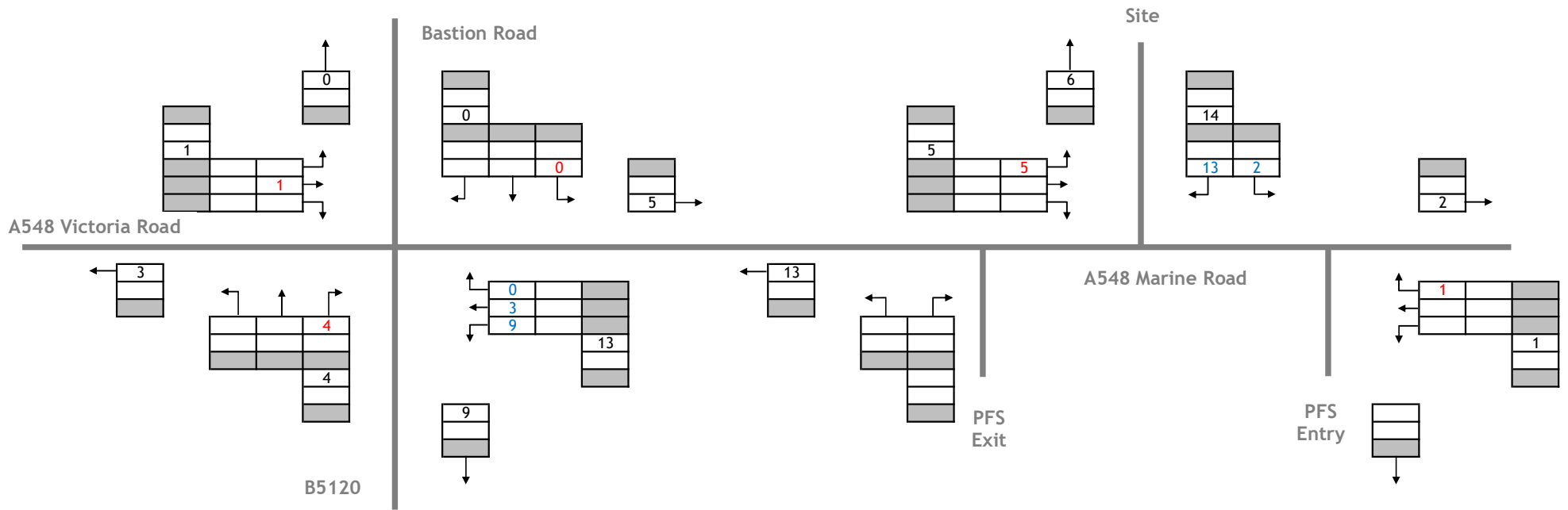
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Information

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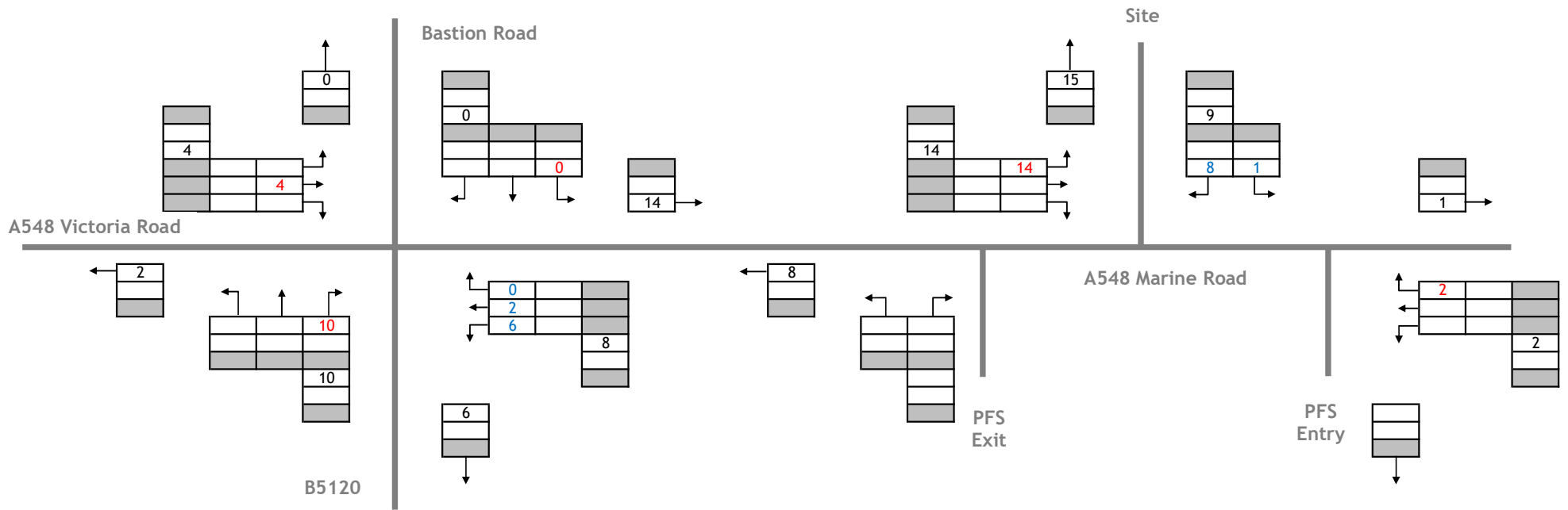
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IN 6  
 OUT 14  
 Two way 20

Key  
 10 Total Vehs  
 5 HGVs  
 15 PCUs



IN 15  
 OUT 9  
 Two way 20

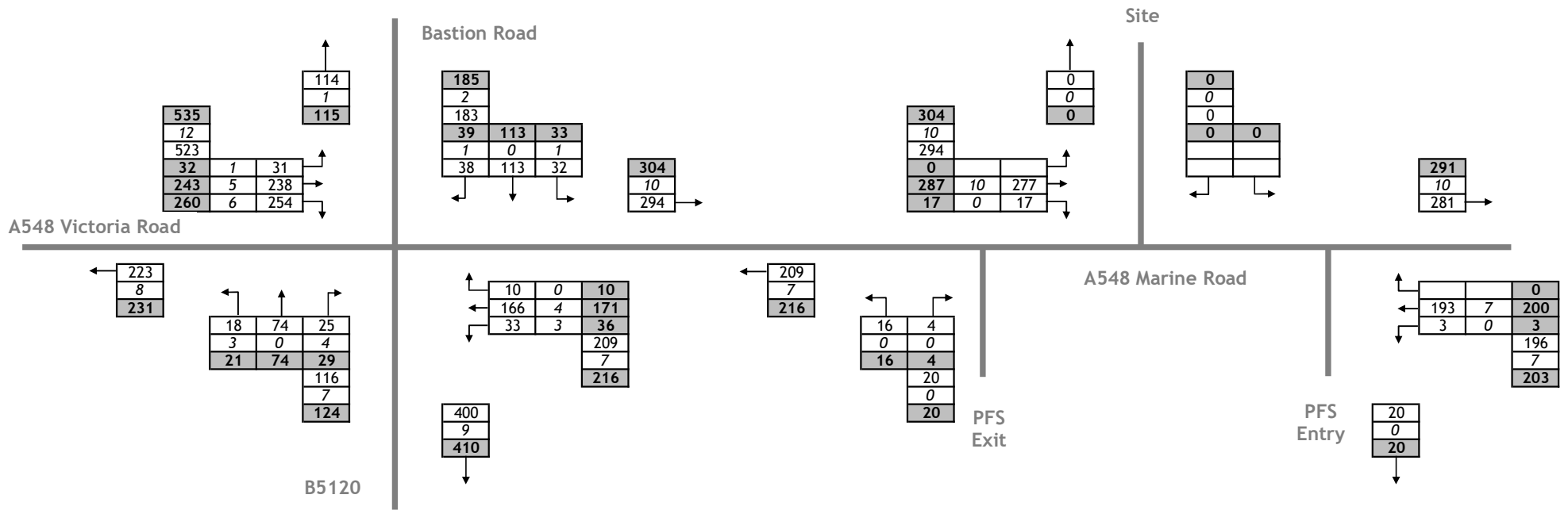
B5120

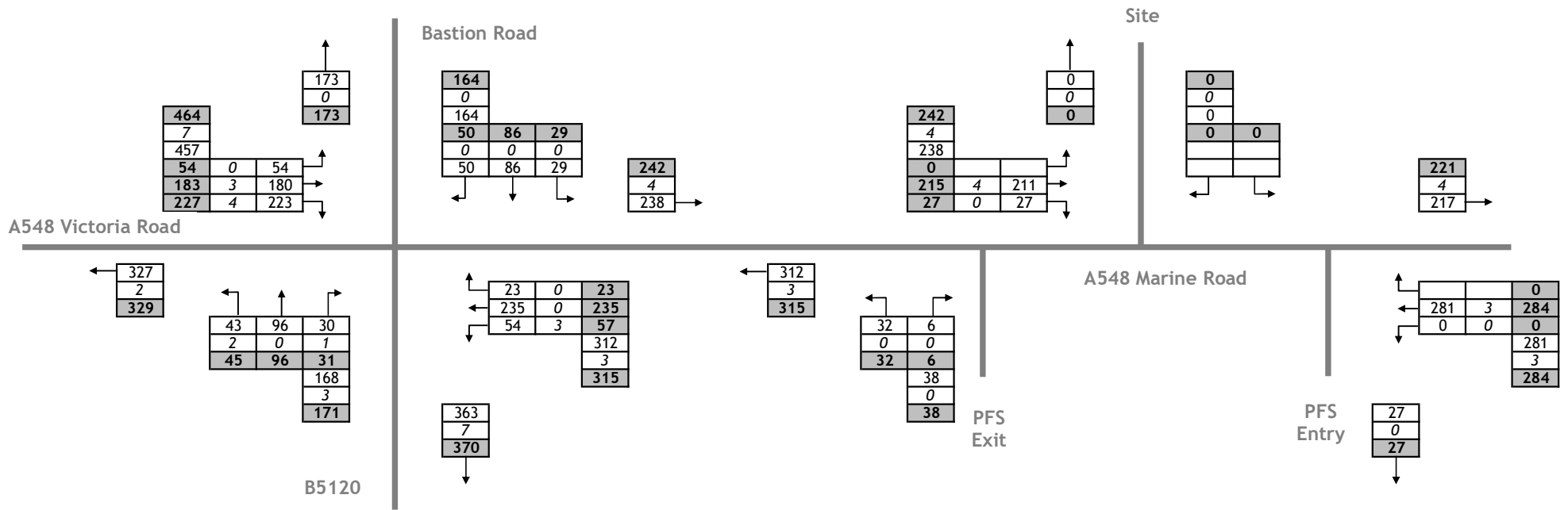
PFS Exit

PFS Entry

**Key**

|    |            |
|----|------------|
| 10 | Total Vehs |
| 5  | HGVs       |
| 15 | PCUs       |

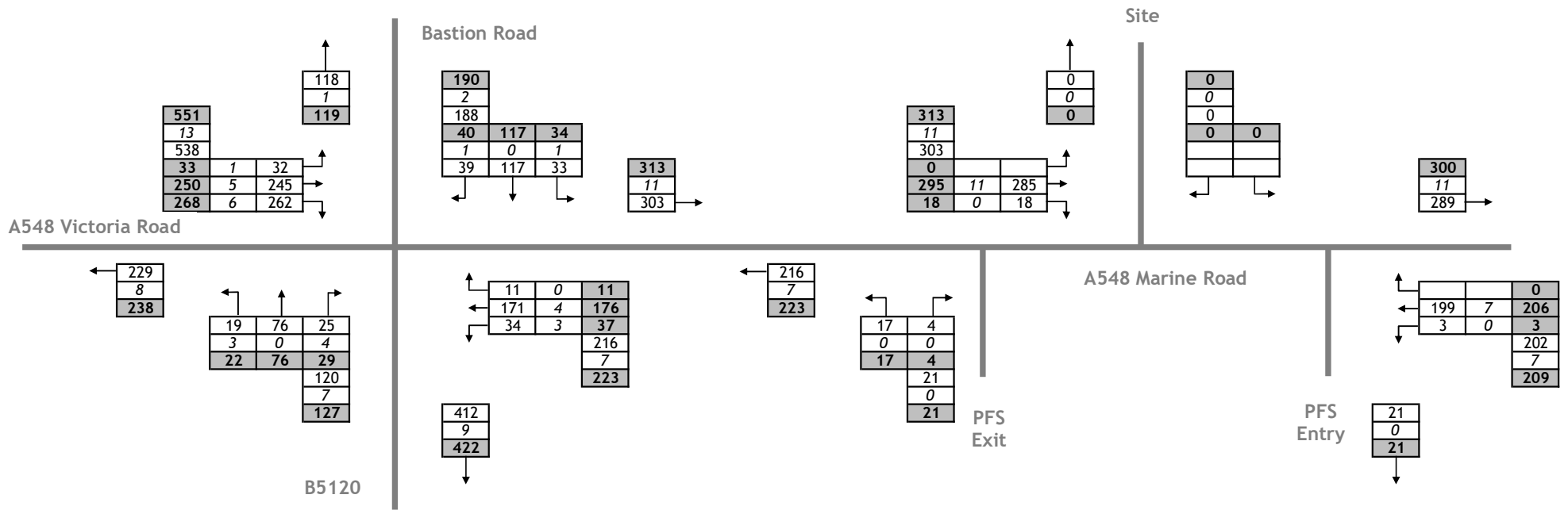




1.0201 2025 - 2027 Growth Factor

Key

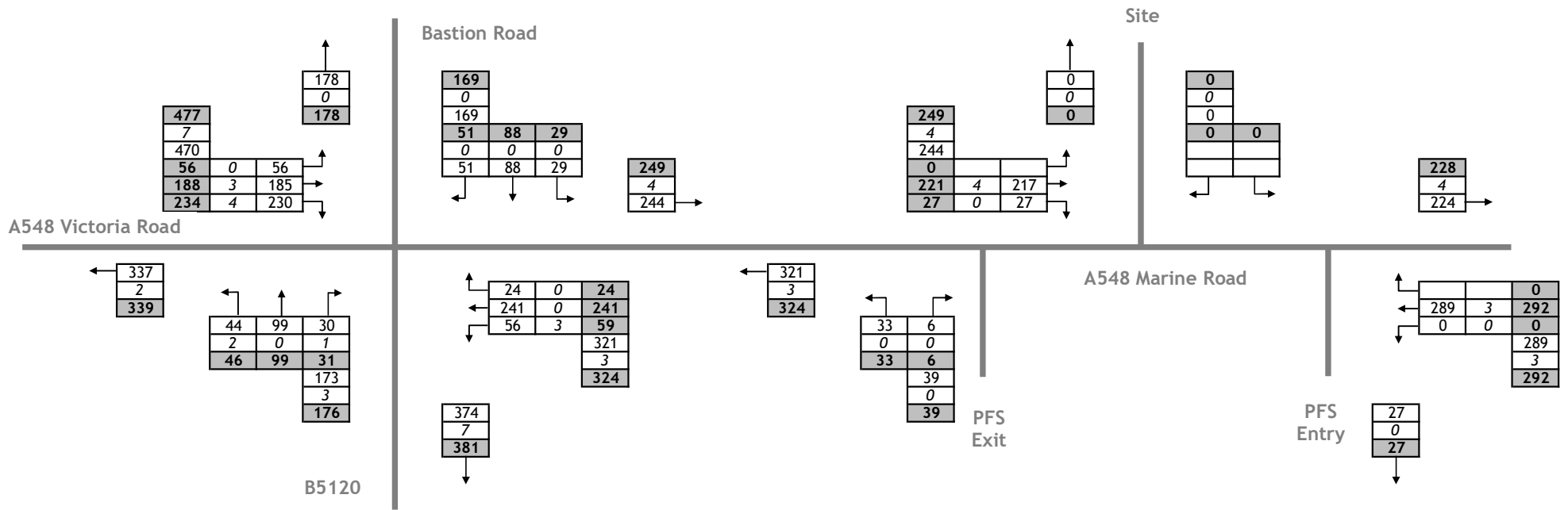
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| 5  | HGVs       |
| 15 | PCUs       |

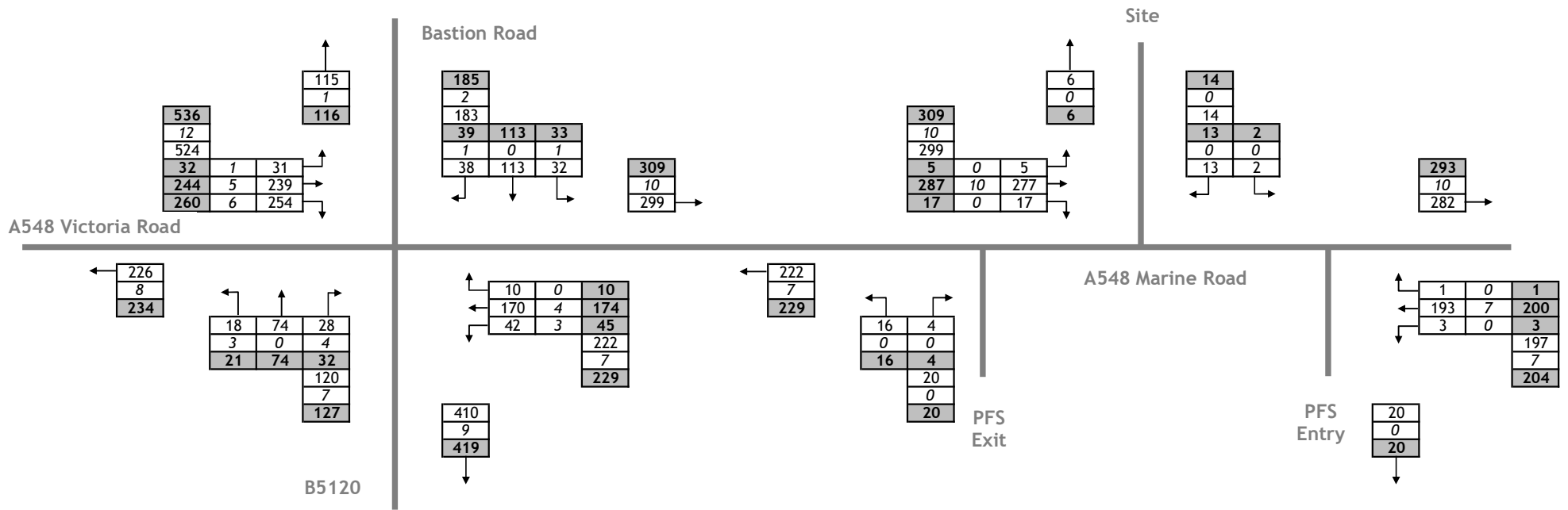


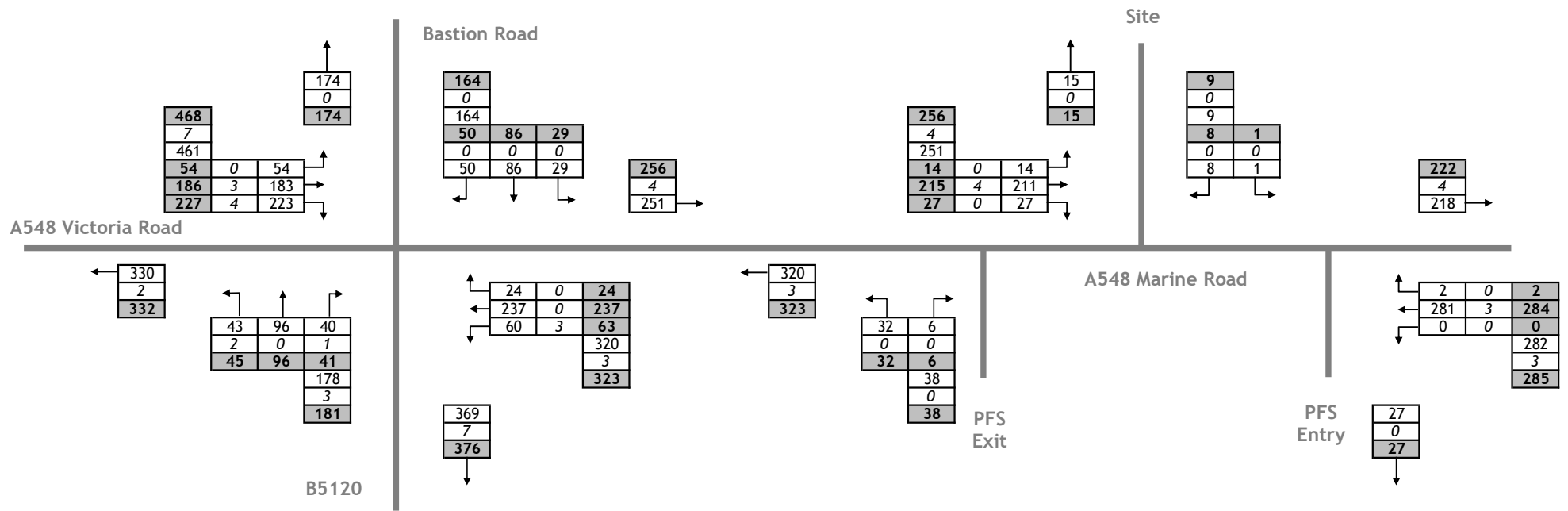
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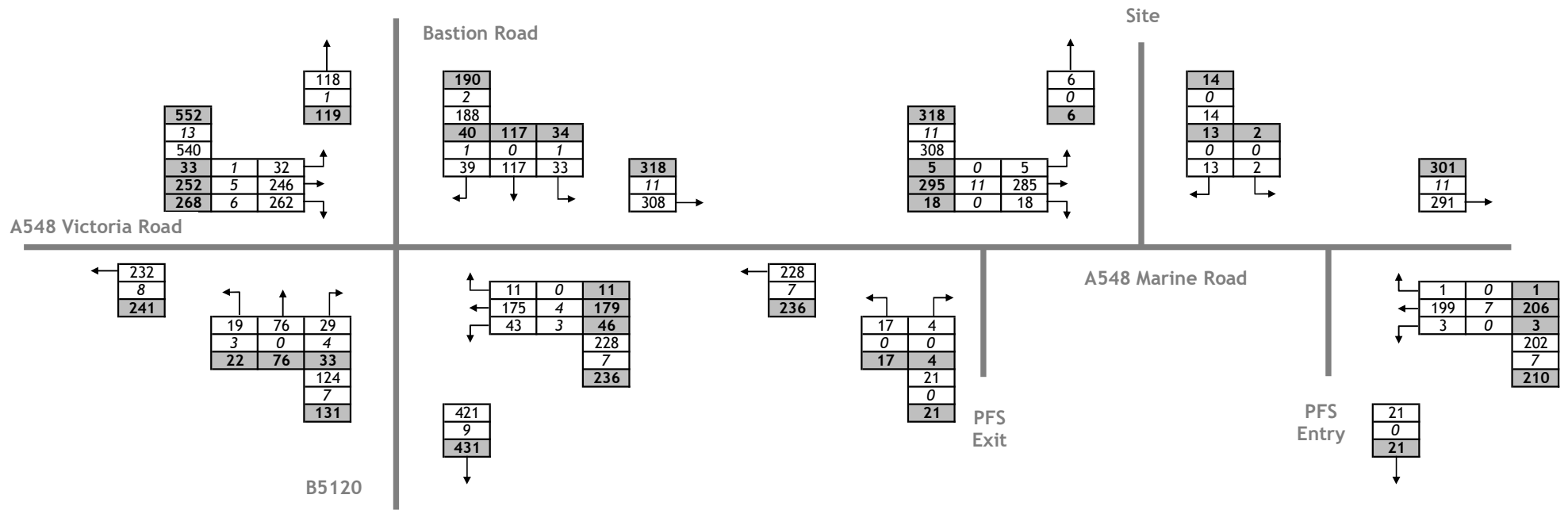
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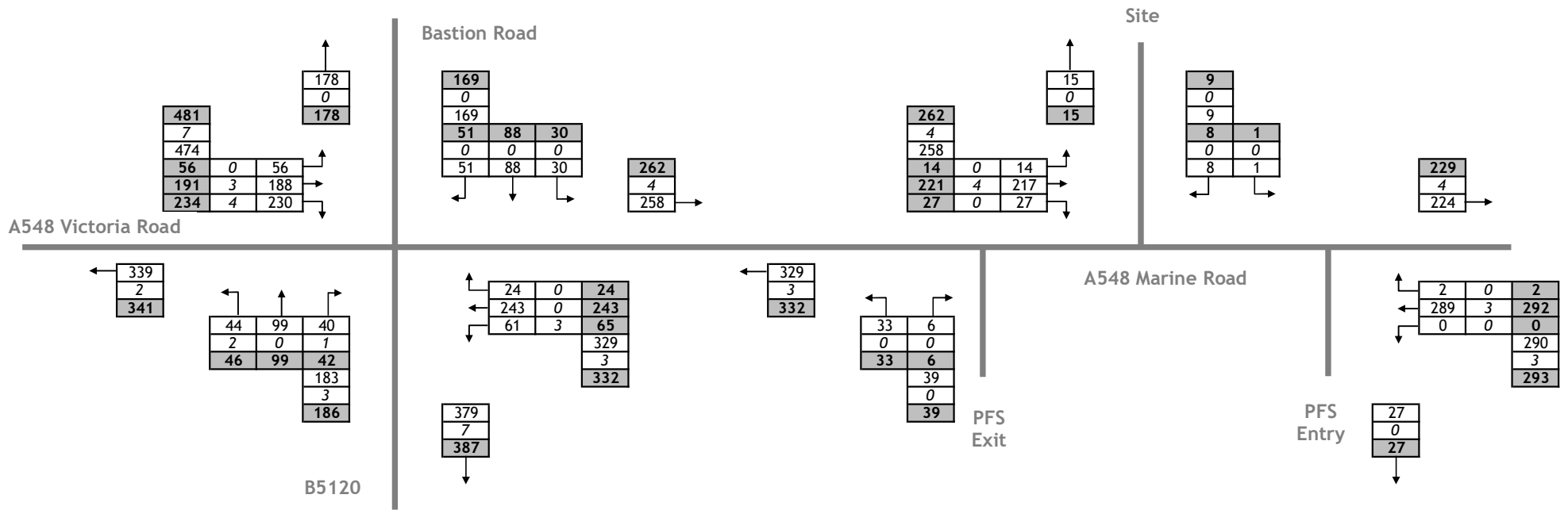
|    |            |
|----|------------|
| 10 | Total Vehs |
| 5  | HGVs       |
| 15 | PCUs       |











