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Units 3 and 4, East Retail Park, Newport

Newport Lux S.A.R.L

Technical Note 03: Traffic Impact Assessment

May 2024





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1 Introduction

Brief

- 1.1 Rappor has been instructed by Newport Lux S.A.R.L to prepare a Technical Note (TN03) in support of a planning application concerning the proposed use of Units 3 and 4 at East Retail Park, Newport, as a discount foodstore (Class E).
- 1.2 Planning permission (Reference: 24/0066) is sought for the amalgamation and conversion of Units 3 and 4, which currently operate on a non-food retail basis (comprising 2,638sq.m Gross Floor Area (GFA)), to a future discount foodstore, with a reduced GFA of 2,016sq.m.

Application Context & Stakeholder Correspondence

- 1.3 Rappor initially produced a Transport Statement (TS) and Travel Plan (TP) in January 2024 in support of this application, both of which were reviewed by the Local Highway Authority (LHA), Newport City Council (NCC). A consultation response was provided in February 2024, which is attached in **Appendix A** for ease of reference.
- 1.4 Following receipt of the February 2024 consultee response, two Technical Notes (01 & 02) were prepared to address the matters raised by NCC. Given the reports only featured minor differences, the consultation responses were broadly similar. The latest consultee responses provided by NCC in April 2024 are attached in **Appendix B** for ease of reference.
- 1.5 A summary of the pertinent highways and transportation comments detailed within the April 2024 consultee response, which are to be addressed within this report, is provided below:
 - a) The development traffic assignment and distribution onto the adjacent highway network should be revised to route entirely via the Docks Way / A48 / Household Recycling Centre Roundabout Junction; and
 - b) The Traffic Impact Assessment (TIA), Traffic Flow Diagrams (TFDs), and PICADY Models should be updated to ensure consistency in summation across all forms of analysis (amending discrepancies resulting from cumulative rounding), in addition to accounting for different years of assessment and background traffic scenarios.
- 1.6 It should be noted that other issues raised within the April 2024 consultee response - concerning the quantum of donor sites used to inform the TIA and the associated trip type classification / reduction percentage - shall be dealt with separately under a forthcoming TN (04).
- 1.7 This approach, to initially address matters considered to be more 'minor' associated with the TIA of the development proposal, before providing updated analysis to support the matters considered to be more significant, was suggested by NCC in recent email correspondence, which is provided in **Appendix C** for ease of reference.



Scope of Report

- 1.8 Given the content of the consultee response, this TN shall feature the following analysis / information to demonstrate the suitability of the development proposal:
- a) Revised development traffic assignment and distribution assessment;
 - b) Revised TIA, TFDs, and PICADY Assessment of the East Retail Park Access / Docks Way priority junction; and
 - c) Provide detail on a mitigation strategy to further reduce any future traffic impact of the development proposal on the local highway network.



2 Technical Response

Development Traffic Assignment

LHA Consultee Response

- 2.1 With regard to the development traffic assignment and distribution methodology detailed in TN02, the LHA provided the following comments:

“For the purposes of this application, we would be content to assume all diverted trips are on the A48. This is unlikely to be accurate, but is reasonably robust for the purposes of assessing these three junctions.

The current assessment only accounts for the new trips. With respect to the access junction, changes in right in / right out movements will be critical and these must all be accounted for...

Impacts at West Way / Docks Way Junction should also be considered in more detail.”

Rappor Technical Response: Development Traffic Assignment & Distribution

- 2.2 In response to the above, the development traffic assignment has been revised with 100% of the forecast trip attraction diverted to route via Docks Way / A48 / Household Recycling Centre Roundabout Junction. As per the commentary above, this does not necessarily present a realistic representation of future traffic movements; however, it is considered to provide a worst-case scenario and thus any future impact on the adjacent roundabout junction, in real terms, shall not be as significant.
- 2.3 For avoidance of doubt, the quantum of vehicle movements routing via each of the three junctions located in proximity to the application site are provided below in **Table 2.1**, whilst the established vehicle trip attraction profile – which is based on 58.1% of all trips being ‘new’ to the network’ – has been retained to ensure an element of consistency with the previously