**Key**

|    |            |
|----|------------|
| 10 | Total Vehs |
| 5  | HGVs       |
| 15 | PCUs       |





Manual Classified Turning Counts, Prestatyn

DATE: TUESDAY 28th JANUARY 2025

LOCATION: BASTION ROAD / MARINE ROAD / B5120 / VICTORIA ROAD

ARM: BASTION ROAD

| TIME / CLASS  | LEFT TO MARINE DRIVE |             |          |     |       |       |           | LEFT TO PETROL STATION |             |             |          |     |       |       | STRAIGHT TO B5120 |       |             |             |          |     |       | RIGHT TO VICTORIA ROAD |           |       |             |             |          |     | TOTAL MOVEMENT FROM ARM |       |       |           |       |
|---------------|----------------------|-------------|----------|-----|-------|-------|-----------|------------------------|-------------|-------------|----------|-----|-------|-------|-------------------|-------|-------------|-------------|----------|-----|-------|------------------------|-----------|-------|-------------|-------------|----------|-----|-------------------------|-------|-------|-----------|-------|
|               | PEDAL CYCLE          | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH | TOTAL                  | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH         | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2                  | BUS COACH | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV |                         | OGV 1 | OGV 2 | BUS COACH | TOTAL |
| 8:00 - 8:15   | 0                    | 0           | 5        | 4   | 0     | 0     | 0         | 9                      | 0           | 0           | 1        | 0   | 0     | 0     | 0                 | 1     | 0           | 0           | 10       | 2   | 0     | 0                      | 0         | 12    | 0           | 0           | 11       | 1   | 0                       | 0     | 0     | 12        | 34    |
| 8:15 - 8:30   | 0                    | 0           | 2        | 1   | 0     | 0     | 0         | 3                      | 0           | 0           | 2        | 1   | 0     | 0     | 0                 | 3     | 0           | 0           | 36       | 1   | 0     | 0                      | 0         | 37    | 0           | 0           | 8        | 4   | 0                       | 0     | 0     | 12        | 55    |
| 8:30 - 8:45   | 0                    | 0           | 2        | 1   | 0     | 0     | 0         | 3                      | 0           | 0           | 2        | 0   | 0     | 0     | 0                 | 2     | 1           | 0           | 34       | 1   | 0     | 0                      | 0         | 36    | 0           | 0           | 7        | 0   | 0                       | 0     | 0     | 7         | 48    |
| 8:45 - 9:00   | 0                    | 0           | 5        | 2   | 0     | 1     | 0         | 8                      | 0           | 0           | 1        | 1   | 0     | 0     | 0                 | 2     | 0           | 0           | 25       | 2   | 0     | 0                      | 0         | 27    | 0           | 0           | 5        | 0   | 1                       | 0     | 0     | 6         | 43    |
| HOURLY TOTAL  | 0                    | 0           | 14       | 8   | 0     | 1     | 0         | 23                     | 0           | 0           | 6        | 2   | 0     | 0     | 0                 | 8     | 1           | 0           | 105      | 6   | 0     | 0                      | 0         | 112   | 0           | 0           | 31       | 5   | 1                       | 0     | 0     | 37        | 180   |
| 9:00 - 9:15   | 0                    | 0           | 0        | 1   | 0     | 0     | 0         | 1                      | 0           | 0           | 3        | 1   | 0     | 0     | 0                 | 4     | 0           | 0           | 14       | 1   | 0     | 0                      | 0         | 15    | 0           | 0           | 9        | 0   | 0                       | 0     | 0     | 9         | 29    |
| 9:15 - 9:30   | 1                    | 0           | 1        | 3   | 0     | 0     | 0         | 5                      | 0           | 0           | 4        | 1   | 0     | 0     | 0                 | 5     | 0           | 0           | 7        | 0   | 0     | 0                      | 0         | 7     | 0           | 0           | 8        | 0   | 0                       | 0     | 1     | 9         | 26    |
| 9:30 - 9:45   | 0                    | 0           | 0        | 2   | 0     | 0     | 0         | 2                      | 0           | 0           | 4        | 0   | 0     | 0     | 0                 | 4     | 0           | 0           | 18       | 2   | 0     | 0                      | 0         | 20    | 0           | 0           | 3        | 1   | 0                       | 0     | 0     | 4         | 30    |
| 9:45 - 10:00  | 0                    | 0           | 4        | 1   | 0     | 0     | 0         | 5                      | 0           | 0           | 3        | 0   | 0     | 0     | 0                 | 3     | 0           | 0           | 19       | 0   | 0     | 0                      | 0         | 19    | 0           | 0           | 4        | 1   | 0                       | 0     | 0     | 5         | 32    |
| HOURLY TOTAL  | 1                    | 0           | 5        | 7   | 0     | 0     | 0         | 13                     | 0           | 0           | 14       | 2   | 0     | 0     | 0                 | 16    | 0           | 0           | 58       | 3   | 0     | 0                      | 0         | 61    | 0           | 0           | 24       | 2   | 0                       | 0     | 1     | 27        | 117   |
| PERIOD TOTAL  | 1                    | 0           | 19       | 15  | 0     | 1     | 0         | 36                     | 0           | 0           | 20       | 4   | 0     | 0     | 0                 | 24    | 1           | 0           | 163      | 9   | 0     | 0                      | 0         | 173   | 0           | 0           | 55       | 7   | 1                       | 0     | 1     | 64        | 297   |
| 16:00 - 16:15 | 0                    | 0           | 5        | 1   | 0     | 0     | 0         | 6                      | 0           | 0           | 0        | 0   | 0     | 0     | 0                 | 0     | 0           | 0           | 21       | 4   | 0     | 0                      | 0         | 25    | 0           | 0           | 17       | 2   | 0                       | 0     | 0     | 19        | 50    |
| 16:15 - 16:30 | 0                    | 0           | 2        | 0   | 0     | 0     | 0         | 2                      | 0           | 0           | 3        | 1   | 0     | 0     | 0                 | 4     | 0           | 0           | 24       | 3   | 0     | 0                      | 0         | 27    | 0           | 0           | 8        | 2   | 0                       | 0     | 0     | 10        | 43    |
| 16:30 - 16:45 | 0                    | 0           | 4        | 1   | 0     | 0     | 0         | 5                      | 0           | 0           | 1        | 0   | 0     | 0     | 0                 | 1     | 0           | 0           | 24       | 2   | 0     | 0                      | 0         | 26    | 0           | 0           | 10       | 3   | 0                       | 0     | 0     | 13        | 45    |
| 16:45 - 17:00 | 0                    | 0           | 5        | 0   | 0     | 0     | 0         | 5                      | 0           | 0           | 2        | 0   | 0     | 0     | 0                 | 2     | 0           | 0           | 21       | 0   | 0     | 0                      | 0         | 21    | 0           | 0           | 7        | 1   | 0                       | 0     | 0     | 8         | 36    |
| HOURLY TOTAL  | 0                    | 0           | 16       | 2   | 0     | 0     | 0         | 18                     | 0           | 0           | 6        | 1   | 0     | 0     | 0                 | 7     | 0           | 0           | 90       | 9   | 0     | 0                      | 0         | 99    | 0           | 0           | 42       | 8   | 0                       | 0     | 0     | 50        | 174   |
| 17:00 - 17:15 | 0                    | 0           | 5        | 1   | 0     | 0     | 0         | 6                      | 0           | 0           | 2        | 1   | 0     | 0     | 0                 | 3     | 0           | 0           | 24       | 1   | 0     | 0                      | 0         | 25    | 0           | 0           | 11       | 2   | 0                       | 0     | 0     | 13        | 47    |
| 17:15 - 17:30 | 0                    | 0           | 1        | 0   | 0     | 0     | 0         | 1                      | 0           | 0           | 2        | 0   | 0     | 0     | 0                 | 2     | 0           | 0           | 17       | 1   | 0     | 0                      | 0         | 18    | 0           | 0           | 9        | 6   | 0                       | 0     | 0     | 15        | 36    |
| 17:30 - 17:45 | 0                    | 0           | 7        | 0   | 0     | 0     | 0         | 7                      | 0           | 0           | 1        | 1   | 0     | 0     | 0                 | 2     | 0           | 0           | 20       | 0   | 0     | 0                      | 0         | 20    | 0           | 0           | 10       | 3   | 0                       | 0     | 0     | 13        | 42    |
| 17:45 - 18:00 | 0                    | 0           | 5        | 1   | 0     | 0     | 0         | 6                      | 0           | 0           | 2        | 0   | 0     | 0     | 0                 | 2     | 0           | 0           | 23       | 1   | 0     | 0                      | 0         | 24    | 0           | 0           | 12       | 3   | 0                       | 0     | 0     | 15        | 47    |
| HOURLY TOTAL  | 0                    | 0           | 18       | 2   | 0     | 0     | 0         | 20                     | 0           | 0           | 7        | 2   | 0     | 0     | 0                 | 9     | 0           | 0           | 84       | 3   | 0     | 0                      | 0         | 87    | 0           | 0           | 42       | 14  | 0                       | 0     | 0     | 56        | 172   |
| PERIOD TOTAL  | 0                    | 0           | 34       | 4   | 0     | 0     | 0         | 38                     | 0           | 0           | 13       | 3   | 0     | 0     | 0                 | 16    | 0           | 0           | 174      | 12  | 0     | 0                      | 0         | 186   | 0           | 0           | 84       | 22  | 0                       | 0     | 0     | 106       | 346   |



Manual Classified Turning Counts, Prestatyn

DATE: TUESDAY 28th JANUARY 2025

LOCATION: BASTION ROAD / MARINE ROAD / B5120 / VICTORIA ROAD

ARM: B5120

| TIME / CLASS  | LEFT TO VICTORIA ROAD |             |          |     |       |       |           | STRAIGHT TO BASTION ROAD |             |             |          |     |       |       | RIGHT TO MARINE ROAD |       |             |             |          |     |       | RIGHT TO PETROL FILLING STATION |           |       |             |             |          |     | TOTAL MOVEMENT FROM ARM |       |       |           |       |   |   |   |   |   |   |   |   |
|---------------|-----------------------|-------------|----------|-----|-------|-------|-----------|--------------------------|-------------|-------------|----------|-----|-------|-------|----------------------|-------|-------------|-------------|----------|-----|-------|---------------------------------|-----------|-------|-------------|-------------|----------|-----|-------------------------|-------|-------|-----------|-------|---|---|---|---|---|---|---|---|
|               | PEDAL CYCLE           | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH | TOTAL                    | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH            | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2                           | BUS COACH | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV |                         | OGV 1 | OGV 2 | BUS COACH | TOTAL |   |   |   |   |   |   |   |   |
| 8:00 - 8:15   | 0                     | 0           | 4        | 2   | 0     | 0     | 1         | 7                        | 0           | 0           | 10       | 5   | 0     | 0     | 0                    | 15    | 0           | 0           | 5        | 3   | 0     | 0                               | 2         | 10    | 0           | 0           | 1        | 0   | 0                       | 0     | 0     | 1         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:15 - 8:30   | 0                     | 0           | 2        | 0   | 0     | 0     | 1         | 3                        | 0           | 0           | 12       | 3   | 0     | 0     | 0                    | 15    | 0           | 0           | 2        | 1   | 0     | 0                               | 1         | 4     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 - 8:45   | 0                     | 0           | 1        | 0   | 0     | 0     | 0         | 1                        | 0           | 0           | 18       | 0   | 0     | 0     | 0                    | 18    | 0           | 0           | 2        | 1   | 0     | 0                               | 1         | 4     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 - 9:00   | 0                     | 0           | 6        | 0   | 0     | 0     | 1         | 7                        | 0           | 0           | 21       | 3   | 0     | 0     | 0                    | 24    | 0           | 0           | 3        | 1   | 0     | 0                               | 0         | 4     | 0           | 0           | 1        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| HOURLY TOTAL  | 0                     | 0           | 13       | 2   | 0     | 0     | 3         | 18                       | 0           | 0           | 61       | 11  | 0     | 0     | 0                    | 72    | 0           | 0           | 12       | 6   | 0     | 0                               | 4         | 22    | 0           | 0           | 2        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9:00 - 9:15   | 0                     | 0           | 5        | 1   | 0     | 0     | 1         | 6                        | 0           | 0           | 15       | 1   | 0     | 0     | 0                    | 16    | 0           | 0           | 5        | 2   | 0     | 0                               | 1         | 8     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:15 - 9:30   | 0                     | 0           | 6        | 0   | 0     | 0     | 1         | 7                        | 0           | 0           | 17       | 5   | 0     | 0     | 1                    | 23    | 0           | 0           | 1        | 0   | 0     | 0                               | 0         | 1     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9:30 - 9:45   | 0                     | 0           | 3        | 3   | 0     | 0     | 0         | 6                        | 0           | 0           | 17       | 0   | 0     | 0     | 1                    | 18    | 0           | 0           | 6        | 0   | 0     | 0                               | 1         | 7     | 0           | 0           | 1        | 1   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 9:45 - 10:00  | 0                     | 0           | 2        | 0   | 0     | 0     | 1         | 3                        | 0           | 0           | 9        | 5   | 1     | 0     | 0                    | 15    | 0           | 0           | 4        | 0   | 0     | 0                               | 0         | 4     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HOURLY TOTAL  | 0                     | 0           | 16       | 4   | 0     | 0     | 2         | 22                       | 0           | 0           | 58       | 11  | 1     | 0     | 2                    | 72    | 0           | 0           | 16       | 2   | 0     | 0                               | 2         | 20    | 0           | 0           | 1        | 1   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| PERIOD TOTAL  | 0                     | 0           | 29       | 6   | 0     | 0     | 5         | 40                       | 0           | 0           | 119      | 22  | 1     | 0     | 2                    | 144   | 0           | 0           | 28       | 8   | 0     | 0                               | 6         | 42    | 0           | 0           | 3        | 1   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 16:00 - 16:15 | 0                     | 0           | 9        | 2   | 0     | 0     | 0         | 11                       | 0           | 0           | 21       | 2   | 0     | 0     | 0                    | 23    | 0           | 0           | 8        | 1   | 0     | 0                               | 2         | 11    | 0           | 0           | 1        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 16:15 - 16:30 | 0                     | 0           | 4        | 1   | 1     | 0     | 1         | 7                        | 0           | 0           | 20       | 3   | 0     | 0     | 0                    | 23    | 0           | 0           | 2        | 3   | 0     | 0                               | 1         | 6     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16:30 - 16:45 | 0                     | 0           | 12       | 0   | 0     | 0     | 0         | 12                       | 0           | 0           | 14       | 3   | 0     | 0     | 0                    | 17    | 0           | 0           | 1        | 3   | 0     | 0                               | 1         | 5     | 0           | 0           | 2        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 16:45 - 17:00 | 0                     | 0           | 13       | 3   | 0     | 0     | 0         | 16                       | 0           | 0           | 25       | 5   | 0     | 0     | 0                    | 30    | 0           | 0           | 2        | 2   | 0     | 0                               | 0         | 4     | 0           | 0           | 1        | 1   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| HOURLY TOTAL  | 0                     | 0           | 38       | 6   | 1     | 0     | 1         | 46                       | 0           | 0           | 80       | 13  | 0     | 0     | 0                    | 93    | 0           | 0           | 13       | 9   | 0     | 0                               | 4         | 26    | 0           | 0           | 1        | 4   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 17:00 - 17:15 | 0                     | 0           | 7        | 3   | 0     | 0     | 1         | 11                       | 0           | 0           | 13       | 1   | 0     | 0     | 0                    | 14    | 0           | 0           | 6        | 2   | 0     | 0                               | 1         | 9     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:15 - 17:30 | 0                     | 0           | 5        | 2   | 0     | 0     | 1         | 8                        | 0           | 0           | 27       | 2   | 0     | 0     | 0                    | 29    | 0           | 0           | 2        | 1   | 0     | 0                               | 0         | 3     | 0           | 0           | 2        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 17:30 - 17:45 | 0                     | 0           | 7        | 0   | 0     | 0     | 0         | 7                        | 0           | 0           | 18       | 3   | 0     | 0     | 0                    | 21    | 0           | 0           | 8        | 1   | 0     | 0                               | 0         | 9     | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:45 - 18:00 | 0                     | 0           | 12       | 2   | 0     | 0     | 0         | 14                       | 0           | 0           | 27       | 4   | 0     | 0     | 0                    | 31    | 0           | 0           | 15       | 1   | 0     | 0                               | 1         | 17    | 0           | 0           | 0        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HOURLY TOTAL  | 0                     | 0           | 31       | 7   | 0     | 0     | 2         | 40                       | 0           | 0           | 85       | 10  | 0     | 0     | 0                    | 95    | 0           | 0           | 31       | 5   | 0     | 0                               | 2         | 38    | 0           | 0           | 2        | 0   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| PERIOD TOTAL  | 0                     | 0           | 69       | 13  | 1     | 0     | 3         | 86                       | 0           | 0           | 165      | 23  | 0     | 0     | 0                    | 188   | 0           | 0           | 44       | 14  | 0     | 0                               | 6         | 64    | 0           | 0           | 1        | 6   | 0                       | 0     | 0     | 0         | 0     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |

Manual Classified Turning Counts, Prestatyn

DATE: TUESDAY 28th JANUARY 2025

LOCATION: BASTION ROAD / MARINE ROAD / B5120 / VICTORIA ROAD

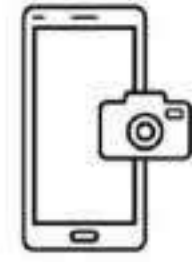
ARM: VICTORIA ROAD

| TIME / CLASS  | LEFT TO BASTION ROAD |             |          |     |       |       |           | STRAIGHT TO MARINE ROAD |             |             |          |     |       |       | STRAIGHT TO PETROL FILLING STATION |       |             |             |          |     |       | RIGHT TO B5120 |           |       |             |             |          |     | TOTAL MOVEMENT FROM ARM |       |       |           |       |
|---------------|----------------------|-------------|----------|-----|-------|-------|-----------|-------------------------|-------------|-------------|----------|-----|-------|-------|------------------------------------|-------|-------------|-------------|----------|-----|-------|----------------|-----------|-------|-------------|-------------|----------|-----|-------------------------|-------|-------|-----------|-------|
|               | PEDAL CYCLE          | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH | TOTAL                   | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH                          | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2          | BUS COACH | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI | LGV |                         | OGV 1 | OGV 2 | BUS COACH | TOTAL |
| 8:00 - 8:15   | 0                    | 1           | 8        | 5   | 0     | 0     | 0         | 14                      | 0           | 0           | 39       | 7   | 1     | 0     | 0                                  | 47    | 0           | 0           | 3        | 1   | 0     | 0              | 0         | 4     | 0           | 0           | 34       | 9   | 1                       | 0     | 2     | 46        | 111   |
| 8:15 - 8:30   | 0                    | 0           | 4        | 1   | 1     | 0     | 0         | 6                       | 0           | 1           | 46       | 12  | 1     | 0     | 0                                  | 60    | 0           | 0           | 1        | 0   | 0     | 0              | 0         | 1     | 0           | 0           | 55       | 5   | 0                       | 0     | 1     | 61        | 128   |
| 8:30 - 8:45   | 0                    | 0           | 2        | 0   | 0     | 0     | 0         | 2                       | 0           | 0           | 45       | 9   | 0     | 0     | 0                                  | 54    | 0           | 0           | 0        | 1   | 0     | 0              | 0         | 1     | 0           | 0           | 75       | 5   | 0                       | 0     | 0     | 80        | 137   |
| 8:45 - 9:00   | 0                    | 0           | 5        | 3   | 0     | 0     | 0         | 8                       | 0           | 0           | 53       | 9   | 3     | 0     | 0                                  | 65    | 0           | 0           | 0        | 1   | 0     | 0              | 0         | 1     | 0           | 0           | 54       | 6   | 1                       | 0     | 1     | 62        | 136   |
| HOURLY TOTAL  | 0                    | 1           | 19       | 9   | 1     | 0     | 0         | 30                      | 0           | 1           | 183      | 37  | 5     | 0     | 0                                  | 226   | 0           | 0           | 4        | 3   | 0     | 0              | 0         | 7     | 0           | 0           | 218      | 25  | 2                       | 0     | 4     | 249       | 512   |
| 9:00 - 9:15   | 0                    | 0           | 8        | 1   | 0     | 0     | 0         | 9                       | 0           | 0           | 40       | 11  | 1     | 0     | 0                                  | 52    | 0           | 0           | 2        | 0   | 0     | 0              | 0         | 2     | 0           | 0           | 38       | 4   | 0                       | 0     | 0     | 42        | 105   |
| 9:15 - 9:30   | 0                    | 0           | 3        | 2   | 0     | 0     | 0         | 5                       | 0           | 0           | 21       | 8   | 3     | 0     | 0                                  | 32    | 0           | 0           | 1        | 0   | 0     | 0              | 0         | 1     | 0           | 0           | 30       | 4   | 0                       | 0     | 1     | 35        | 73    |
| 9:30 - 9:45   | 0                    | 0           | 8        | 3   | 0     | 0     | 0         | 11                      | 0           | 0           | 30       | 7   | 2     | 1     | 0                                  | 40    | 0           | 0           | 2        | 0   | 0     | 0              | 0         | 2     | 0           | 0           | 41       | 4   | 0                       | 0     | 0     | 45        | 98    |
| 9:45 - 10:00  | 0                    | 0           | 13       | 0   | 1     | 0     | 0         | 14                      | 0           | 0           | 31       | 2   | 1     | 0     | 0                                  | 34    | 0           | 0           | 3        | 2   | 0     | 0              | 0         | 5     | 0           | 0           | 58       | 6   | 0                       | 1     | 1     | 66        | 119   |
| HOURLY TOTAL  | 0                    | 0           | 32       | 6   | 1     | 0     | 0         | 39                      | 0           | 0           | 122      | 28  | 7     | 1     | 0                                  | 158   | 0           | 0           | 8        | 2   | 0     | 0              | 0         | 10    | 0           | 0           | 167      | 18  | 0                       | 1     | 2     | 188       | 395   |
| PERIOD TOTAL  | 0                    | 1           | 51       | 15  | 2     | 0     | 0         | 69                      | 0           | 1           | 305      | 65  | 12    | 1     | 0                                  | 384   | 0           | 0           | 12       | 5   | 0     | 0              | 0         | 17    | 0           | 0           | 385      | 43  | 2                       | 1     | 6     | 437       | 907   |
| 16:00 - 16:15 | 0                    | 0           | 10       | 1   | 0     | 0     | 0         | 11                      | 0           | 0           | 38       | 8   | 1     | 0     | 0                                  | 47    | 0           | 0           | 0        | 1   | 0     | 0              | 0         | 1     | 0           | 0           | 43       | 11  | 1                       | 0     | 0     | 55        | 114   |
| 16:15 - 16:30 | 0                    | 0           | 9        | 0   | 0     | 0     | 0         | 9                       | 0           | 0           | 25       | 4   | 0     | 0     | 1                                  | 30    | 0           | 0           | 1        | 0   | 0     | 0              | 0         | 1     | 0           | 0           | 37       | 5   | 0                       | 0     | 0     | 42        | 82    |
| 16:30 - 16:45 | 0                    | 0           | 14       | 0   | 0     | 0     | 0         | 14                      | 0           | 1           | 33       | 7   | 1     | 0     | 0                                  | 42    | 0           | 0           | 2        | 1   | 0     | 0              | 0         | 3     | 0           | 0           | 51       | 10  | 0                       | 0     | 0     | 61        | 120   |
| 16:45 - 17:00 | 0                    | 0           | 12       | 2   | 0     | 0     | 0         | 14                      | 1           | 1           | 25       | 2   | 2     | 0     | 0                                  | 31    | 0           | 1           | 3        | 0   | 0     | 0              | 0         | 4     | 0           | 0           | 47       | 9   | 0                       | 0     | 0     | 56        | 105   |
| HOURLY TOTAL  | 0                    | 0           | 45       | 3   | 0     | 0     | 0         | 48                      | 1           | 2           | 121      | 21  | 4     | 0     | 1                                  | 150   | 0           | 1           | 6        | 2   | 0     | 0              | 0         | 9     | 0           | 0           | 178      | 35  | 1                       | 0     | 0     | 214       | 421   |
| 17:00 - 17:15 | 0                    | 0           | 15       | 0   | 0     | 0     | 0         | 15                      | 0           | 0           | 36       | 3   | 1     | 0     | 0                                  | 40    | 0           | 0           | 2        | 1   | 0     | 0              | 0         | 3     | 0           | 0           | 53       | 8   | 0                       | 0     | 1     | 62        | 120   |
| 17:15 - 17:30 | 0                    | 0           | 14       | 0   | 0     | 0     | 0         | 14                      | 0           | 0           | 41       | 4   | 0     | 0     | 0                                  | 45    | 0           | 0           | 1        | 0   | 0     | 0              | 0         | 1     | 0           | 0           | 51       | 3   | 0                       | 0     | 1     | 56        | 116   |
| 17:30 - 17:45 | 0                    | 0           | 7        | 3   | 0     | 0     | 0         | 10                      | 0           | 0           | 38       | 10  | 0     | 0     | 0                                  | 48    | 0           | 0           | 5        | 0   | 0     | 0              | 0         | 5     | 0           | 0           | 41       | 2   | 0                       | 0     | 2     | 45        | 108   |
| 17:45 - 18:00 | 0                    | 0           | 13       | 1   | 0     | 0     | 0         | 14                      | 0           | 0           | 30       | 2   | 0     | 0     | 0                                  | 32    | 0           | 0           | 3        | 0   | 0     | 0              | 0         | 3     | 0           | 0           | 41       | 3   | 0                       | 0     | 0     | 44        | 93    |
| HOURLY TOTAL  | 0                    | 0           | 49       | 4   | 0     | 0     | 0         | 53                      | 0           | 0           | 145      | 19  | 1     | 0     | 0                                  | 165   | 0           | 0           | 11       | 1   | 0     | 0              | 0         | 12    | 0           | 1           | 166      | 16  | 0                       | 0     | 4     | 207       | 437   |
| PERIOD TOTAL  | 0                    | 0           | 94       | 7   | 0     | 0     | 0         | 101                     | 1           | 2           | 266      | 40  | 5     | 0     | 1                                  | 315   | 0           | 1           | 17       | 3   | 0     | 0              | 0         | 21    | 0           | 1           | 364      | 51  | 1                       | 0     | 4     | 421       | 858   |

| LEFT TO PETROL FILLING STATION |             |          |     |       |       |           |       |             |             | RIGHT OUT OF PETROL FILLING STATION |     |       |       |           |       |    |  |  |  | TOTAL MOVEMENT FROM ARM |
|--------------------------------|-------------|----------|-----|-------|-------|-----------|-------|-------------|-------------|-------------------------------------|-----|-------|-------|-----------|-------|----|--|--|--|-------------------------|
| PEDAL CYCLE                    | MOTOR CYCLE | CAR TAXI | LGV | OGV 1 | OGV 2 | BUS COACH | TOTAL | PEDAL CYCLE | MOTOR CYCLE | CAR TAXI                            | LGV | OGV 1 | OGV 2 | BUS COACH | TOTAL |    |  |  |  |                         |
| 0                              | 0           | 1        | 2   | 0     | 0     | 0         | 3     | 0           | 0           | 2                                   | 0   | 0     | 0     | 0         | 2     | 5  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 0                                   | 0   | 0     | 0     | 0         | 0     | 0  |  |  |  |                         |
| 0                              | 0           | 1        | 2   | 0     | 0     | 0         | 3     | 0           | 0           | 4                                   | 0   | 0     | 0     | 0         | 4     | 7  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 2                                   | 0   | 0     | 0     | 0         | 2     | 2  |  |  |  |                         |
| 0                              | 0           | 1        | 0   | 0     | 0     | 0         | 1     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 2  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 2                                   | 0   | 0     | 0     | 0         | 2     | 2  |  |  |  |                         |
| 0                              | 0           | 1        | 0   | 0     | 0     | 0         | 1     | 0           | 0           | 6                                   | 0   | 0     | 0     | 0         | 6     | 7  |  |  |  |                         |
| 0                              | 0           | 2        | 2   | 0     | 0     | 0         | 4     | 0           | 0           | 10                                  | 0   | 0     | 0     | 0         | 10    | 14 |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 1   | 0     | 0     | 0         | 2     | 2  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 1        | 0   | 0     | 0     | 0         | 1     | 0           | 0           | 2                                   | 1   | 0     | 0     | 0         | 3     | 4  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 2                                   | 0   | 0     | 0     | 0         | 2     | 2  |  |  |  |                         |
| 0                              | 0           | 1        | 0   | 0     | 0     | 0         | 1     | 0           | 0           | 4                                   | 2   | 0     | 0     | 0         | 8     | 9  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 1                                   | 0   | 0     | 0     | 0         | 1     | 1  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 2                                   | 0   | 0     | 0     | 0         | 2     | 2  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 0                                   | 0   | 0     | 0     | 0         | 0     | 0  |  |  |  |                         |
| 0                              | 0           | 0        | 0   | 0     | 0     | 0         | 0     | 0           | 0           | 4                                   | 0   | 0     | 0     | 0         | 4     | 4  |  |  |  |                         |
| 0                              | 0           | 1        | 0   | 0     | 0     | 0         | 1     | 0           | 0           | 8                                   | 2   | 0     | 0     | 0         | 12    | 13 |  |  |  |                         |



16/02/2025 20:00:56



scan the qr code with your mobile phone camera for an illustrative video of the site panorama



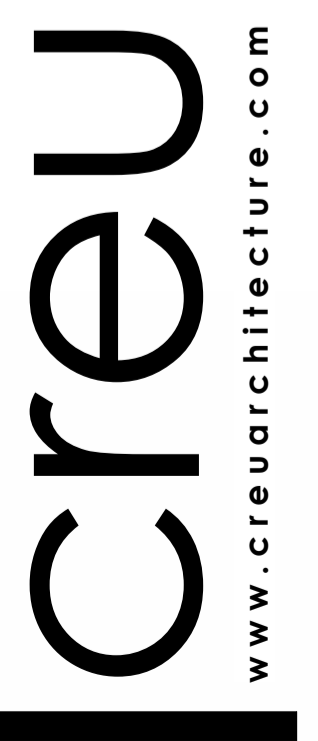
10mm 50 100 200



- soft landscaping grass, meadow, planting, trees to landscape architects details
- Q30/311 grass generic
- Q22/110 tarmac path generic
- Q22/120 tarmac road generic
- Q25/800 concrete slab paving generic
- Q25/300 brick paving generic
- site boundary
- sun path
- tree - existing retained
- sewer easment
- right of way access must be maintained to prestatyn gutter at all times
- existing building footprint
- LDP designated open space
- below ground mains electric
- below ground mains gas
- below ground mains drainage
- ( refer to utility providers plans for further detail )

PUBLISHED - for construction  
 SHARED - for approval  
 WIP - for discussion

| Revision | Description                      | Date of Revision | Issued by |
|----------|----------------------------------|------------------|-----------|
| A        | WIP - issued for review/ comment | 2025.02.14       | AJR       |



Project name C523

Drawing No 006

Revision A

Date: 2024.09.23

Scale@A1: As indicated Project: TA CENTRE, PRESTATYN  
Sheet name: PROPOSED SITE

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : K - MIXED PRIV HOUS (FLATS AND HOUSES)  
TOTAL VEHICLES

Selected regions and areas:

|    |                          |        |
|----|--------------------------|--------|
| 02 | SOUTH EAST               |        |
|    | BO BEDFORD               | 1 days |
|    | ES EAST SUSSEX           | 1 days |
|    | WS WEST SUSSEX           | 1 days |
| 03 | SOUTH WEST               |        |
|    | CW CORNWALL              | 1 days |
| 04 | EAST ANGLIA              |        |
|    | CA CAMBRIDGESHIRE        | 1 days |
| 05 | EAST MIDLANDS            |        |
|    | NM WEST NORTHAMPTONSHIRE | 1 days |
| 08 | NORTH WEST               |        |
|    | GM GREATER MANCHESTER    | 1 days |
| 09 | NORTH                    |        |
|    | FU WESTMORLAND & FURNESS | 1 days |
|    | TW TYNE & WEAR           | 1 days |
| 10 | WALES                    |        |
|    | BL BLAENAU GWENT         | 1 days |
|    | CO CONWY                 | 1 days |

## Primary Filtering selection:

Parameter: No of Dwellings  
 Actual Range: 15 to 89 (units: )  
 Range Selected by User: 15 to 100 (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: 01/01/16 to 12/06/24

Selected survey days:

|           |        |
|-----------|--------|
| Monday    | 1 days |
| Tuesday   | 2 days |
| Wednesday | 2 days |
| Thursday  | 5 days |
| Friday    | 1 days |

Selected survey types:

|                       |         |
|-----------------------|---------|
| Manual count          | 11 days |
| Directional ATC Count | 0 days  |

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Edge of Town Centre                | 2 |
| Suburban Area (PPS6 Out of Centre) | 3 |
| Edge of Town                       | 6 |

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Commercial Zone  | 1 |
| Residential Zone | 9 |
| No Sub Category  | 1 |

Inclusion of Servicing Vehicles Counts:

|                             |                   |
|-----------------------------|-------------------|
| Servicing vehicles Included | 3 days - Selected |
| Servicing vehicles Excluded | 8 days - Selected |

## Secondary Filtering selection:

Use Class:

|    |         |
|----|---------|
| C3 | 11 days |
|----|---------|

Population within 500m Range:

All Surveys Included

Population within 1 mile:

|                   |        |
|-------------------|--------|
| 1,000 or Less     | 1 days |
| 5,001 to 10,000   | 3 days |
| 10,001 to 15,000  | 2 days |
| 15,001 to 20,000  | 3 days |
| 25,001 to 50,000  | 1 days |
| 50,001 to 100,000 | 1 days |

Population within 5 miles:

|                    |        |
|--------------------|--------|
| 25,001 to 50,000   | 3 days |
| 50,001 to 75,000   | 2 days |
| 75,001 to 100,000  | 1 days |
| 100,001 to 125,000 | 1 days |
| 125,001 to 250,000 | 2 days |
| 250,001 to 500,000 | 1 days |
| 500,001 or More    | 1 days |

## Secondary Filtering selection (Cont.):

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 0.6 to 1.0 | 3 days |
| 1.1 to 1.5 | 6 days |
| 1.6 to 2.0 | 2 days |

Travel Plan:

|     |        |
|-----|--------|
| Yes | 2 days |
| No  | 9 days |

PTAL Rating:

|                 |         |
|-----------------|---------|
| No PTAL Present | 11 days |
|-----------------|---------|

|                       |     |  |
|-----------------------|-----|--|
| 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 | BL-03-K-01<br>STEELWORKS ROAD<br>EBBW VALE  | MIXED HOUSES & FLATS   | BLAENAU GWENT              |
|   | Edge of Town<br>Residential Zone<br>Total No of Dwellings: 69<br><i>Survey date: MONDAY 17/05/21</i>                          |                        | <i>Survey Type: MANUAL</i> |
| 2 | BO-03-K-01<br>MARTELL DRIVE<br>BEDFORD<br>KEMPSTON  | MIXED HOUSES & FLATS   | BEDFORD                    |
|   | Edge of Town<br>Residential Zone<br>Total No of Dwellings: 65<br><i>Survey date: THURSDAY 15/10/20</i>                        |                        | <i>Survey Type: MANUAL</i> |
| 3 | CA-03-K-04<br>FORDHAM ROAD<br>SOHAM   | MIXED HOUSES & FLATS   | CAMBRIDGESHIRE             |
|   | Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 65<br><i>Survey date: WEDNESDAY 11/07/18</i> |                        | <i>Survey Type: MANUAL</i> |
| 4 | CO-03-K-01<br>LIDDELL DRIVE<br>LLANDUDNO  | MIXED HOUSES & FLATS   | CONWY                      |
|   | Edge of Town<br>Residential Zone<br>Total No of Dwellings: 15<br><i>Survey date: TUESDAY 27/03/18</i>                         |                        | <i>Survey Type: MANUAL</i> |
| 5 | CW-03-K-01<br>TRELLOWEN DRIVE<br>PENRYN   | MIXED HOUSES & FLATS   | CORNWALL                   |
|   | Edge of Town<br>Residential Zone<br>Total No of Dwellings: 89<br><i>Survey date: THURSDAY 28/03/19</i>                        |                        | <i>Survey Type: MANUAL</i> |
| 6 | ES-03-K-01<br>LEWES ROAD<br>UCKFIELD<br>RIDGEWOOD   | MIXED HOUSES & FLATS   | EAST SUSSEX                |
|   | Edge of Town<br>Residential Zone<br>Total No of Dwellings: 64<br><i>Survey date: THURSDAY 14/07/16</i>                        |                        | <i>Survey Type: MANUAL</i> |
| 7 | FU-03-K-01<br>NATLAND ROAD<br>KENDAL  | SEMI -DETACHED & FLATS | WESTMORLAND & FURNESS      |
|   | Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 15<br><i>Survey date: TUESDAY 21/06/16</i>   |                        | <i>Survey Type: MANUAL</i> |
| 8 | GM-03-K-03<br>WILBRAHAM ROAD<br>MANCHESTER<br>WHALLEY RANGE   | SEMI -DETACHED & FLATS | GREATER MANCHESTER         |
|   | Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 21<br><i>Survey date: THURSDAY 06/05/21</i>  |                        | <i>Survey Type: MANUAL</i> |

LIST OF SITES relevant to selection parameters (Cont.)

|    |            |                         |                       |
|----|------------|-------------------------|-----------------------|
| 9  | NM-03-K-01 | TERRACED HOUSES & FLATS | WEST NORTHAMPTONSHIRE |
|    |            | AUCTIONEERS COURT       |                       |
|    |            | NORTHAMPTON             |                       |
|    |            | Edge of Town Centre     |                       |
|    |            | Commercial Zone         |                       |
|    |            | Total No of Dwellings:  | 23                    |
|    |            | Survey date: THURSDAY   | 18/04/24              |
|    |            |                         | Survey Type: MANUAL   |
| 10 | TW-03-K-02 | FLATS & TOWN HOUSES     | TYNE & WEAR           |
|    |            | TYNEMOUTH ROAD          |                       |
|    |            | TYNEMOUTH               |                       |
|    |            | Edge of Town Centre     |                       |
|    |            | No Sub Category         |                       |
|    |            | Total No of Dwellings:  | 28                    |
|    |            | Survey date: FRIDAY     | 15/10/21              |
|    |            |                         | Survey Type: MANUAL   |
| 11 | WS-03-K-06 | MIXED HOUSES & FLATS    | WEST SUSSEX           |
|    |            | WESTERN ROAD            |                       |
|    |            | CHICHESTER              |                       |
|    |            | Edge of Town            |                       |
|    |            | Residential Zone        |                       |
|    |            | Total No of Dwellings:  | 41                    |
|    |            | Survey date: WEDNESDAY  | 12/06/24              |
|    |            |                         | Survey Type: MANUAL   |

TRIP RATE for Land Use 03 - RESIDENTIAL/K - MIXED PRIV HOUS (FLATS AND HOUSES)

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       | 11       | 45          | 0.067        | 11         | 45          | 0.257        | 11       | 45          | 0.324        |
| 08:00 - 09:00       | 11       | 45          | 0.123        | 11         | 45          | 0.303        | 11       | 45          | 0.426        |
| 09:00 - 10:00       | 11       | 45          | 0.129        | 11         | 45          | 0.152        | 11       | 45          | 0.281        |
| 10:00 - 11:00       | 11       | 45          | 0.152        | 11         | 45          | 0.176        | 11       | 45          | 0.328        |
| 11:00 - 12:00       | 11       | 45          | 0.158        | 11         | 45          | 0.178        | 11       | 45          | 0.336        |
| 12:00 - 13:00       | 11       | 45          | 0.198        | 11         | 45          | 0.174        | 11       | 45          | 0.372        |
| 13:00 - 14:00       | 11       | 45          | 0.121        | 11         | 45          | 0.125        | 11       | 45          | 0.246        |
| 14:00 - 15:00       | 11       | 45          | 0.154        | 11         | 45          | 0.166        | 11       | 45          | 0.320        |
| 15:00 - 16:00       | 11       | 45          | 0.279        | 11         | 45          | 0.214        | 11       | 45          | 0.493        |
| 16:00 - 17:00       | 11       | 45          | 0.299        | 11         | 45          | 0.184        | 11       | 45          | 0.483        |
| 17:00 - 18:00       | 11       | 45          | 0.329        | 11         | 45          | 0.192        | 11       | 45          | 0.521        |
| 18:00 - 19:00       | 11       | 45          | 0.240        | 11         | 45          | 0.129        | 11       | 45          | 0.369        |
| 19:00 - 20:00       |          |             |              |            |             |              |          |             |              |
| 20:00 - 21:00       |          |             |              |            |             |              |          |             |              |
| 21:00 - 22:00       |          |             |              |            |             |              |          |             |              |
| 22:00 - 23:00       |          |             |              |            |             |              |          |             |              |
| 23:00 - 24:00       |          |             |              |            |             |              |          |             |              |
| <b>Total Rates:</b> |          |             | <b>2.249</b> |            |             | <b>2.250</b> |          |             | <b>4.499</b> |

Parameter summary

Trip rate parameter range selected: 15 - 89 (units: )  
 Survey date date range: 01/01/16 - 12/06/24  
 Number of weekdays (Monday-Friday): 11  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 0  
 Surveys manually removed from selection: 0



**WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)**

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population All usual residents aged 16 and over in employment the week before the census  
 units Persons  
 date 2011  
 usual residence W02000043 : Denbighshire 002 (2011 super output area - middle layer)

| place of work                | All categories:<br>Method of travel<br>to work (2001<br>specification) | Driving a car or<br>van |               |       |             |       | Total        | Bastion Road  | Victoria Road | A5120       | Marine Road | Total |
|------------------------------|--|-------------------------|---------------|-------|-------------|-------|--------------|---------------|---------------|-------------|-------------|-------|
|                              |  | Bastion Road            | Victoria Road | A5120 | Marine Road | Total |              |               |               |             |             |       |
| East                         | 3 Norwich  | 2                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.2%          | 0.0%        | 0.2%        |       |
| East Midlands                | 2 Derby  | 2                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.2%          | 0.0%        | 0.2%        |       |
| London                       | 5 London   | 0                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| North East                   | 0 Newcastle  | 0                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| North West                   | 130 Manchester   | 91                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 7.8%          | 0.0%        | 7.8%        |       |
| Northern Ireland             | 0 Belfast  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Scotland                     | 0 Edinburgh  | 0                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| South East                   | 5 Maidstone  | 4                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| South West                   | 3 Plymouth   | 1                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| West Midlands                | 6 Birmingham   | 5                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.4%          | 0.0%        | 0.4%        |       |
| Yorkshire and The Humber     | 7 York   | 6                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.5%          | 0.0%        | 0.5%        |       |
| Blaenau Gwent                | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Bridgend                     | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Caerphilly                   | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Cardiff                      | 1 Cardiff  | 1                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| Cardiff                      | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Ceredigion                   | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Gwynedd                      | 10 Dolgellau   | 9                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.8%          | 0.0%        | 0.8%        |       |
| Isle of Anglesey             | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Merthyr Tydfil               | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Monmouthshire                | 1 Abergavenny  | 1                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| Neath Port Talbot            | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Newport                      | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Pembrokeshire                | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Powys                        | 1 Welshpool  | 1                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| Rhondda Cynon Taf            | 1 Aberdare   | 1                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| Swansea                      | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| The Vale of Glamorgan        | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Torfaen                      | 0  | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| Wrexham                      | 27 Wrexham   | 20                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 1.7%          | 0.0%        | 1.7%        |       |
| W02000027 : Conwy 001        | 14 Llandudno   | 10                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.9%          | 0.0%        | 0.9%        |       |
| W02000028 : Conwy 002        | 2 Craigside, Llandudno   | 1                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| W02000029 : Conwy 003        | 3 Penrhyn Bay  | 2                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.2%          | 0.0%        | 0.2%        |       |
| W02000030 : Conwy 004        | 13 Rhos on Sea   | 13                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 1.1%          | 0.0%        | 1.1%        |       |
| W02000031 : Conwy 005        | 45 Kinnel Bay  | 34                      | 1             |       |             | 1.0   | 0.0%         | 2.9%          | 0.0%          | 0.0%        | 2.9%        |       |
| W02000032 : Conwy 006        | 4 Llandudno Junction   | 2                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.2%          | 0.0%        | 0.2%        |       |
| W02000033 : Conwy 007        | 30 Colwyn Bay  | 23                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 2.0%          | 0.0%        | 2.0%        |       |
| W02000034 : Conwy 008        | 16 Welsh Mountain Zoo  | 12                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 1.0%          | 0.0%        | 1.0%        |       |
| W02000035 : Conwy 009        | 4 Llanddulas   | 2                       | 0.6           | 0.4   |             | 1.0   | 0.0%         | 0.1%          | 0.1%          | 0.0%        | 0.2%        |       |
| W02000036 : Conwy 010        | 18 Abergele  | 13                      | 0.6           | 0.4   |             | 1.0   | 0.0%         | 0.7%          | 0.4%          | 0.0%        | 1.1%        |       |
| W02000037 : Conwy 011        | 16 Llansanffraid glan conwy  | 14                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 1.2%          | 0.0%        | 1.2%        |       |
| W02000038 : Conwy 012        | 4 Conwy  | 3                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| W02000039 : Conwy 013        | 2 Penmaenmawr  | 2                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.2%          | 0.0%        | 0.2%        |       |
| W02000040 : Conwy 014        | 9 Llanfair Talhaearn   | 9                       | 0.4           | 0.6   |             | 1.0   | 0.0%         | 0.3%          | 0.5%          | 0.0%        | 0.8%        |       |
| W02000041 : Conwy 015        | 1 Llanwrst   | 1                       | 0.5           | 0.5   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.1%        |       |
| W02000042 : Denbighshire 001 | 51 Ffrith Beach, Prestatyn   | 26                      |               | 1.0   |             | 1.0   | 0.0%         | 2.2%          | 0.0%          | 0.0%        | 2.2%        |       |
| W02000043 : Denbighshire 002 | 370 Prestatyn  | 144                     | 0.1           |       | 0.7         | 0.2   | 1.2%         | 0.0%          | 8.6%          | 2.5%        | 12.3%       |       |
| W02000044 : Denbighshire 003 | 44 Ysgol y Llys, Princes Ave   | 24                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 2.0%          | 0.0%        | 2.0%        |       |
| W02000045 : Denbighshire 004 | 182 White Rose Centre, Rhyf  | 127                     |               | 1.0   |             | 1.0   | 0.0%         | 10.8%         | 0.0%          | 0.0%        | 10.8%       |       |
| W02000047 : Denbighshire 006 | 63 Morrisons , West Rhyf   | 48                      |               | 1.0   |             | 1.0   | 0.0%         | 4.1%          | 0.0%          | 0.0%        | 4.1%        |       |
| W02000049 : Denbighshire 008 | 33 Dyserth   | 25                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 2.1%          | 0.0%        | 2.1%        |       |
| W02000050 : Denbighshire 009 | 217 Rhuddlan   | 176                     |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 15.0%         | 0.0%        | 15.0%       |       |
| W02000051 : Denbighshire 010 | 70 St Asaph  | 55                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 4.7%          | 0.0%        | 4.7%        |       |
| W02000052 : Denbighshire 011 | 16 Denbigh   | 12                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 1.0%          | 0.0%        | 1.0%        |       |
| W02000053 : Denbighshire 012 | 20 Cyffylliog  | 17                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 1.4%          | 0.0%        | 1.4%        |       |
| W02000054 : Denbighshire 013 | 7 Llanbedr Dyffryn   | 5                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.4%          | 0.0%        | 0.4%        |       |
| W02000055 : Denbighshire 014 | 27 Ruthin  | 21                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 1.8%          | 0.0%        | 1.8%        |       |
| W02000056 : Denbighshire 015 | 4 Llanellidan  | 4                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| W02000057 : Denbighshire 016 | 9 Llangollen   | 4                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| W02000049 : Denbighshire 017 | 24 ysgol llywelyn, east Rhyf   | 19                      |               | 1.0   |             | 1.0   | 0.0%         | 1.6%          | 0.0%          | 0.0%        | 1.6%        |       |
| W02000058 : Flintshire 001   | 46 Trelawnyd / Talacre   | 31                      |               | 0.5   |             | 0.5   | 1.0          | 0.0%          | 1.3%          | 1.3%        | 2.6%        |       |
| W02000059 : Flintshire 002   | 14 Mostyn  | 13                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 1.1%        | 1.1%        |       |
| W02000060 : Flintshire 003   | 27 Bagillt   | 23                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 2.0%        | 2.0%        |       |
| W02000061 : Flintshire 004   | 18 Flint   | 15                      |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 1.3%        | 1.3%        |       |
| W02000062 : Flintshire 005   | 2 Flint Mountain & south Flint   | 1                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.1%        | 0.1%        |       |
| W02000063 : Flintshire 006   | 2 Pentre Hallyn  | 2                       |               | 0.6   |             | 0.4   | 1.0          | 0.0%          | 0.0%          | 0.1%        | 0.2%        |       |
| W02000064 : Flintshire 007   | 4 Connaht's Quay   | 3                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.3%        | 0.3%        |       |
| W02000065 : Flintshire 008   | 7 Deeside Industrial Park  | 7                       |               | 1.0   |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.6%        | 0.6%        |       |
| W02000066 : Flintshire 009   | 24 Shotton / Deeside   | 22                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 1.9%        | 1.9%        |       |
| W02000067 : Flintshire 010   | 0 Northop Hall   | 0                       |               |       |             | 0.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| W02000068 : Flintshire 011   | 14 Sandycroft  | 9                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.8%          | 0.0%        | 0.8%        |       |
| W02000069 : Flintshire 012   | 5 Sychdyn  | 3                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| W02000070 : Flintshire 013   | 11 Ewloe   | 8                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.7%          | 0.0%        | 0.7%        |       |
| W02000071 : Flintshire 014   | 0 Mynydd Isa   | 0                       |               | 0.5   |             | 0.5   | 1.0          | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| W02000072 : Flintshire 015   | 23 Broughton   | 20                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 1.7%          | 0.0%        | 1.7%        |       |
| W02000073 : Flintshire 016   | 24 Mold  | 19                      |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 1.6%          | 0.0%        | 1.6%        |       |
| W02000074 : Flintshire 017   | 5 Buckley  | 4                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.3%          | 0.0%        | 0.3%        |       |
| W02000075 : Flintshire 018   | 0 Higher Kinnerton   | 0                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.0%          | 0.0%        | 0.0%        |       |
| W02000076 : Flintshire 019   | 1 Treuddyn   | 1                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
| W02000077 : Flintshire 020   | 1 Caerwrlle  | 1                       |               | 1     |             | 1.0   | 0.0%         | 0.0%          | 0.1%          | 0.0%        | 0.1%        |       |
|                              |  | 1,748                   |               | 1,174 |             |       | Bastion Road | Victoria Road | B5120         | Marine Road | Total       |       |
|                              |  |                         |               |       |             |       | 1.2%         | 22.8%         | 65.0%         | 11.0%       | 100.0%      |       |



TEMPro8

CORE  
A Road

| 2025 - 2027      | AM     | PM     | Ave<br>Weekday | Ave Day |
|------------------|--------|--------|----------------|---------|
| Denbighshire 002 | 1.0212 | 1.0201 | 1.0198         | 1.0198  |

AM Peak

NTM Traffic Growth Calculations

Scenario: Core Base Year: 2025 Future Year: 2027  
Time Period: Weekday AM peak period (0700 - 0959)

1. Select NTM Dataset:

| NTM Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2. Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0212              |

PM Peak

NTM Traffic Growth Calculations

Scenario: Core Base Year: 2025 Future Year: 2027  
Time Period: Weekday PM peak period (1600 - 1859)

1. Select NTM Dataset:

| NTM Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2. Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0201              |

Average Weekday

NTM Traffic Growth Calculations

Scenario: Core Base Year: 2025 Future Year: 2027  
Time Period: Average Weekday

1. Select NTM Dataset:

| NTM Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2. Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0198              |

Average Day

NTM Traffic Growth Calculations

Scenario: Core Base Year: 2025 Future Year: 2027  
Time Period: Average Day

1. Select NTM Dataset:

| NTM Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2. Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0198              |

| 2025 - 2030      | AM     | PM     | Ave Weekday | Ave Day |
|------------------|--------|--------|-------------|---------|
| Denbighshire 002 | 1.0513 | 1.0493 | 1.0486      | 1.0486  |

AM Peak

NTM Traffic Growth Calculators

Scenario: Core Base Year: 2025 Future Year: 2030  
Time Period: Weekday AM peak period (0700 - 0959)

1: Select NTH Dataset:

| NTH Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2: Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0513              |

PM Peak

NTM Traffic Growth Calculators

Scenario: Core Base Year: 2025 Future Year: 2030  
Time Period: Weekday PM peak period (1600 - 1859)

1: Select NTH Dataset:

| NTH Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2: Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0493              |

Average Weekday

NTM Traffic Growth Calculators

Scenario: Core Base Year: 2025 Future Year: 2030  
Time Period: Average Weekday

1: Select NTH Dataset:

| NTH Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2: Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0486              |

Average Day

NTM Traffic Growth Calculators

Scenario: Core Base Year: 2025 Future Year: 2030  
Time Period: Average Day

1: Select NTH Dataset:

| NTH Dataset Description                 | From | To   |
|---|------|------|
| NRTP 2022 Core                          | 2015 | 2060 |
| NRTP 2022 Behavioural Change            | 2015 | 2060 |
| NRTP 2022 High Economy                  | 2015 | 2060 |
| NRTP 2022 Low Economy                   | 2015 | 2060 |
| NRTP 2022 Mode-balanced Decarbonisation | 2015 | 2060 |
| NRTP 2022 Regional                      | 2015 | 2060 |
| NRTP 2022 Technology                    | 2015 | 2060 |
| NRTP 2022 Vehicle-led Decarbonisation   | 2015 | 2060 |

2: Select Areas to make up the geographic region:  Denbighshire 002 (W02000043)

3. Select area type:  Urban  Rural  All

4. Select road type:  Motorway  Trunk  A Road  Minor  All

5. Select which area it serves:  Region  England

Calculate the adjusted local growth figure

**Results**

| Level     | Area             | Local Growth Figure |
|-----------|------------------|---------------------|
| W02000043 | Denbighshire 002 | 1.0486              |

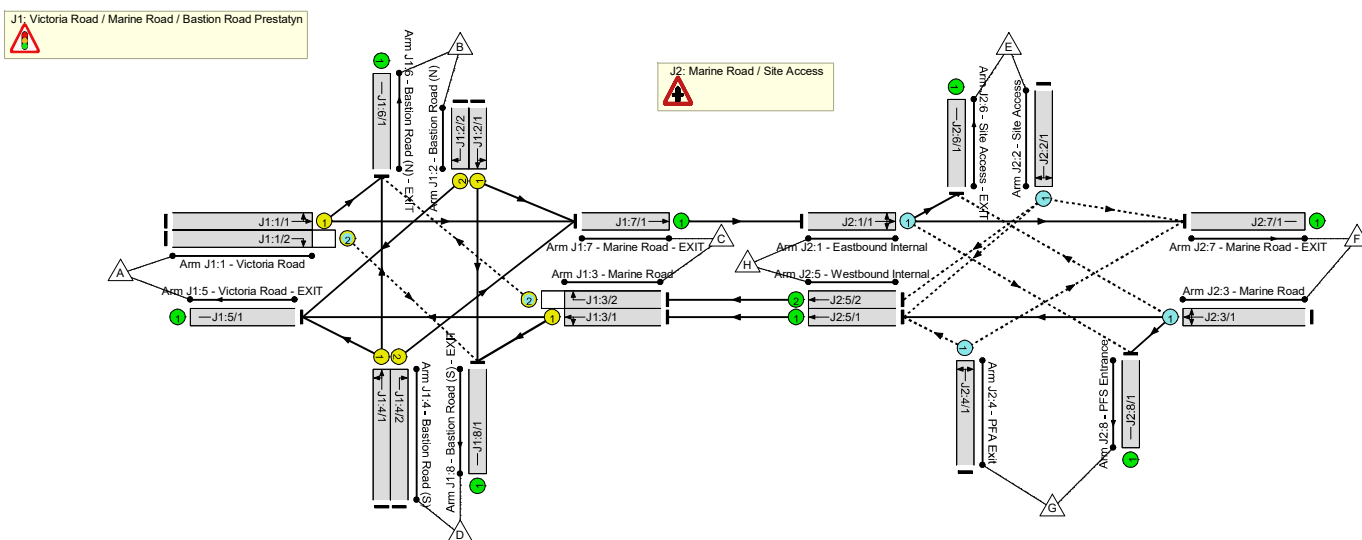


Full Input Data And Results  
**Full Input Data And Results**

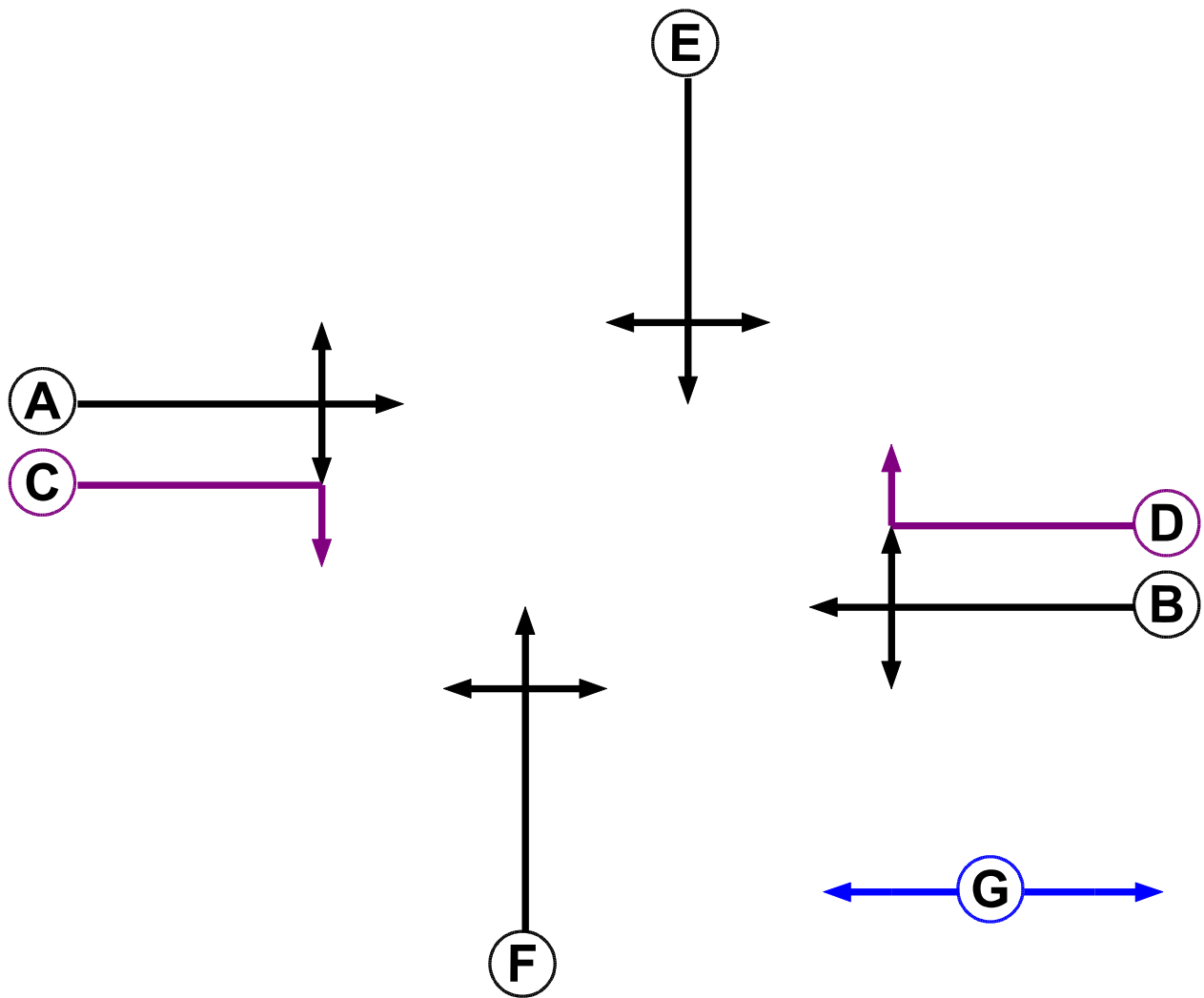
**User and Project Details**

|                           |   |
|---------------------------|---|
| <b>Project:</b>           |   |
| <b>Title:</b>             |   |
| <b>Location:</b>          |   |
| <b>Additional detail:</b> |   |
| <b>File name:</b>         | Marine Rd_Bastion Rd signals with site access.lsg3x     |
| <b>Author:</b>            |   |
| <b>Company:</b>           | Focus Transport Planning Ltd.                           |
| <b>Address:</b>           | Pentland House, Village Way, Wilmslow, Cheshire SK9 2GH |

**Network Layout Diagram**



**Phase Diagram**



**Phase Input Data**

| Phase Name | Phase Type | Assoc. Phase | Street Min | Cont Min |
|------------|------------|--------------|------------|----------|
| A          | Traffic    |              | 7          | 7        |
| B          | Traffic    |              | 7          | 7        |
| C          | Ind. Arrow | A            | 4          | 4        |
| D          | Ind. Arrow | B            | 4          | 4        |
| E          | Traffic    |              | 7          | 7        |
| F          | Traffic    |              | 7          | 7        |
| G          | Pedestrian |              | 6          | 6        |

Full Input Data And Results

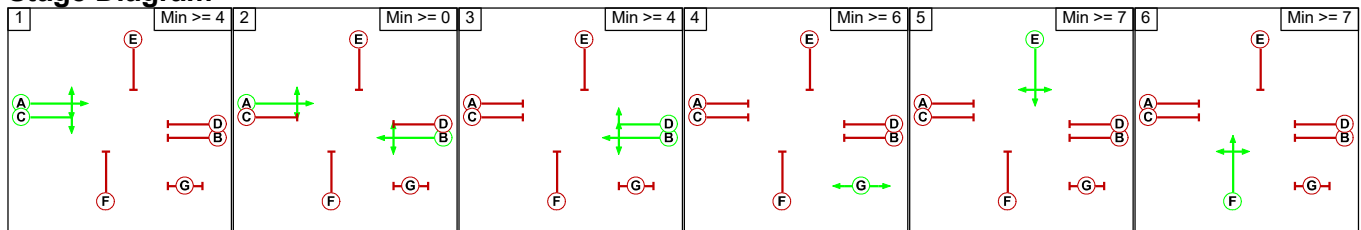
**Phase Intergrens Matrix**

| Terminating Phase | Starting Phase |   |   |   |   |   |    |  |
|-------------------|----------------|---|---|---|---|---|----|--|
|                   | A              | B | C | D | E | F | G  |  |
| A                 | -              | - | - | 6 | 7 | 7 | 11 |  |
| B                 | -              | - | 5 | - | 7 | 7 | 11 |  |
| C                 | -              | 7 | - | 5 | 5 | 7 | 11 |  |
| D                 | 7              | - | 5 | - | 7 | 5 | 11 |  |
| E                 | 6              | 7 | 6 | 5 | - | 9 | 11 |  |
| F                 | 6              | 6 | 6 | 6 | 8 | - | -  |  |
| G                 | 0              | 0 | 0 | 0 | 0 | 0 | -  |  |

**Phases in Stage**

| Stage No. | Phases in Stage |
|-----------|-----------------|
| 1         | A C             |
| 2         | A B             |
| 3         | B D             |
| 4         | G               |
| 5         | E               |
| 6         | F               |

**Stage Diagram**



**Phase Delays**

| Term. Stage                       | Start Stage | Phase | Type | Value | Cont value |
|-----------------------------------|-------------|-------|------|-------|------------|
| There are no Phase Delays defined |             |       |      |       |            |

**Prohibited Stage Change**

| From Stage | To Stage |   |   |    |   |   |  |
|------------|----------|---|---|----|---|---|--|
|            | 1        | 2 | 3 | 4  | 5 | 6 |  |
| 1          | -        | 7 | X | 11 | 7 | 7 |  |
| 2          | 5        | - | 6 | 11 | 7 | 7 |  |
| 3          | X        | 7 | - | 11 | 7 | 7 |  |
| 4          | X        | 2 | X | -  | 2 | 2 |  |
| 5          | 6        | 7 | X | 11 | - | 9 |  |
| 6          | 6        | 6 | 6 | 0  | 8 | - |  |

Full Input Data And Results

**Give-Way Lane Input Data**

| Junction: J1: Victoria Road / Marine Road / Bastion Road Prestatyn |                |                                   |                                   |               |                  |              |                          |                            |      |                        |                               |
|--|----------------|-----------------------------------|-----------------------------------|---------------|------------------|--------------|--------------------------|----------------------------|------|------------------------|-------------------------------|
| Lane   | Movement       | Max Flow when Giving Way (PCU/Hr) | Min Flow when Giving Way (PCU/Hr) | Opposing Lane | Opp. Lane Coeff. | Opp. Mvmnts. | Right Turn Storage (PCU) | Non-Blocking Storage (PCU) | RTF  | Right Turn Move up (s) | Max Turns in Intergreen (PCU) |
| J1:1/2<br>(Victoria Road)  | J1:8/1 (Right) | 1439                              | 0                                 | J1:3/1        | 1.09             | All          | 2.00                     | -                          | 0.50 | 2                      | 2.00                          |
| J1:3/2<br>(Marine Road)  | J1:6/1 (Right) | 1439                              | 0                                 | J1:1/1        | 1.09             | All          | 2.00                     | -                          | 0.50 | 2                      | 2.00                          |

Full Input Data And Results

| Junction: J2: Marine Road / Site Access |                |                                   |                                   |               |                  |                                     |                          |                            |     |                        |                               |
|---|----------------|-----------------------------------|-----------------------------------|---------------|------------------|-------------------------------------|--------------------------|----------------------------|-----|------------------------|-------------------------------|
| Lane                                    | Movement       | Max Flow when Giving Way (PCU/Hr) | Min Flow when Giving Way (PCU/Hr) | Opposing Lane | Opp. Lane Coeff. | Opp. Mvmnts.                        | Right Turn Storage (PCU) | Non-Blocking Storage (PCU) | RTF | Right Turn Move up (s) | Max Turns in Intergreen (PCU) |
| J2:1/1 (Eastbound Internal)             | J2:8/1 (Right) | 1439                              | 0                                 | J2:3/1        | 1.09             | All                                 | -                        | -                          | -   | -                      | -                             |
| J2:2/1 (Site Access)                    | J2:5/1 (Right) | 1439                              | 0                                 | J2:1/1        | 1.09             | All                                 | -                        | -                          | -   | -                      | -                             |
|   |                |                                   |                                   | J2:3/1        | 1.09             | To J2:5/1 (Ahead) To J2:6/1 (Right) |                          |                            |     |                        |                               |
|   | J2:5/2 (Right) | 1439                              | 0                                 | J2:1/1        | 1.09             | All                                 |                          |                            |     |                        |                               |
|   |                |                                   |                                   | J2:3/1        | 1.09             | To J2:5/1 (Ahead) To J2:6/1 (Right) |                          |                            |     |                        |                               |
|   | J2:7/1 (Left)  | 1439                              | 0                                 | J2:1/1        | 1.09             | All                                 |                          |                            |     |                        |                               |
| J2:3/1 (Marine Road)                    | J2:6/1 (Right) | 1439                              | 0                                 | J2:1/1        | 1.09             | All                                 | -                        | -                          | -   | -                      | -                             |
| J2:4/1 (PFA Exit)                       | J2:5/1 (Left)  | 1439                              | 0                                 | J2:3/1        | 1.09             | To J2:5/1 (Ahead)                   | -                        | -                          | -   | -                      | -                             |
|   |                |                                   |                                   | J2:2/1        | 1.09             | To J2:5/1 (Right) To J2:5/2 (Right) |                          |                            |     |                        |                               |
|   | J2:7/1 (Right) | 1439                              | 0                                 | J2:1/1        | 1.09             | All                                 |                          |                            |     |                        |                               |
|   |                |                                   |                                   | J2:2/1        | 1.09             | To J2:5/1 (Right) To J2:5/2 (Right) |                          |                            |     |                        |                               |
|   |                |                                   |                                   | J2:3/1        | 1.09             | To J2:5/1 (Ahead) To J2:6/1 (Right) |                          |                            |     |                        |                               |

Full Input Data And Results

**Lane Input Data**

| Junction: J1: Victoria Road / Marine Road / Bastion Road Prestatyn |           |        |             |           |                       |               |                                   |                |          |               |                |                    |
|--|-----------|--------|-------------|-----------|-----------------------|---------------|-----------------------------------|----------------|----------|---------------|----------------|--------------------|
| Lane   | Lane Type | Phases | Start Disp. | End Disp. | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient | Nearside Lane | Turns          | Turning Radius (m) |
| J1:1/1 (Victoria Road)   | U         | A      | 2           | 3         | 60.0                  | Geom          | -                                 | 2.70           | 0.00     | Y             | Arm J1:6 Left  | 12.00              |
|  |           |        |             |           |                       |               |                                   |                |          |               | Arm J1:7 Ahead | Inf                |
| J1:1/2 (Victoria Road)   | O         | A C    | 2           | 3         | 60.0                  | Geom          | -                                 | 2.80           | 0.00     | N             | Arm J1:8 Right | 40.00              |
| J1:2/1 (Bastion Road (N))  | U         | E      | 2           | 3         | 60.0                  | Geom          | -                                 | 2.30           | 0.00     | Y             | Arm J1:7 Left  | 15.00              |
|  |           |        |             |           |                       |               |                                   |                |          |               | Arm J1:8 Ahead | Inf                |
| J1:2/2 (Bastion Road (N))  | U         | E      | 2           | 3         | 60.0                  | Geom          | -                                 | 2.50           | 0.00     | N             | Arm J1:5 Right | 20.00              |
| J1:3/1 (Marine Road)   | U         | B      | 2           | 3         | 5.9                   | Geom          | -                                 | 2.45           | 0.00     | Y             | Arm J1:5 Ahead | 15.00              |
|  |           |        |             |           |                       |               |                                   |                |          |               | Arm J1:8 Left  | Inf                |
| J1:3/2 (Marine Road)   | O         | B D    | 2           | 3         | 5.9                   | Geom          | -                                 | 2.75           | 0.00     | N             | Arm J1:6 Right | 40.00              |
| J1:4/1 (Bastion Road (S))  | U         | F      | 2           | 3         | 60.0                  | Geom          | -                                 | 2.40           | 0.00     | Y             | Arm J1:5 Left  | 12.00              |
|  |           |        |             |           |                       |               |                                   |                |          |               | Arm J1:6 Ahead | Inf                |
| J1:4/2 (Bastion Road (S))  | U         | F      | 2           | 3         | 60.0                  | Geom          | -                                 | 2.30           | 0.00     | N             | Arm J1:7 Right | 40.00              |
| J1:5/1 (Victoria Road - EXIT)                                      | U         |        | 2           | 3         | 60.0                  | Inf           | -                                 | -              | -        | -             | -              | -                  |
| J1:6/1 (Bastion Road (N) - EXIT)                                   | U         |        | 2           | 3         | 60.0                  | Inf           | -                                 | -              | -        | -             | -              | -                  |

Full Input Data And Results

|   |   |  |   |   |      |      |      |   |   |   |   |   |
|---|---|--|---|---|------|------|------|---|---|---|---|---|
| J1:7/1<br>(Marine<br>Road -<br>EXIT)          | U |  | 2 | 3 | 60.0 | User | 1915 | - | - | - | - | - |
| J1:8/1<br>(Bastio<br>n Road<br>(S) -<br>EXIT) | U |  | 2 | 3 | 60.0 | Inf  | -    | - | - | - | - | - |

Full Input Data And Results

| Junction: J2: Marine Road / Site Access |           |        |             |           |                       |               |                                   |                |          |                  |                |                    |
|---|-----------|--------|-------------|-----------|-----------------------|---------------|-----------------------------------|----------------|----------|------------------|----------------|--------------------|
| Lane                                    | Lane Type | Phases | Start Disp. | End Disp. | Physical Length (PCU) | Sat Flow Type | Def User Saturation Flow (PCU/Hr) | Lane Width (m) | Gradient | Nearside of Lane | Turns          | Turning Radius (m) |
| J2:1/1 (Eastbound Internal)             | O         |        | 2           | 3         | 7.3                   | Geom          | -                                 | 3.00           | 0.00     | Y                | Arm J2:6 Left  | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:7 Ahead | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:8 Right | Inf                |
| J2:2/1 (Site Access)                    | O         |        | 2           | 3         | 60.0                  | Geom          | -                                 | 3.00           | 0.00     | Y                | Arm J2:5 Right | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:7 Left  | Inf                |
| J2:3/1 (Marine Road)                    | O         |        | 2           | 3         | 60.0                  | Geom          | -                                 | 3.30           | 0.00     | Y                | Arm J2:5 Ahead | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:6 Right | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:8 Left  | Inf                |
| J2:4/1 (PFA Exit)                       | O         |        | 2           | 3         | 60.0                  | Geom          | -                                 | 3.00           | 0.00     | Y                | Arm J2:5 Left  | Inf                |
|   |           |        |             |           |                       |               |                                   |                |          |                  | Arm J2:7 Right | Inf                |
| J2:5/1 (Westbound Internal)             | U         |        | 2           | 3         | 60.0                  | User          | 1723                              | -              | -        | -                | -              | -                  |
| J2:5/2 (Westbound Internal)             | U         |        | 2           | 3         | 60.0                  | User          | 1957                              | -              | -        | -                | -              | -                  |
| J2:6/1 (Site Access - EXIT)             | U         |        | 2           | 3         | 60.0                  | Inf           | -                                 | -              | -        | -                | -              | -                  |
| J2:7/1 (Marine Road - EXIT)             | U         |        | 2           | 3         | 60.0                  | Inf           | -                                 | -              | -        | -                | -              | -                  |

Full Input Data And Results

|                                 |   |  |   |   |      |     |   |   |   |   |   |   |
|---------------------------------|---|--|---|---|------|-----|---|---|---|---|---|---|
| J2:8/1<br>(PFS<br>Entranc<br>e) | U |  | 2 | 3 | 60.0 | Inf | - | - | - | - | - | - |
|---------------------------------|---|--|---|---|------|-----|---|---|---|---|---|---|

Traffic Flow Groups

| Flow Group          | Start Time | End Time | Duration | Formula |
|---------------------|------------|----------|----------|---------|
| 1: '2025 Survey AM' | 08:00      | 09:00    | 01:00    |         |

Scenario 1: 'Survey' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

| Origin | Destination |     |     |     |   |     |    |     |     | Tot. |
|--------|-------------|-----|-----|-----|---|-----|----|-----|-----|------|
|        | A           | B   | C   | D   | E | F   | G  | H   |     |      |
| A      | 0           | 31  | 238 | 255 | 0 | 0   | 0  | 0   | 0   | 524  |
| B      | 38          | 0   | 32  | 111 | 0 | 0   | 0  | 0   | 0   | 181  |
| C      | 167         | 10  | 0   | 35  | 0 | 0   | 0  | 0   | 0   | 212  |
| D      | 21          | 72  | 28  | 0   | 0 | 0   | 0  | 0   | 0   | 121  |
| E      | 0           | 0   | 0   | 0   | 0 | 0   | 0  | 0   | 0   | 0    |
| F      | 0           | 0   | 0   | 0   | 0 | 0   | 0  | 3   | 196 | 199  |
| G      | 0           | 0   | 0   | 0   | 0 | 4   | 0  | 16  | 0   | 20   |
| H      | 0           | 0   | 0   | 0   | 0 | 281 | 17 | 0   | 0   | 298  |
| Tot.   | 226         | 113 | 298 | 401 | 0 | 285 | 20 | 212 | 0   | 1555 |

**Traffic Lane Flows**

| Lane  | Scenario 1:<br>Survey |
|---|-----------------------|
| <b>Junction: J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> |                       |
| J1:1/1  | 269                   |
| J1:1/2  | 255                   |
| J1:2/1  | 143                   |
| J1:2/2  | 38                    |
| J1:3/1  | 202                   |
| J1:3/2  | 10                    |
| J1:4/1  | 93                    |
| J1:4/2  | 28                    |
| J1:5/1  | 226                   |
| J1:6/1  | 113                   |
| J1:7/1  | 298                   |
| J1:8/1  | 401                   |
| <b>Junction: J2: Marine Road / Site Access</b>                            |                       |
| J2:1/1  | 0                     |
| J2:2/1  | 0                     |
| J2:3/1  | 3                     |
| J2:4/1  | 4                     |
| J2:5/1  | 0                     |
| J2:5/2  | 0                     |
| J2:6/1  | 0                     |
| J2:7/1  | 4                     |
| J2:8/1  | 3                     |

## Lane Saturation Flows

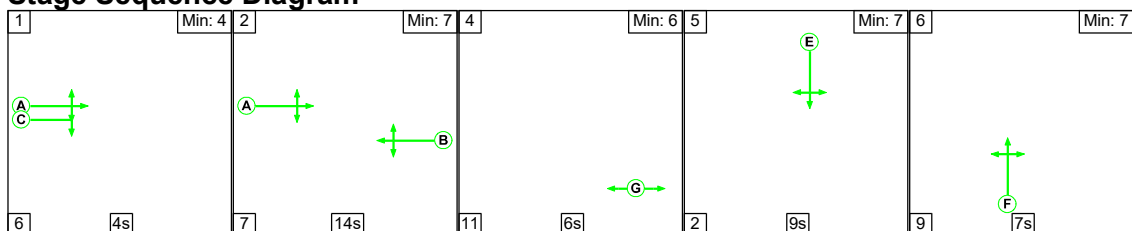
| Junction: J1: Victoria Road / Marine Road / Bastion Road Prestatyn |   |          |               |                   |                    |               |                   |                          |
|--|---|----------|---------------|-------------------|--------------------|---------------|-------------------|--------------------------|
| Lane   | Lane Width (m)                                    | Gradient | Nearside Lane | Allowed Turns     | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| J1:1/1<br>(Victoria Road)  | 2.70  | 0.00     | Y             | Arm J1:6<br>Left  | 12.00              | 11.5 %        | 1858              | 1858                     |
|  |   |          |               | Arm J1:7<br>Ahead | Inf                | 88.5 %        |                   |                          |
| J1:1/2<br>(Victoria Road)  | 2.80  | 0.00     | N             | Arm J1:8<br>Right | 40.00              | 100.0 %       | 1961              | 1961                     |
| J1:2/1<br>(Bastion Road (N))                                       | 2.30  | 0.00     | Y             | Arm J1:7<br>Left  | 15.00              | 22.4 %        | 1805              | 1805                     |
|  |   |          |               | Arm J1:8<br>Ahead | Inf                | 77.6 %        |                   |                          |
| J1:2/2<br>(Bastion Road (N))                                       | 2.50  | 0.00     | N             | Arm J1:5<br>Right | 20.00              | 100.0 %       | 1865              | 1865                     |
| J1:3/1<br>(Marine Road)  | 2.45  | 0.00     | Y             | Arm J1:5<br>Ahead | 15.00              | 82.7 %        | 1718              | 1718                     |
|  |   |          |               | Arm J1:8<br>Left  | Inf                | 17.3 %        |                   |                          |
| J1:3/2<br>(Marine Road)  | 2.75  | 0.00     | N             | Arm J1:6<br>Right | 40.00              | 100.0 %       | 1957              | 1957                     |
| J1:4/1<br>(Bastion Road (S))                                       | 2.40  | 0.00     | Y             | Arm J1:5<br>Left  | 12.00              | 22.6 %        | 1804              | 1804                     |
|  |   |          |               | Arm J1:6<br>Ahead | Inf                | 77.4 %        |                   |                          |
| J1:4/2<br>(Bastion Road (S))                                       | 2.30  | 0.00     | N             | Arm J1:7<br>Right | 40.00              | 100.0 %       | 1913              | 1913                     |
| J1:5/1<br>(Victoria Road - EXIT Lane 1)                            | Infinite Saturation Flow                          |          |               |                   |                    |               | Inf               | Inf                      |
| J1:6/1<br>(Bastion Road (N) - EXIT Lane 1)                         | Infinite Saturation Flow                          |          |               |                   |                    |               | Inf               | Inf                      |
| J1:7/1<br>(Marine Road - EXIT Lane 1)                              | This lane uses a directly entered Saturation Flow |          |               |                   |                    |               | 1915              | 1915                     |
| J1:8/1<br>(Bastion Road (S) - EXIT Lane 1)                         | Infinite Saturation Flow                          |          |               |                   |                    |               | Inf               | Inf                      |

Full Input Data And Results

| Junction: J2: Marine Road / Site Access |   |          |               |                |                    |               |                   |                          |
|---|---|----------|---------------|----------------|--------------------|---------------|-------------------|--------------------------|
| Lane                                    | Lane Width (m)                                    | Gradient | Nearside Lane | Allowed Turns  | Turning Radius (m) | Turning Prop. | Sat Flow (PCU/Hr) | Flared Sat Flow (PCU/Hr) |
| J2:1/1 (Eastbound Internal)             | 3.00  | 0.00     | Y             | Arm J2:6 Left  | Inf                | 0.0 %         | 1915              | 1915                     |
|   |   |          |               | Arm J2:7 Ahead | Inf                | 0.0 %         |                   |                          |
|   |   |          |               | Arm J2:8 Right | Inf                | 0.0 %         |                   |                          |
| J2:2/1 (Site Access)                    | 3.00  | 0.00     | Y             | Arm J2:5 Right | Inf                | 0.0 %         | 1915              | 1915                     |
|   |   |          |               | Arm J2:7 Left  | Inf                | 0.0 %         |                   |                          |
| J2:3/1 (Marine Road)                    | 3.30  | 0.00     | Y             | Arm J2:5 Ahead | Inf                | 0.0 %         | 1945              | 1945                     |
|   |   |          |               | Arm J2:6 Right | Inf                | 0.0 %         |                   |                          |
|   |   |          |               | Arm J2:8 Left  | Inf                | 100.0 %       |                   |                          |
| J2:4/1 (PFA Exit)                       | 3.00  | 0.00     | Y             | Arm J2:5 Left  | Inf                | 0.0 %         | 1915              | 1915                     |
|   |   |          |               | Arm J2:7 Right | Inf                | 100.0 %       |                   |                          |
| J2:5/1 (Westbound Internal Lane 1)      | This lane uses a directly entered Saturation Flow |          |               |                |                    |               | 1723              | 1723                     |
| J2:5/2 (Westbound Internal Lane 2)      | This lane uses a directly entered Saturation Flow |          |               |                |                    |               | 1957              | 1957                     |
| J2:6/1 (Site Access - EXIT Lane 1)      | Infinite Saturation Flow                          |          |               |                |                    |               | Inf               | Inf                      |
| J2:7/1 (Marine Road - EXIT Lane 1)      | Infinite Saturation Flow                          |          |               |                |                    |               | Inf               | Inf                      |
| J2:8/1 (PFS Entrance Lane 1)            | Infinite Saturation Flow                          |          |               |                |                    |               | Inf               | Inf                      |

Scenario 1: 'Survey' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

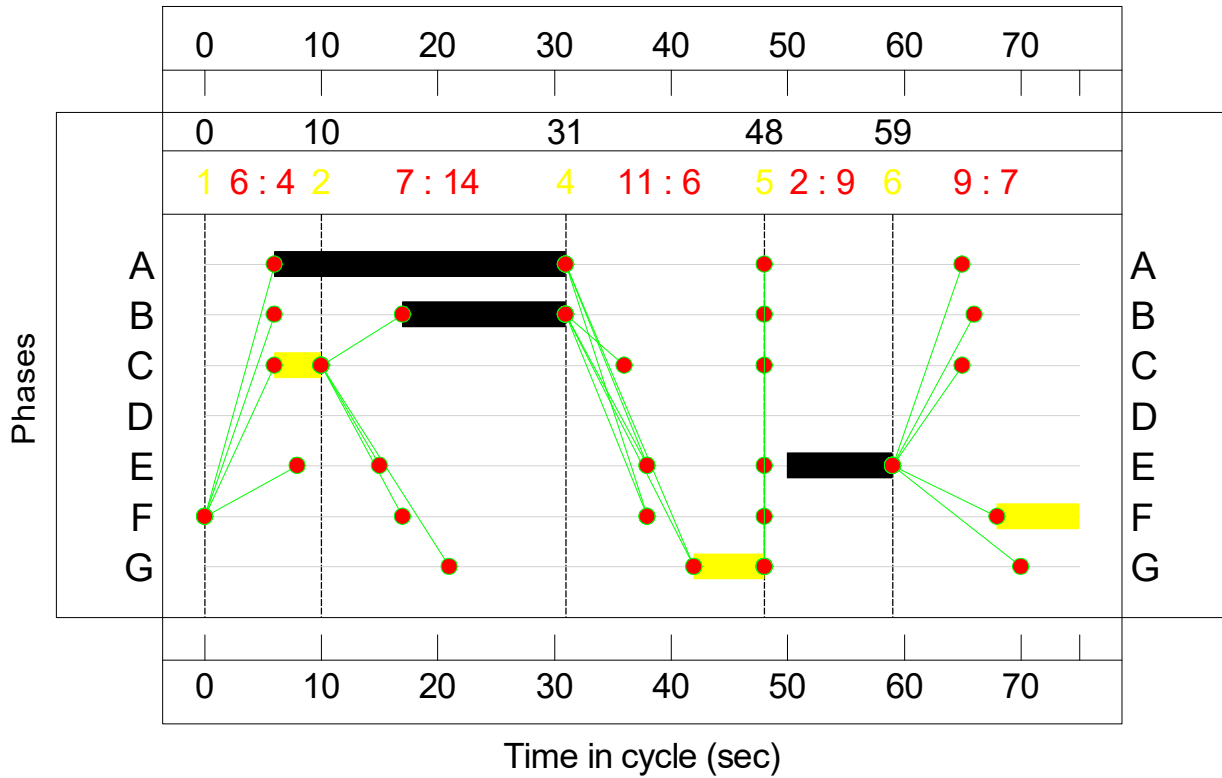
Stage Sequence Diagram



**Stage Timings**

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 14 | 6  | 9  | 7  |
| Change Point | 0 | 10 | 31 | 48 | 59 |

**Signal Timings Diagram**



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>62.2%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>62.2%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 25              | -               | 269               | 1858              | 644            | 41.8%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 25              | 4               | 255               | 1961              | 410            | 62.2%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 143               | 1805              | 241            | 59.4%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 38                | 1865              | 249            | 15.3%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 14              | -               | 202               | 1718              | 344            | 58.8%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 14              | 0               | 10                | 1957              | 295            | 3.4%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 93                | 1804              | 192            | 48.3%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 28                | 1913              | 204            | 13.7%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 226               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 113               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 298               | 1915              | 1915           | 15.6%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 401               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |            |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|------------|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | <b>N/A</b> | -   | - |  | - | - | - | - | -    | -    | <b>0.3%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A        | N/A | - |  | - | - | - | 0 | 1915 | 1737 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A        | N/A | - |  | - | - | - | 0 | 1915 | 1492 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A        | N/A | - |  | - | - | - | 3 | 1945 | 1945 | 0.2%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A        | N/A | - |  | - | - | - | 4 | 1915 | 1439 | 0.3%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 4 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A        | N/A | - |  | - | - | - | 3 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>72</b>             | <b>197</b>                   | <b>0</b>                    | <b>6.9</b>            | <b>3.3</b>                   | <b>0.1</b>                         | <b>10.3</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>68</b>             | <b>197</b>                   | <b>0</b>                    | <b>6.9</b>            | <b>3.3</b>                   | <b>0.1</b>                         | <b>10.3</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 269            | 269           | -                     | -                            | -                           | 1.4                   | 0.4                          | -                                  | 1.8                 | 23.5                      | 4.3                              | 0.4                        | 4.6                  |
| 1/2   | 255            | 255           | 58                    | 197                          | 0                           | 1.3                   | 0.8                          | 0.1                                | 2.2                 | 30.8                      | 4.0                              | 0.8                        | 4.8                  |
| 2/1   | 143            | 143           | -                     | -                            | -                           | 1.2                   | 0.7                          | -                                  | 1.9                 | 48.8                      | 2.8                              | 0.7                        | 3.5                  |
| 2/2   | 38             | 38            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 37.4                      | 0.7                              | 0.1                        | 0.8                  |
| 3/1   | 202            | 202           | -                     | -                            | -                           | 1.5                   | 0.7                          | -                                  | 2.2                 | 39.8                      | 3.8                              | 0.7                        | 4.5                  |
| 3/2   | 10             | 10            | 10                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.1                 | 30.7                      | 0.2                              | 0.0                        | 0.2                  |
| 4/1   | 93             | 93            | -                     | -                            | -                           | 0.8                   | 0.5                          | -                                  | 1.3                 | 49.5                      | 1.8                              | 0.5                        | 2.3                  |
| 4/2   | 28             | 28            | -                     | -                            | -                           | 0.2                   | 0.1                          | -                                  | 0.3                 | 40.6                      | 0.5                              | 0.1                        | 0.6                  |
| 5/1   | 226            | 226           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 113            | 113           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 298            | 298           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 401            | 401           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>4</b>              | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.0</b>                   | <b>0.0</b>                         | <b>0.0</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 3              | 3             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.9                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 4              | 4             | 4                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 1.3                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

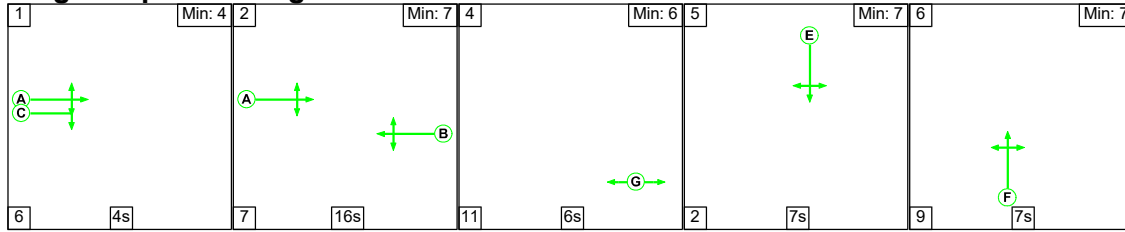
Full Input Data And Results

|     |   |                              |   |      |   |  |     |       |     |                 |     |     |     |
|-----|---|------------------------------|---|------|---|--|-----|-------|-----|-----------------|-----|-----|-----|
| 7/1 | 4 | 4                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| 8/1 | 3 | 3                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): |   | 44.6 |   | Total Delay for Signalled Lanes (pcuHr): |     | 10.18 |     | Cycle Time (s): |     | 75  |     |
|     |   | PRC Over All Lanes (%):      |   | 44.6 |   | Total Delay Over All Lanes(pcuHr):       |     | 10.27 |     |                 |     |     |     |

Full Input Data And Results

Scenario 2: 'Survey' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')

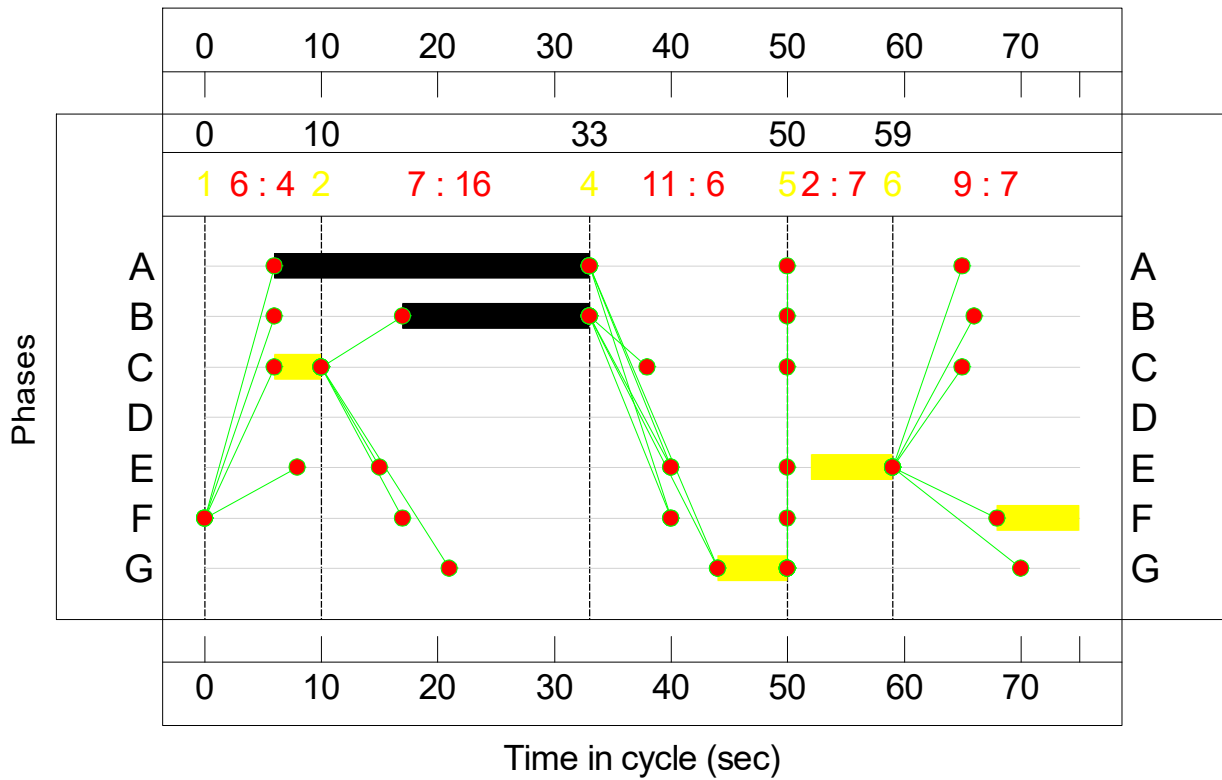
Stage Sequence Diagram



Stage Timings

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 16 | 6  | 7  | 7  |
| Change Point | 0 | 10 | 33 | 50 | 59 |

Signal Timings Diagram



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>73.3%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>73.3%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 27              | -               | 232               | 1833              | 684            | 33.9%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 27              | 4               | 223               | 1961              | 380            | 58.7%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 112               | 1800              | 192            | 58.3%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 49                | 1865              | 199            | 24.6%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 16              | -               | 286               | 1722              | 390            | 73.3%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 16              | 0               | 23                | 1957              | 333            | 6.9%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 138               | 1784              | 190            | 72.5%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 30                | 1913              | 204            | 14.7%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 323               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 170               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 237               | 1915              | 1915           | 12.4%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 363               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |     |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|-----|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | N/A | -   | - |  | - | - | - | - | -    | -    | <b>0.0%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1725 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A | N/A | - |  | - | - | - | 0 | 1945 | 1817 | 0.0%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>79</b>             | <b>167</b>                   | <b>0</b>                    | <b>7.3</b>            | <b>4.6</b>                   | <b>0.1</b>                         | <b>12.0</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>79</b>             | <b>167</b>                   | <b>0</b>                    | <b>7.3</b>            | <b>4.6</b>                   | <b>0.1</b>                         | <b>12.0</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 232            | 232           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.3                 | 20.8                      | 3.4                              | 0.3                        | 3.7                  |
| 1/2   | 223            | 223           | 56                    | 167                          | 0                           | 1.0                   | 0.7                          | 0.1                                | 1.8                 | 29.6                      | 3.3                              | 0.7                        | 4.0                  |
| 2/1   | 112            | 112           | -                     | -                            | -                           | 1.0                   | 0.7                          | -                                  | 1.7                 | 54.1                      | 2.2                              | 0.7                        | 2.9                  |
| 2/2   | 49             | 49            | -                     | -                            | -                           | 0.4                   | 0.2                          | -                                  | 0.6                 | 42.8                      | 0.9                              | 0.2                        | 1.1                  |
| 3/1   | 286            | 286           | -                     | -                            | -                           | 2.1                   | 1.3                          | -                                  | 3.5                 | 43.7                      | 5.5                              | 1.3                        | 6.8                  |
| 3/2   | 23             | 23            | 23                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.2                 | 28.7                      | 0.4                              | 0.0                        | 0.4                  |
| 4/1   | 138            | 138           | -                     | -                            | -                           | 1.2                   | 1.3                          | -                                  | 2.5                 | 65.3                      | 2.8                              | 1.3                        | 4.0                  |
| 4/2   | 30             | 30            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.3                 | 40.8                      | 0.6                              | 0.1                        | 0.7                  |
| 5/1   | 323            | 323           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 170            | 170           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 237            | 237           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 363            | 363           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>0</b>              | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.0</b>                   | <b>0.0</b>                         | <b>0.0</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

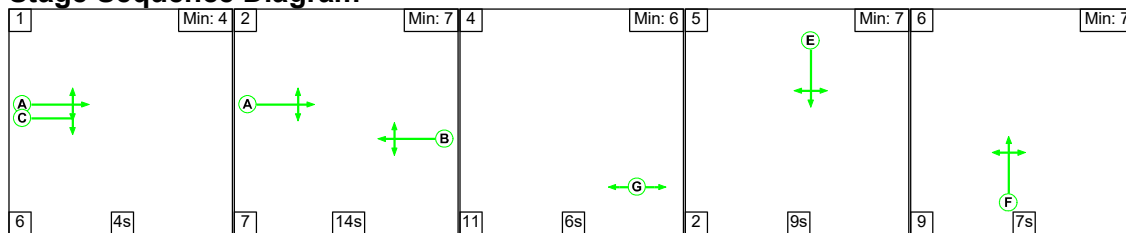
Full Input Data And Results

|     |   |                              |   |      |   |  |     |       |     |                 |     |     |     |
|-----|---|------------------------------|---|------|---|--|-----|-------|-----|-----------------|-----|-----|-----|
| 7/1 | 0 | 0                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| 8/1 | 0 | 0                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): |   | 22.8 |   | Total Delay for Signalled Lanes (pcuHr): |     | 11.94 |     | Cycle Time (s): |     | 75  |     |
|     |   | PRC Over All Lanes (%):      |   | 22.8 |   | Total Delay Over All Lanes(pcuHr):       |     | 12.01 |     |                 |     |     |     |

Full Input Data And Results

Scenario 3: '2027 Base AM' (FG3: '2027 Base AM', Plan 1: 'Network Control Plan 1')

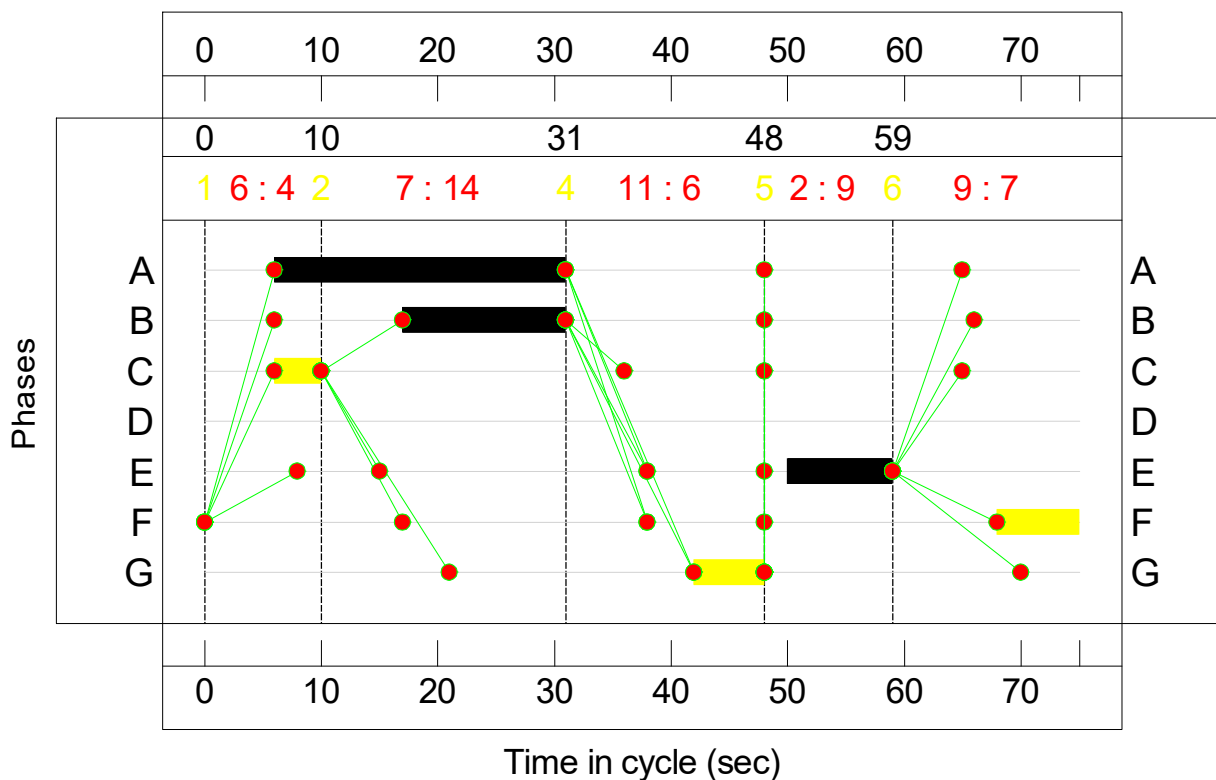
Stage Sequence Diagram



Stage Timings

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 14 | 6  | 9  | 7  |
| Change Point | 0 | 10 | 31 | 48 | 59 |

Signal Timings Diagram



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>63.8%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>63.8%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 25              | -               | 275               | 1858              | 644            | 42.7%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 25              | 4               | 260               | 1961              | 407            | 63.8%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 146               | 1804              | 241            | 60.7%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 39                | 1865              | 249            | 15.7%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 14              | -               | 207               | 1718              | 344            | 60.2%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 14              | 0               | 10                | 1957              | 293            | 3.4%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 95                | 1805              | 193            | 49.3%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 29                | 1913              | 204            | 14.2%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 231               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 116               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 305               | 1915              | 1915           | 15.9%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 409               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |     |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|-----|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | N/A | -   | - |  | - | - | - | - | -    | -    | <b>0.0%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1725 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A | N/A | - |  | - | - | - | 0 | 1945 | 1817 | 0.0%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>69</b>             | <b>201</b>                   | <b>0</b>                    | <b>7.0</b>            | <b>3.5</b>                   | <b>0.1</b>                         | <b>10.6</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>69</b>             | <b>201</b>                   | <b>0</b>                    | <b>7.0</b>            | <b>3.5</b>                   | <b>0.1</b>                         | <b>10.6</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 275            | 275           | -                     | -                            | -                           | 1.4                   | 0.4                          | -                                  | 1.8                 | 23.7                      | 4.4                              | 0.4                        | 4.7                  |
| 1/2   | 260            | 260           | 59                    | 201                          | 0                           | 1.3                   | 0.9                          | 0.1                                | 2.3                 | 31.4                      | 4.0                              | 0.9                        | 4.9                  |
| 2/1   | 146            | 146           | -                     | -                            | -                           | 1.2                   | 0.8                          | -                                  | 2.0                 | 49.4                      | 2.8                              | 0.8                        | 3.6                  |
| 2/2   | 39             | 39            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 37.4                      | 0.7                              | 0.1                        | 0.8                  |
| 3/1   | 207            | 207           | -                     | -                            | -                           | 1.6                   | 0.7                          | -                                  | 2.3                 | 40.3                      | 3.9                              | 0.7                        | 4.7                  |
| 3/2   | 10             | 10            | 10                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.1                 | 30.8                      | 0.2                              | 0.0                        | 0.2                  |
| 4/1   | 95             | 95            | -                     | -                            | -                           | 0.8                   | 0.5                          | -                                  | 1.3                 | 49.9                      | 1.8                              | 0.5                        | 2.3                  |
| 4/2   | 29             | 29            | -                     | -                            | -                           | 0.2                   | 0.1                          | -                                  | 0.3                 | 40.7                      | 0.5                              | 0.1                        | 0.6                  |
| 5/1   | 231            | 231           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 116            | 116           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 305            | 305           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 409            | 409           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>0</b>              | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.0</b>                   | <b>0.0</b>                         | <b>0.0</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

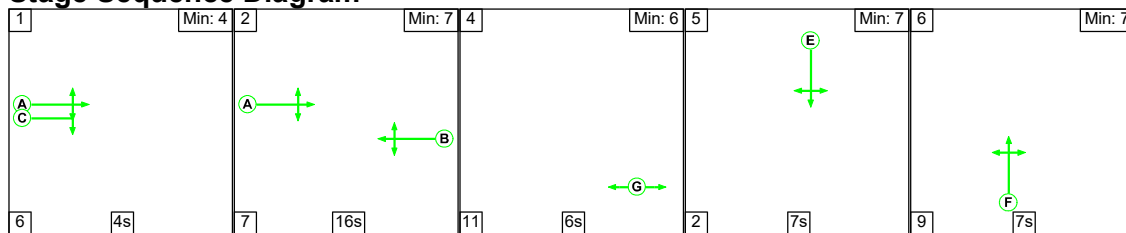
Full Input Data And Results

|     |   |                              |      |  |   |       |                 |   |     |     |     |     |     |
|-----|---|------------------------------|------|--|---|-------|-----------------|---|-----|-----|-----|-----|-----|
| 7/1 | 0 | 0                            | -    | -  | - | 0.0   | 0.0             | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 0 | 0                            | -    | -  | - | 0.0   | 0.0             | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): | 41.0 | Total Delay for Signalled Lanes (pcuHr): |   | 10.54 | Cycle Time (s): |   | 75  |     |     |     |     |
|     |   | PRC Over All Lanes (%):      | 41.0 | Total Delay Over All Lanes(pcuHr):       |   | 10.63 |                 |   |     |     |     |     |     |

Full Input Data And Results

Scenario 4: '2027 Base PM' (FG4: '2027 Base PM', Plan 1: 'Network Control Plan 1')

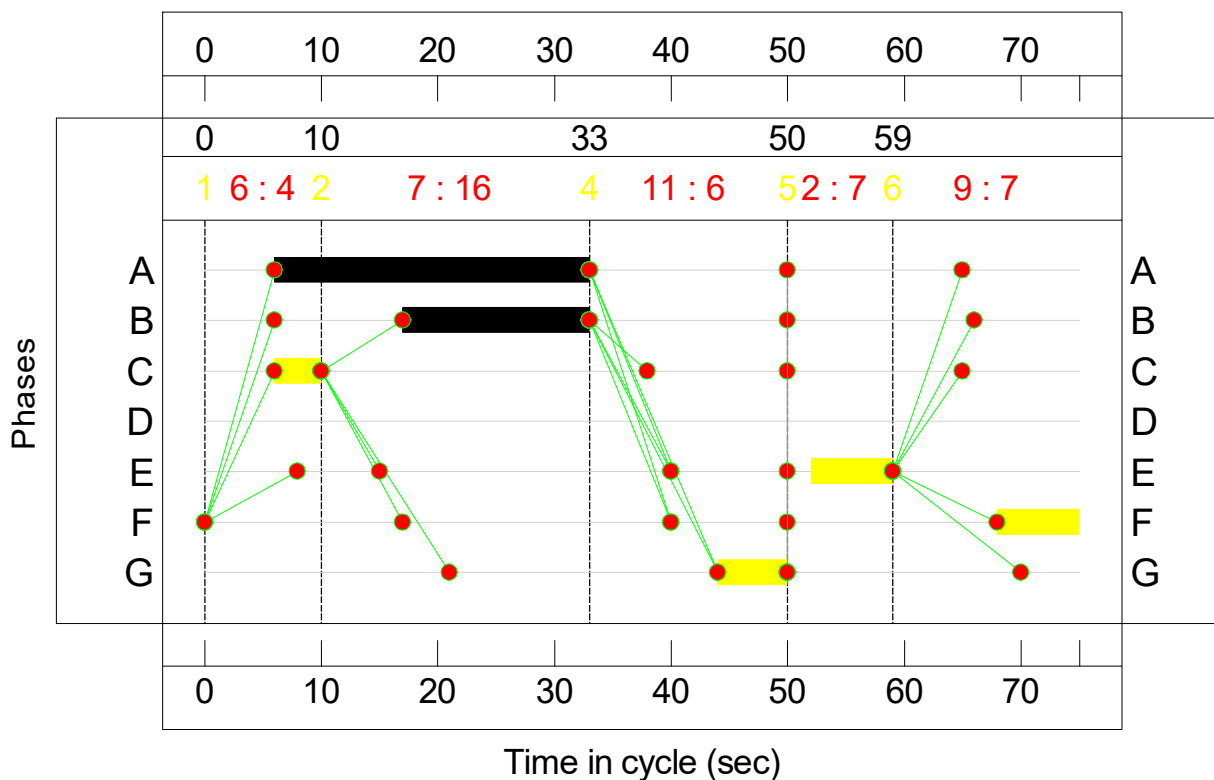
Stage Sequence Diagram



Stage Timings

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 16 | 6  | 7  | 7  |
| Change Point | 0 | 10 | 33 | 50 | 59 |

Signal Timings Diagram



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>74.9%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>74.9%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 27              | -               | 237               | 1833              | 684            | 34.6%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 27              | 4               | 227               | 1961              | 357            | 63.5%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 115               | 1800              | 192            | 59.9%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 50                | 1865              | 199            | 25.1%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 16              | -               | 292               | 1721              | 390            | 74.9%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 16              | 0               | 23                | 1957              | 332            | 6.9%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 141               | 1784              | 190            | 74.1%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 31                | 1913              | 204            | 15.2%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 330               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 173               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 243               | 1915              | 1915           | 12.7%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 370               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |     |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|-----|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | N/A | -   | - |  | - | - | - | - | -    | -    | <b>0.0%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1725 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A | N/A | - |  | - | - | - | 0 | 1945 | 1817 | 0.0%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>81</b>             | <b>169</b>                   | <b>0</b>                    | <b>7.5</b>            | <b>5.0</b>                   | <b>0.1</b>                         | <b>12.6</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>81</b>             | <b>169</b>                   | <b>0</b>                    | <b>7.5</b>            | <b>5.0</b>                   | <b>0.1</b>                         | <b>12.6</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 237            | 237           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.4                 | 20.9                      | 3.5                              | 0.3                        | 3.8                  |
| 1/2   | 227            | 227           | 58                    | 169                          | 0                           | 1.1                   | 0.9                          | 0.1                                | 2.0                 | 31.9                      | 3.3                              | 0.9                        | 4.2                  |
| 2/1   | 115            | 115           | -                     | -                            | -                           | 1.0                   | 0.7                          | -                                  | 1.8                 | 54.9                      | 2.3                              | 0.7                        | 3.0                  |
| 2/2   | 50             | 50            | -                     | -                            | -                           | 0.4                   | 0.2                          | -                                  | 0.6                 | 42.8                      | 0.9                              | 0.2                        | 1.1                  |
| 3/1   | 292            | 292           | -                     | -                            | -                           | 2.2                   | 1.4                          | -                                  | 3.6                 | 44.8                      | 5.6                              | 1.4                        | 7.0                  |
| 3/2   | 23             | 23            | 23                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.2                 | 28.7                      | 0.4                              | 0.0                        | 0.4                  |
| 4/1   | 141            | 141           | -                     | -                            | -                           | 1.3                   | 1.4                          | -                                  | 2.6                 | 67.1                      | 2.8                              | 1.4                        | 4.2                  |
| 4/2   | 31             | 31            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 40.8                      | 0.6                              | 0.1                        | 0.7                  |
| 5/1   | 330            | 330           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 173            | 173           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 243            | 243           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 370            | 370           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>0</b>              | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.0</b>                   | <b>0.0</b>                         | <b>0.0</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

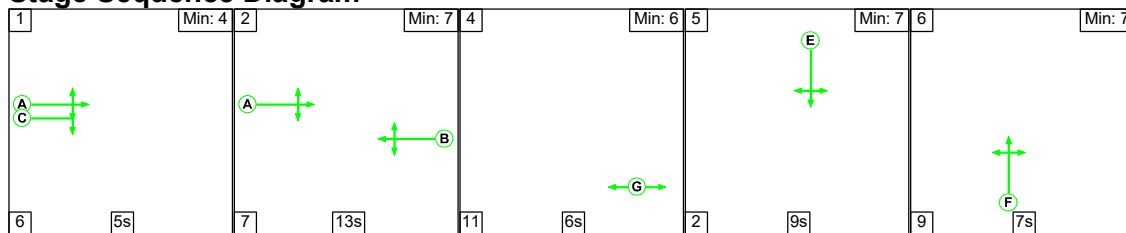
Full Input Data And Results

|     |   |                              |   |      |  |     |       |                 |     |     |     |     |     |
|-----|---|------------------------------|---|------|--|-----|-------|-----------------|-----|-----|-----|-----|-----|
| 7/1 | 0 | 0                            | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 0 | 0                            | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): |   | 20.2 | Total Delay for Signalled Lanes (pcuHr): |     | 12.54 | Cycle Time (s): |     | 75  |     |     |     |
|     |   | PRC Over All Lanes (%):      |   | 20.2 | Total Delay Over All Lanes(pcuHr):       |     | 12.61 |                 |     |     |     |     |     |

Full Input Data And Results

Scenario 5: '2030 Base AM' (FG5: '2030 Base AM', Plan 1: 'Network Control Plan 1')

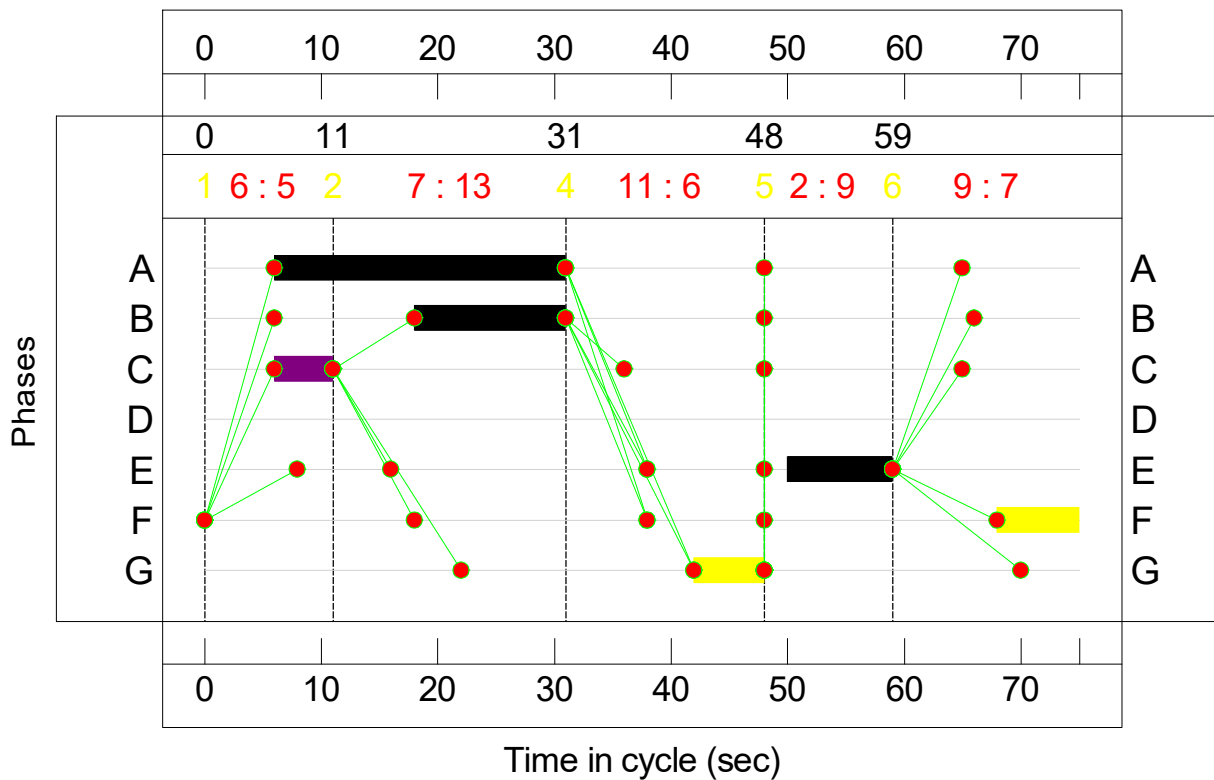
Stage Sequence Diagram



Stage Timings

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 5 | 13 | 6  | 9  | 7  |
| Change Point | 0 | 11 | 31 | 48 | 59 |

Signal Timings Diagram



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>66.4%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>66.4%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 25              | -               | 283               | 1858              | 644            | 43.9%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 25              | 5               | 268               | 1961              | 408            | 65.7%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 151               | 1804              | 241            | 62.8%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 9               | -               | 40                | 1865              | 249            | 16.1%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 13              | -               | 213               | 1718              | 321            | 66.4%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 13              | 0               | 11                | 1957              | 277            | 4.0%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 98                | 1804              | 192            | 50.9%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 29                | 1913              | 204            | 14.2%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 238               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 120               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 313               | 1915              | 1915           | 16.3%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 422               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |     |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|-----|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | N/A | -   | - |  | - | - | - | - | -    | -    | <b>0.0%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1725 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A | N/A | - |  | - | - | - | 0 | 1945 | 1817 | 0.0%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | 68                    | 211                          | 0                           | 7.3                   | 3.9                          | 0.1                                | 11.4                | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | 68                    | 211                          | 0                           | 7.3                   | 3.9                          | 0.1                                | 11.4                | -                         | -                                | -                          | -                    |
| 1/1   | 283            | 283           | -                     | -                            | -                           | 1.5                   | 0.4                          | -                                  | 1.9                 | 23.9                      | 4.5                              | 0.4                        | 4.9                  |
| 1/2   | 268            | 268           | 57                    | 211                          | 0                           | 1.4                   | 0.9                          | 0.1                                | 2.4                 | 32.2                      | 4.2                              | 0.9                        | 5.1                  |
| 2/1   | 151            | 151           | -                     | -                            | -                           | 1.3                   | 0.8                          | -                                  | 2.1                 | 50.5                      | 2.9                              | 0.8                        | 3.8                  |
| 2/2   | 40             | 40            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 37.5                      | 0.7                              | 0.1                        | 0.8                  |
| 3/1   | 213            | 213           | -                     | -                            | -                           | 1.7                   | 1.0                          | -                                  | 2.6                 | 44.7                      | 4.1                              | 1.0                        | 5.1                  |
| 3/2   | 11             | 11            | 11                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.1                 | 32.0                      | 0.2                              | 0.0                        | 0.2                  |
| 4/1   | 98             | 98            | -                     | -                            | -                           | 0.9                   | 0.5                          | -                                  | 1.4                 | 50.5                      | 1.9                              | 0.5                        | 2.4                  |
| 4/2   | 29             | 29            | -                     | -                            | -                           | 0.2                   | 0.1                          | -                                  | 0.3                 | 40.7                      | 0.5                              | 0.1                        | 0.6                  |
| 5/1   | 238            | 238           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 120            | 120           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 313            | 313           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 422            | 422           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | 0.0                                | 0.0                 | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

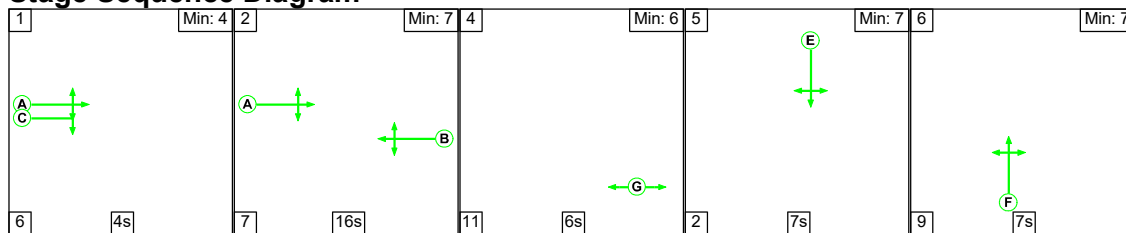
Full Input Data And Results

|     |   |                              |   |      |   |  |     |       |     |                 |     |     |     |
|-----|---|------------------------------|---|------|---|--|-----|-------|-----|-----------------|-----|-----|-----|
| 7/1 | 0 | 0                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| 8/1 | 0 | 0                            | - | -    | - | 0.0                                      | 0.0 | -     | 0.0 | 0.0             | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): |   | 35.5 |   | Total Delay for Signalled Lanes (pcuHr): |     | 11.26 |     | Cycle Time (s): |     | 75  |     |
|     |   | PRC Over All Lanes (%):      |   | 35.5 |   | Total Delay Over All Lanes(pcuHr):       |     | 11.36 |     |                 |     |     |     |

Full Input Data And Results

Scenario 6: '2030 Base PM' (FG6: '2030 Base PM', Plan 1: 'Network Control Plan 1')

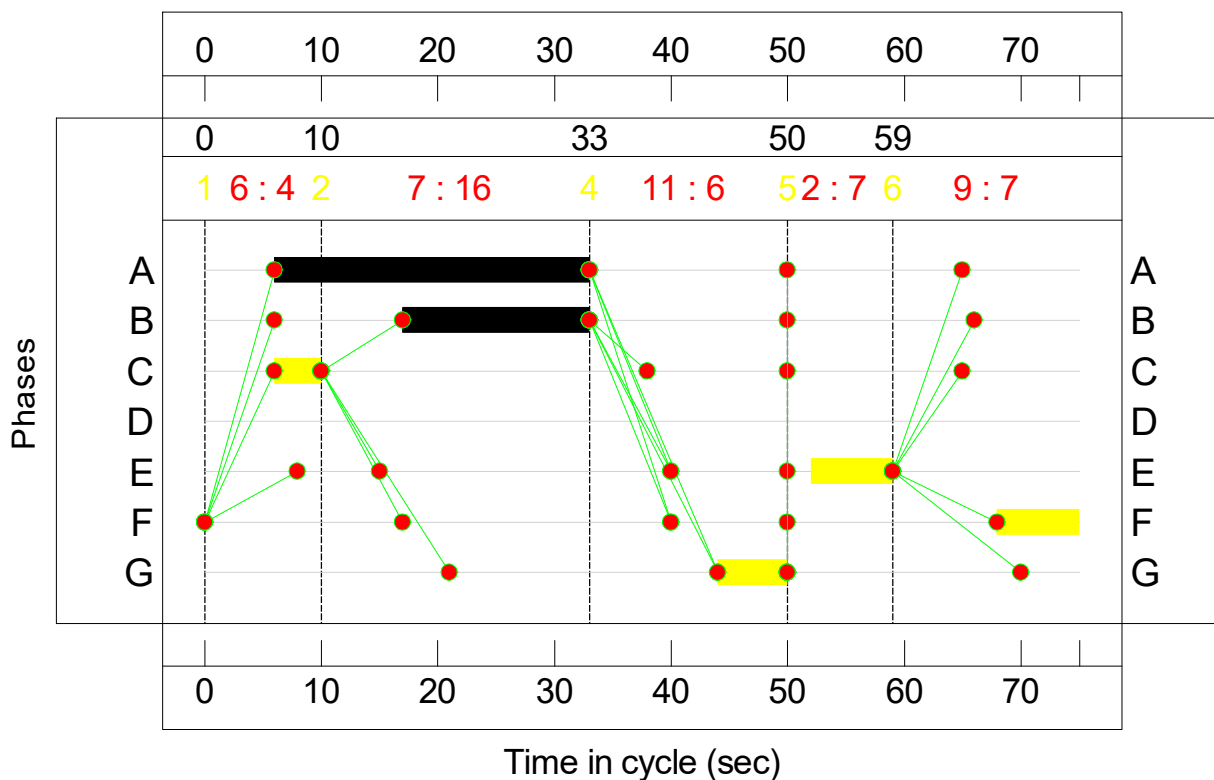
Stage Sequence Diagram



Stage Timings

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 16 | 6  | 7  | 7  |
| Change Point | 0 | 10 | 33 | 50 | 59 |

Signal Timings Diagram



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>76.9%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>76.9%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 27              | -               | 244               | 1832              | 684            | 35.7%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 27              | 4               | 234               | 1961              | 357            | 65.5%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 117               | 1800              | 192            | 60.9%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 51                | 1865              | 199            | 25.6%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 16              | -               | 300               | 1722              | 390            | 76.9%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 16              | 0               | 24                | 1957              | 331            | 7.3%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 145               | 1784              | 190            | 76.2%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 31                | 1913              | 204            | 15.2%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 338               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 179               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 248               | 1915              | 1915           | 13.0%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 381               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |     |     |   |  |   |   |   |   |      |      |             |
|--------------------------------------|-------------------------------------|---|-----|-----|---|--|---|---|---|---|------|------|-------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | N/A | -   | - |  | - | - | - | - | -    | -    | <b>0.0%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1725 | 0.0%        |
| 2/1                                  | Site Access Right Left              | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A | N/A | - |  | - | - | - | 0 | 1945 | 1817 | 0.0%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A | N/A | - |  | - | - | - | 0 | 1915 | 1439 | 0.0%        |
| 5/1                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1723 | 1723 | 0.0%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A | N/A | - |  | - | - | - | 0 | 1957 | 1957 | 0.0%        |
| 6/1                                  | Site Access - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 7/1                                  | Marine Road - EXIT                  | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |
| 8/1                                  | PFS Entrance                        | U | N/A | N/A | - |  | - | - | - | 0 | Inf  | Inf  | 0.0%        |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | 83                    | 175                          | 0                           | 7.7                   | 5.5                          | 0.1                                | 13.3                | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | 83                    | 175                          | 0                           | 7.7                   | 5.5                          | 0.1                                | 13.3                | -                         | -                                | -                          | -                    |
| 1/1   | 244            | 244           | -                     | -                            | -                           | 1.2                   | 0.3                          | -                                  | 1.4                 | 21.1                      | 3.7                              | 0.3                        | 3.9                  |
| 1/2   | 234            | 234           | 59                    | 175                          | 0                           | 1.1                   | 0.9                          | 0.1                                | 2.1                 | 32.8                      | 3.4                              | 0.9                        | 4.4                  |
| 2/1   | 117            | 117           | -                     | -                            | -                           | 1.0                   | 0.8                          | -                                  | 1.8                 | 55.5                      | 2.3                              | 0.8                        | 3.1                  |
| 2/2   | 51             | 51            | -                     | -                            | -                           | 0.4                   | 0.2                          | -                                  | 0.6                 | 42.9                      | 1.0                              | 0.2                        | 1.1                  |
| 3/1   | 300            | 300           | -                     | -                            | -                           | 2.3                   | 1.6                          | -                                  | 3.9                 | 46.4                      | 5.8                              | 1.6                        | 7.4                  |
| 3/2   | 24             | 24            | 24                    | 0                            | 0                           | 0.2                   | 0.0                          | 0.0                                | 0.2                 | 28.8                      | 0.4                              | 0.0                        | 0.4                  |
| 4/1   | 145            | 145           | -                     | -                            | -                           | 1.3                   | 1.5                          | -                                  | 2.8                 | 69.8                      | 2.9                              | 1.5                        | 4.4                  |
| 4/2   | 31             | 31            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 40.8                      | 0.6                              | 0.1                        | 0.7                  |
| 5/1   | 338            | 338           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 179            | 179           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 248            | 248           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 381            | 381           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | 0.0                                | 0.0                 | -                         | -                                | -                          | -                    |
| 1/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 2/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 4/1   | 0              | 0             | 0                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 5/2   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 0              | 0             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

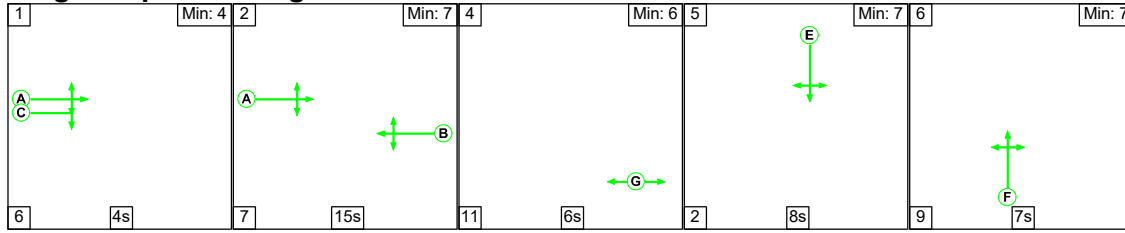
Full Input Data And Results

|     |   |                              |   |      |  |     |       |                 |     |     |     |     |     |
|-----|---|------------------------------|---|------|--|-----|-------|-----------------|-----|-----|-----|-----|-----|
| 7/1 | 0 | 0                            | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 0 | 0                            | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |   | PRC for Signalled Lanes (%): |   | 17.1 | Total Delay for Signalled Lanes (pcuHr): |     | 13.20 | Cycle Time (s): |     | 75  |     |     |     |
|     |   | PRC Over All Lanes (%):      |   | 17.1 | Total Delay Over All Lanes(pcuHr):       |     | 13.28 |                 |     |     |     |     |     |

Full Input Data And Results

**Scenario 7: '2027 Base with Development AM'** (FG7: '2027 Base with Development AM', Plan 1: 'Network Control Plan 1')

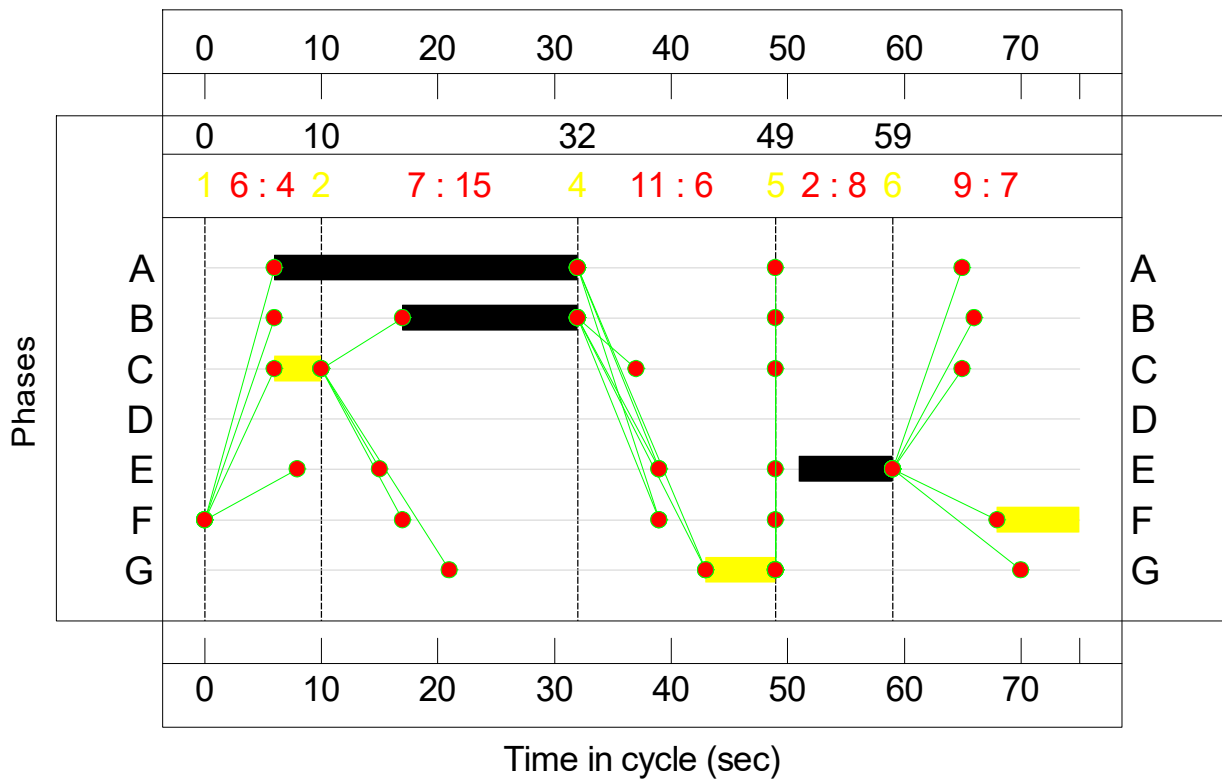
**Stage Sequence Diagram**



**Stage Timings**

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 15 | 6  | 8  | 7  |
| Change Point | 0 | 10 | 32 | 49 | 59 |

**Signal Timings Diagram**



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>67.4%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>67.4%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 26              | -               | 276               | 1858              | 669            | 41.3%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 26              | 4               | 260               | 1961              | 414            | 62.7%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 8               | -               | 146               | 1804              | 216            | 67.4%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 8               | -               | 39                | 1865              | 224            | 17.4%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 15              | -               | 219               | 1723              | 368            | 59.6%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 15              | 0               | 10                | 1957              | 308            | 3.2%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 95                | 1805              | 193            | 49.3%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 32                | 1913              | 204            | 15.7%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 234               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 116               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 309               | 1915              | 1915           | 16.1%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 418               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |            |     |   |  |   |   |   |     |      |      |              |
|--------------------------------------|-------------------------------------|---|------------|-----|---|--|---|---|---|-----|------|------|--------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | <b>N/A</b> | -   | - |  | - | - | - | -   | -    | -    | <b>16.6%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A        | N/A | - |  | - | - | - | 309 | 1915 | 1856 | 16.6%        |
| 2/1                                  | Site Access Right Left              | O | N/A        | N/A | - |  | - | - | - | 15  | 1915 | 907  | 1.7%         |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A        | N/A | - |  | - | - | - | 204 | 1945 | 1938 | 10.5%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A        | N/A | - |  | - | - | - | 20  | 1915 | 1120 | 1.8%         |
| 5/1                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 216 | 1723 | 1723 | 12.5%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 13  | 1957 | 1957 | 0.7%         |
| 6/1                                  | Site Access - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 6   | Inf  | Inf  | 0.0%         |
| 7/1                                  | Marine Road - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 293 | Inf  | Inf  | 0.0%         |
| 8/1                                  | PFS Entrance                        | U | N/A        | N/A | - |  | - | - | - | 20  | Inf  | Inf  | 0.0%         |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>125</b>            | <b>198</b>                   | <b>0</b>                    | <b>7.1</b>            | <b>4.0</b>                   | <b>0.1</b>                         | <b>11.1</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>72</b>             | <b>198</b>                   | <b>0</b>                    | <b>7.1</b>            | <b>3.7</b>                   | <b>0.1</b>                         | <b>10.8</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 276            | 276           | -                     | -                            | -                           | 1.4                   | 0.4                          | -                                  | 1.7                 | 22.6                      | 4.3                              | 0.4                        | 4.6                  |
| 1/2   | 260            | 260           | 62                    | 198                          | 0                           | 1.3                   | 0.8                          | 0.1                                | 2.2                 | 30.2                      | 4.0                              | 0.8                        | 4.8                  |
| 2/1   | 146            | 146           | -                     | -                            | -                           | 1.3                   | 1.0                          | -                                  | 2.3                 | 56.4                      | 2.9                              | 1.0                        | 3.9                  |
| 2/2   | 39             | 39            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 39.5                      | 0.7                              | 0.1                        | 0.8                  |
| 3/1   | 219            | 219           | -                     | -                            | -                           | 1.6                   | 0.7                          | -                                  | 2.3                 | 38.6                      | 4.1                              | 0.7                        | 4.8                  |
| 3/2   | 10             | 10            | 10                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.1                 | 29.6                      | 0.2                              | 0.0                        | 0.2                  |
| 4/1   | 95             | 95            | -                     | -                            | -                           | 0.8                   | 0.5                          | -                                  | 1.3                 | 49.9                      | 1.8                              | 0.5                        | 2.3                  |
| 4/2   | 32             | 32            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 40.9                      | 0.6                              | 0.1                        | 0.7                  |
| 5/1   | 234            | 234           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 116            | 116           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 309            | 309           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 418            | 418           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>53</b>             | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.3</b>                   | <b>0.0</b>                         | <b>0.3</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 309            | 309           | 17                    | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 2/1   | 15             | 15            | 15                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 2.0                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 204            | 204           | 1                     | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.0                       | 0.0                              | 0.1                        | 0.1                  |
| 4/1   | 20             | 20            | 20                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 1.6                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 216            | 216           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 5/2   | 13             | 13            | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.9                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 6              | 6             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

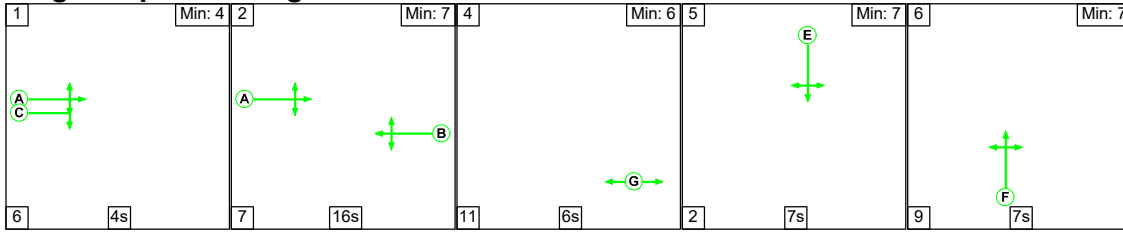
### Full Input Data And Results

|     |     |                              |   |      |  |     |       |                 |     |     |     |     |     |
|-----|-----|------------------------------|---|------|--|-----|-------|-----------------|-----|-----|-----|-----|-----|
| 7/1 | 293 | 293                          | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 20  | 20                           | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |     | PRC for Signalled Lanes (%): |   | 33.4 | Total Delay for Signalled Lanes (pcuHr): |     | 10.75 | Cycle Time (s): |     | 75  |     |     |     |
|     |     | PRC Over All Lanes (%):      |   | 33.4 | Total Delay Over All Lanes(pcuHr):       |     | 11.09 |                 |     |     |     |     |     |

Full Input Data And Results

**Scenario 8: '2027 Base with Development PM'** (FG8: '2027 Base with Development PM', Plan 1: 'Network Control Plan 1')

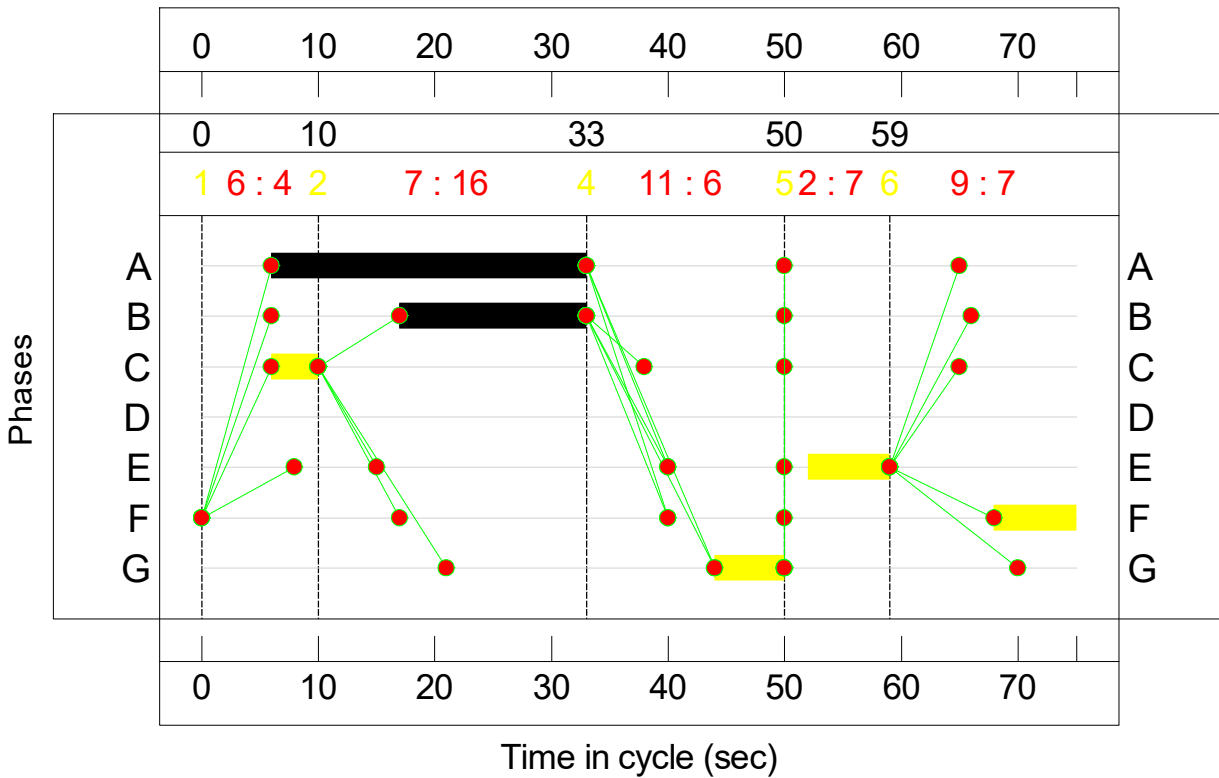
**Stage Sequence Diagram**



**Stage Timings**

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 16 | 6  | 7  | 7  |
| Change Point | 0 | 10 | 33 | 50 | 59 |

**Signal Timings Diagram**



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>76.8%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>76.8%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 27              | -               | 240               | 1833              | 684            | 35.1%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 27              | 4               | 227               | 1961              | 357            | 63.5%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 115               | 1800              | 192            | 59.9%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 50                | 1865              | 199            | 25.1%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 16              | -               | 300               | 1724              | 391            | 76.8%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 16              | 0               | 24                | 1957              | 331            | 7.2%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 141               | 1784              | 190            | 74.1%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 41                | 1913              | 204            | 20.1%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 332               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 174               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 256               | 1915              | 1915           | 13.4%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 376               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |            |     |   |  |   |   |   |     |      |      |              |
|--------------------------------------|-------------------------------------|---|------------|-----|---|--|---|---|---|-----|------|------|--------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | <b>N/A</b> | -   | - |  | - | - | - | -   | -    | -    | <b>18.3%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A        | N/A | - |  | - | - | - | 256 | 1915 | 1784 | 14.4%        |
| 2/1                                  | Site Access Right Left              | O | N/A        | N/A | - |  | - | - | - | 9   | 1915 | 874  | 1.0%         |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A        | N/A | - |  | - | - | - | 286 | 1945 | 1936 | 14.8%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A        | N/A | - |  | - | - | - | 38  | 1915 | 1064 | 3.6%         |
| 5/1                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 316 | 1723 | 1723 | 18.3%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 8   | 1957 | 1957 | 0.4%         |
| 6/1                                  | Site Access - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 16  | Inf  | Inf  | 0.0%         |
| 7/1                                  | Marine Road - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 222 | Inf  | Inf  | 0.0%         |
| 8/1                                  | PFS Entrance                        | U | N/A        | N/A | - |  | - | - | - | 27  | Inf  | Inf  | 0.0%         |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>158</b>            | <b>169</b>                   | <b>0</b>                    | <b>7.7</b>            | <b>5.5</b>                   | <b>0.1</b>                         | <b>13.3</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>82</b>             | <b>169</b>                   | <b>0</b>                    | <b>7.7</b>            | <b>5.2</b>                   | <b>0.1</b>                         | <b>13.0</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 240            | 240           | -                     | -                            | -                           | 1.1                   | 0.3                          | -                                  | 1.4                 | 21.0                      | 3.6                              | 0.3                        | 3.9                  |
| 1/2   | 227            | 227           | 58                    | 169                          | 0                           | 1.1                   | 0.9                          | 0.1                                | 2.0                 | 32.0                      | 3.3                              | 0.9                        | 4.2                  |
| 2/1   | 115            | 115           | -                     | -                            | -                           | 1.0                   | 0.7                          | -                                  | 1.8                 | 54.9                      | 2.3                              | 0.7                        | 3.0                  |
| 2/2   | 50             | 50            | -                     | -                            | -                           | 0.4                   | 0.2                          | -                                  | 0.6                 | 42.8                      | 0.9                              | 0.2                        | 1.1                  |
| 3/1   | 300            | 300           | -                     | -                            | -                           | 2.3                   | 1.6                          | -                                  | 3.9                 | 46.3                      | 5.8                              | 1.6                        | 7.4                  |
| 3/2   | 24             | 24            | 24                    | 0                            | 0                           | 0.2                   | 0.0                          | 0.0                                | 0.2                 | 28.8                      | 0.4                              | 0.0                        | 0.4                  |
| 4/1   | 141            | 141           | -                     | -                            | -                           | 1.3                   | 1.4                          | -                                  | 2.6                 | 67.1                      | 2.8                              | 1.4                        | 4.2                  |
| 4/2   | 41             | 41            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.5                 | 41.7                      | 0.8                              | 0.1                        | 0.9                  |
| 5/1   | 332            | 332           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 174            | 174           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 256            | 256           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 376            | 376           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>76</b>             | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.3</b>                   | <b>0.0</b>                         | <b>0.3</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 256            | 256           | 27                    | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 2/1   | 9              | 9             | 9                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 2.1                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 286            | 286           | 2                     | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 4/1   | 38             | 38            | 38                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 1.8                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 316            | 316           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.3                       | 0.0                              | 0.1                        | 0.1                  |
| 5/2   | 8              | 8             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.9                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 16             | 16            | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

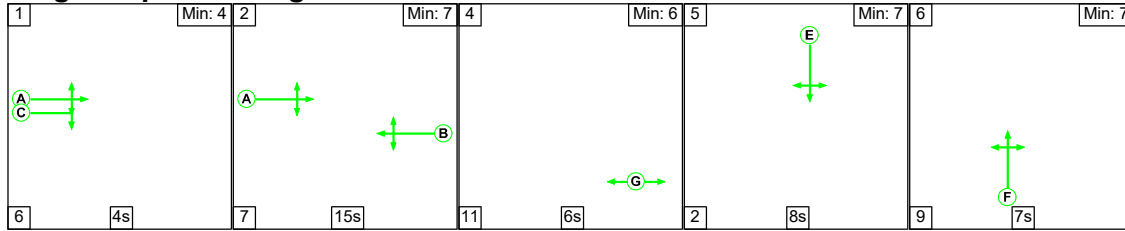
Full Input Data And Results

|     |     |                              |      |  |   |       |                 |   |     |     |     |     |     |
|-----|-----|------------------------------|------|--|---|-------|-----------------|---|-----|-----|-----|-----|-----|
| 7/1 | 222 | 222                          | -    | -  | - | 0.0   | 0.0             | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 27  | 27                           | -    | -  | - | 0.0   | 0.0             | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |     | PRC for Signalled Lanes (%): | 17.2 | Total Delay for Signalled Lanes (pcuHr): |   | 12.92 | Cycle Time (s): |   | 75  |     |     |     |     |
|     |     | PRC Over All Lanes (%):      | 17.2 | Total Delay Over All Lanes(pcuHr):       |   | 13.31 |                 |   |     |     |     |     |     |

Full Input Data And Results

**Scenario 9: '2030 Base with Development AM'** (FG9: '2030 Base with Development AM', Plan 1: 'Network Control Plan 1')

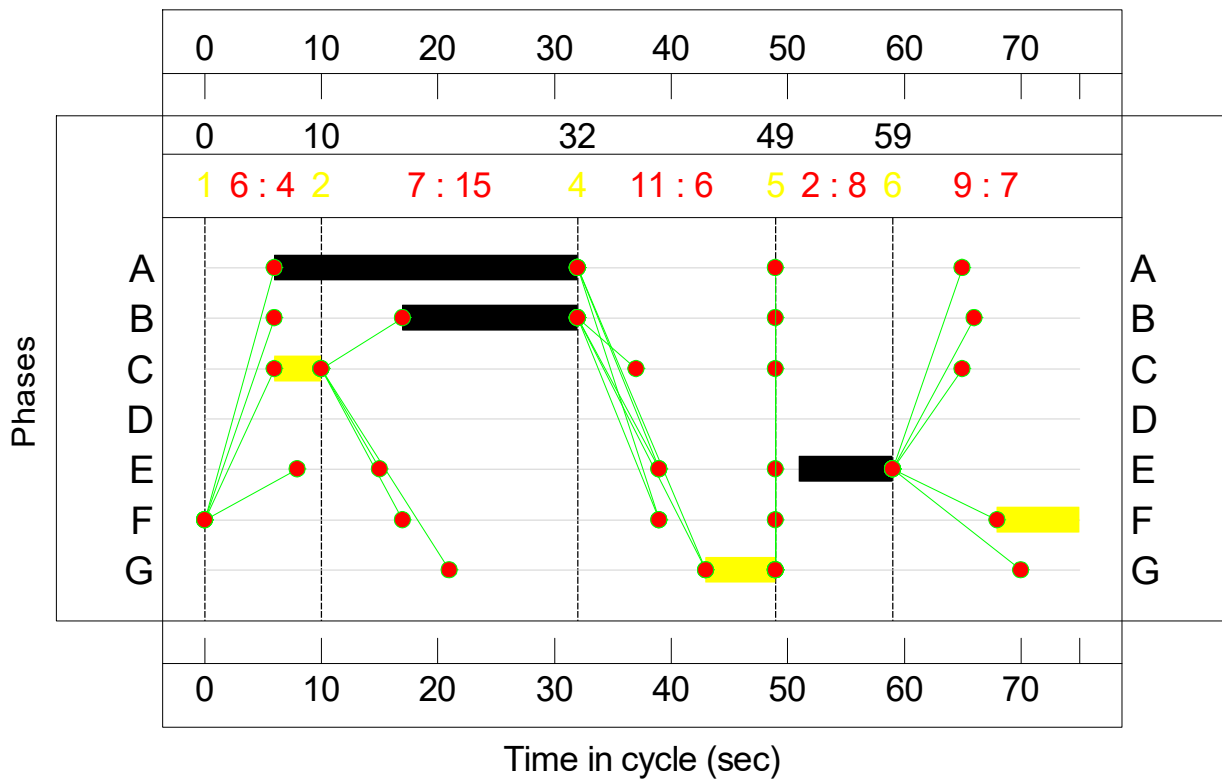
**Stage Sequence Diagram**



**Stage Timings**

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 15 | 6  | 8  | 7  |
| Change Point | 0 | 10 | 32 | 49 | 59 |

**Signal Timings Diagram**



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>69.8%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>69.8%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 26              | -               | 285               | 1858              | 669            | 42.6%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 26              | 4               | 268               | 1961              | 410            | 65.4%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 8               | -               | 151               | 1804              | 216            | 69.8%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 8               | -               | 40                | 1865              | 224            | 17.9%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 15              | -               | 225               | 1723              | 368            | 61.2%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 15              | 0               | 11                | 1957              | 307            | 3.6%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 98                | 1804              | 192            | 50.9%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 33                | 1913              | 204            | 16.2%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 241               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 120               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 319               | 1915              | 1915           | 16.7%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 431               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |            |     |   |  |   |   |   |     |      |      |              |
|--------------------------------------|-------------------------------------|---|------------|-----|---|--|---|---|---|-----|------|------|--------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | <b>N/A</b> | -   | - |  | - | - | - | -   | -    | -    | <b>17.2%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A        | N/A | - |  | - | - | - | 318 | 1915 | 1854 | 17.2%        |
| 2/1                                  | Site Access Right Left              | O | N/A        | N/A | - |  | - | - | - | 15  | 1915 | 891  | 1.7%         |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A        | N/A | - |  | - | - | - | 210 | 1945 | 1938 | 10.8%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A        | N/A | - |  | - | - | - | 21  | 1915 | 1114 | 1.9%         |
| 5/1                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 223 | 1723 | 1723 | 12.9%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 13  | 1957 | 1957 | 0.7%         |
| 6/1                                  | Site Access - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 6   | Inf  | Inf  | 0.0%         |
| 7/1                                  | Marine Road - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 301 | Inf  | Inf  | 0.0%         |
| 8/1                                  | PFS Entrance                        | U | N/A        | N/A | - |  | - | - | - | 21  | Inf  | Inf  | 0.0%         |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>130</b>            | <b>204</b>                   | <b>0</b>                    | <b>7.3</b>            | <b>4.3</b>                   | <b>0.1</b>                         | <b>11.7</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>75</b>             | <b>204</b>                   | <b>0</b>                    | <b>7.3</b>            | <b>4.0</b>                   | <b>0.1</b>                         | <b>11.4</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 285            | 285           | -                     | -                            | -                           | 1.4                   | 0.4                          | -                                  | 1.8                 | 22.8                      | 4.4                              | 0.4                        | 4.8                  |
| 1/2   | 268            | 268           | 64                    | 204                          | 0                           | 1.3                   | 0.9                          | 0.1                                | 2.3                 | 31.4                      | 4.1                              | 0.9                        | 5.0                  |
| 2/1   | 151            | 151           | -                     | -                            | -                           | 1.3                   | 1.1                          | -                                  | 2.4                 | 58.3                      | 3.0                              | 1.1                        | 4.1                  |
| 2/2   | 40             | 40            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 39.5                      | 0.7                              | 0.1                        | 0.9                  |
| 3/1   | 225            | 225           | -                     | -                            | -                           | 1.7                   | 0.8                          | -                                  | 2.4                 | 39.2                      | 4.2                              | 0.8                        | 5.0                  |
| 3/2   | 11             | 11            | 11                    | 0                            | 0                           | 0.1                   | 0.0                          | 0.0                                | 0.1                 | 29.7                      | 0.2                              | 0.0                        | 0.2                  |
| 4/1   | 98             | 98            | -                     | -                            | -                           | 0.9                   | 0.5                          | -                                  | 1.4                 | 50.5                      | 1.9                              | 0.5                        | 2.4                  |
| 4/2   | 33             | 33            | -                     | -                            | -                           | 0.3                   | 0.1                          | -                                  | 0.4                 | 41.0                      | 0.6                              | 0.1                        | 0.7                  |
| 5/1   | 241            | 241           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 120            | 120           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 319            | 319           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 431            | 431           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>55</b>             | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.3</b>                   | <b>0.0</b>                         | <b>0.3</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 318            | 318           | 18                    | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 2/1   | 15             | 15            | 15                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 2.1                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 210            | 210           | 1                     | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.0                       | 0.0                              | 0.1                        | 0.1                  |
| 4/1   | 21             | 21            | 21                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 1.6                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 223            | 223           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 5/2   | 13             | 13            | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.9                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 6              | 6             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

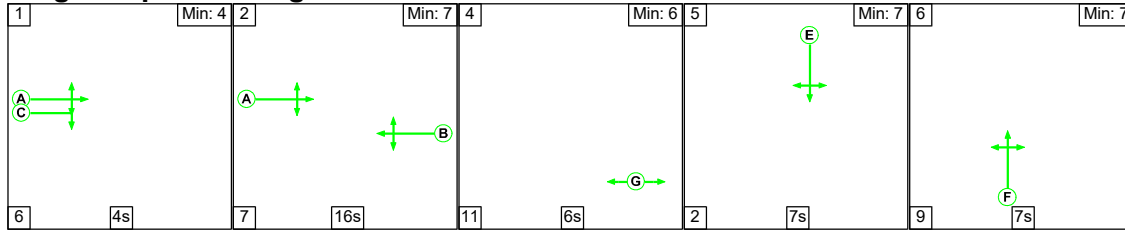
### Full Input Data And Results

|     |     |                              |   |      |  |     |       |                 |     |     |     |     |     |
|-----|-----|------------------------------|---|------|--|-----|-------|-----------------|-----|-----|-----|-----|-----|
| 7/1 | 301 | 301                          | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 21  | 21                           | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |     | PRC for Signalled Lanes (%): |   | 29.0 | Total Delay for Signalled Lanes (pcuHr): |     | 11.32 | Cycle Time (s): |     | 75  |     |     |     |
|     |     | PRC Over All Lanes (%):      |   | 29.0 | Total Delay Over All Lanes(pcuHr):       |     | 11.68 |                 |     |     |     |     |     |

Full Input Data And Results

**Scenario 10: '2030 Base with Development PM'** (FG10: '2030 Base with Development PM', Plan 1: 'Network Control Plan 1')

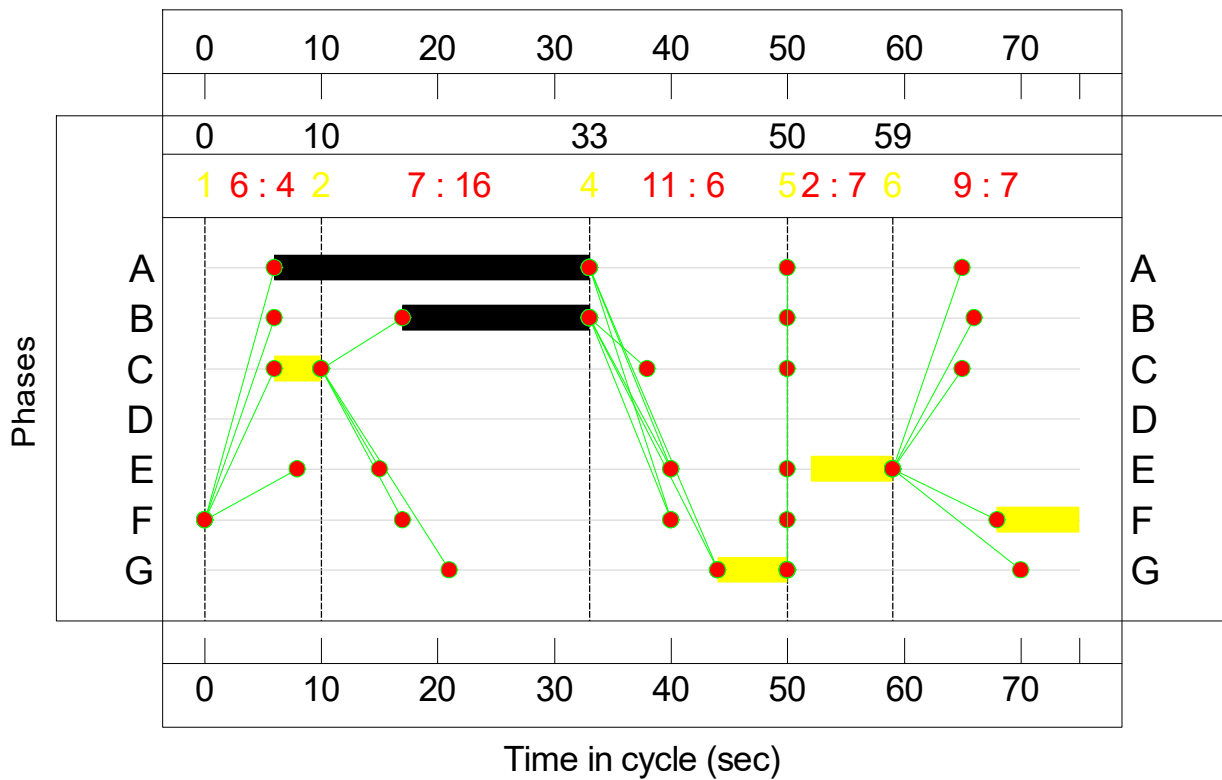
**Stage Sequence Diagram**



**Stage Timings**

| Stage        | 1 | 2  | 4  | 5  | 6  |
|--------------|---|----|----|----|----|
| Duration     | 4 | 16 | 6  | 7  | 7  |
| Change Point | 0 | 10 | 33 | 50 | 59 |

**Signal Timings Diagram**



Full Input Data And Results

**Network Results**

Full Input Data And Results

| Item  | Lane Description            | Lane Type | Controller Stream | Position In Filtered Route | Full Phase | Arrow Phase | Num Greens | Total Green (s) | Arrow Green (s) | Demand Flow (pcu) | Sat Flow (pcu/Hr) | Capacity (pcu) | Deg Sat (%)  |
|---|-----------------------------|-----------|-------------------|----------------------------|------------|-------------|------------|-----------------|-----------------|-------------------|-------------------|----------------|--------------|
| <b>Network</b>  | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>78.8%</b> |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -                           | -         | <b>N/A</b>        | -                          | -          |             | -          | -               | -               | -                 | -                 | -              | <b>78.8%</b> |
| 1/1   | Victoria Road Left Ahead    | U         | N/A               | N/A                        | A          |             | 1          | 27              | -               | 247               | 1833              | 684            | 36.1%        |
| 1/2   | Victoria Road Right         | O         | N/A               | N/A                        | A          | C           | 1          | 27              | 4               | 234               | 1961              | 357            | 65.5%        |
| 2/1   | Bastion Road (N) Left Ahead | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 118               | 1799              | 192            | 61.5%        |
| 2/2   | Bastion Road (N) Right      | U         | N/A               | N/A                        | E          |             | 1          | 7               | -               | 51                | 1865              | 199            | 25.6%        |
| 3/1   | Marine Road Ahead Left      | U         | N/A               | N/A                        | B          |             | 1          | 16              | -               | 308               | 1724              | 391            | 78.8%        |
| 3/2   | Marine Road Right           | O         | N/A               | N/A                        | B          | D           | 1          | 16              | 0               | 24                | 1957              | 330            | 7.3%         |
| 4/1   | Bastion Road (S) Left Ahead | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 145               | 1784              | 190            | 76.2%        |
| 4/2   | Bastion Road (S) Right      | U         | N/A               | N/A                        | F          |             | 1          | 7               | -               | 42                | 1913              | 204            | 20.6%        |
| 5/1   | Victoria Road - EXIT        | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 340               | Inf               | Inf            | 0.0%         |
| 6/1   | Bastion Road (N) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 179               | Inf               | Inf            | 0.0%         |
| 7/1   | Marine Road - EXIT Ahead    | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 263               | 1915              | 1915           | 13.7%        |
| 8/1   | Bastion Road (S) - EXIT     | U         | N/A               | N/A                        | -          |             | -          | -               | -               | 387               | Inf               | Inf            | 0.0%         |

Full Input Data And Results

|                                      |                                     |   |            |     |   |  |   |   |   |     |      |      |              |
|--------------------------------------|-------------------------------------|---|------------|-----|---|--|---|---|---|-----|------|------|--------------|
| <b>J2: Marine Road / Site Access</b> | -                                   | - | <b>N/A</b> | -   | - |  | - | - | - | -   | -    | -    | <b>18.9%</b> |
| 1/1                                  | Eastbound Internal Left Ahead Right | O | N/A        | N/A | - |  | - | - | - | 262 | 1915 | 1784 | 14.7%        |
| 2/1                                  | Site Access Right Left              | O | N/A        | N/A | - |  | - | - | - | 9   | 1915 | 859  | 1.0%         |
| 3/1                                  | Marine Road Ahead Right Left        | O | N/A        | N/A | - |  | - | - | - | 294 | 1945 | 1936 | 15.2%        |
| 4/1                                  | PFA Exit Left Right                 | O | N/A        | N/A | - |  | - | - | - | 39  | 1915 | 1055 | 3.7%         |
| 5/1                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 325 | 1723 | 1723 | 18.9%        |
| 5/2                                  | Westbound Internal Ahead            | U | N/A        | N/A | - |  | - | - | - | 8   | 1957 | 1957 | 0.4%         |
| 6/1                                  | Site Access - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 16  | Inf  | Inf  | 0.0%         |
| 7/1                                  | Marine Road - EXIT                  | U | N/A        | N/A | - |  | - | - | - | 228 | Inf  | Inf  | 0.0%         |
| 8/1                                  | PFS Entrance                        | U | N/A        | N/A | - |  | - | - | - | 27  | Inf  | Inf  | 0.0%         |

Full Input Data And Results

| Item  | Arriving (pcu) | Leaving (pcu) | Turners In Gaps (pcu) | Turners When Unopposed (pcu) | Turners In Intergreen (pcu) | Uniform Delay (pcuHr) | Rand + Oversat Delay (pcuHr) | Storage Area Uniform Delay (pcuHr) | Total Delay (pcuHr) | Av. Delay Per PCU (s/pcu) | Max. Back of Uniform Queue (pcu) | Rand + Oversat Queue (pcu) | Mean Max Queue (pcu) |
|---|----------------|---------------|-----------------------|------------------------------|-----------------------------|-----------------------|------------------------------|------------------------------------|---------------------|---------------------------|----------------------------------|----------------------------|----------------------|
| <b>Network</b>  | -              | -             | <b>160</b>            | <b>175</b>                   | <b>0</b>                    | <b>7.9</b>            | <b>6.0</b>                   | <b>0.1</b>                         | <b>14.0</b>         | -                         | -                                | -                          | -                    |
| <b>J1: Victoria Road / Marine Road / Bastion Road Prestatyn</b> | -              | -             | <b>83</b>             | <b>175</b>                   | <b>0</b>                    | <b>7.9</b>            | <b>5.7</b>                   | <b>0.1</b>                         | <b>13.7</b>         | -                         | -                                | -                          | -                    |
| 1/1   | 247            | 247           | -                     | -                            | -                           | 1.2                   | 0.3                          | -                                  | 1.5                 | 21.1                      | 3.7                              | 0.3                        | 4.0                  |
| 1/2   | 234            | 234           | 59                    | 175                          | 0                           | 1.1                   | 0.9                          | 0.1                                | 2.1                 | 33.0                      | 3.4                              | 0.9                        | 4.4                  |
| 2/1   | 118            | 118           | -                     | -                            | -                           | 1.1                   | 0.8                          | -                                  | 1.8                 | 55.9                      | 2.3                              | 0.8                        | 3.1                  |
| 2/2   | 51             | 51            | -                     | -                            | -                           | 0.4                   | 0.2                          | -                                  | 0.6                 | 42.9                      | 1.0                              | 0.2                        | 1.1                  |
| 3/1   | 308            | 308           | -                     | -                            | -                           | 2.3                   | 1.8                          | -                                  | 4.1                 | 48.2                      | 6.0                              | 1.8                        | 7.8                  |
| 3/2   | 24             | 24            | 24                    | 0                            | 0                           | 0.2                   | 0.0                          | 0.0                                | 0.2                 | 28.8                      | 0.4                              | 0.0                        | 0.4                  |
| 4/1   | 145            | 145           | -                     | -                            | -                           | 1.3                   | 1.5                          | -                                  | 2.8                 | 69.8                      | 2.9                              | 1.5                        | 4.4                  |
| 4/2   | 42             | 42            | -                     | -                            | -                           | 0.4                   | 0.1                          | -                                  | 0.5                 | 41.8                      | 0.8                              | 0.1                        | 0.9                  |
| 5/1   | 340            | 340           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 179            | 179           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| 7/1   | 263            | 263           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 8/1   | 387            | 387           | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |
| <b>J2: Marine Road / Site Access</b>                            | -              | -             | <b>77</b>             | <b>0</b>                     | <b>0</b>                    | <b>0.0</b>            | <b>0.3</b>                   | <b>0.0</b>                         | <b>0.3</b>          | -                         | -                                | -                          | -                    |
| 1/1   | 262            | 262           | 27                    | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.2                       | 0.0                              | 0.1                        | 0.1                  |
| 2/1   | 9              | 9             | 9                     | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 2.1                       | 0.0                              | 0.0                        | 0.0                  |
| 3/1   | 294            | 294           | 2                     | 0                            | 0                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.1                       | 0.0                              | 0.1                        | 0.1                  |
| 4/1   | 39             | 39            | 39                    | 0                            | 0                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 1.8                       | 0.0                              | 0.0                        | 0.0                  |
| 5/1   | 325            | 325           | -                     | -                            | -                           | 0.0                   | 0.1                          | -                                  | 0.1                 | 1.3                       | 0.0                              | 0.1                        | 0.1                  |
| 5/2   | 8              | 8             | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.9                       | 0.0                              | 0.0                        | 0.0                  |
| 6/1   | 16             | 16            | -                     | -                            | -                           | 0.0                   | 0.0                          | -                                  | 0.0                 | 0.0                       | 0.0                              | 0.0                        | 0.0                  |

Full Input Data And Results

|     |     |                              |   |      |  |     |       |                 |     |     |     |     |     |
|-----|-----|------------------------------|---|------|--|-----|-------|-----------------|-----|-----|-----|-----|-----|
| 7/1 | 228 | 228                          | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 8/1 | 27  | 27                           | - | -    | -  | 0.0 | 0.0   | -               | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| C1  |     | PRC for Signalled Lanes (%): |   | 14.2 | Total Delay for Signalled Lanes (pcuHr): |     | 13.65 | Cycle Time (s): |     | 75  |     |     |     |
|     |     | PRC Over All Lanes (%):      |   | 14.2 | Total Delay Over All Lanes(pcuHr):       |     | 14.04 |                 |     |     |     |     |     |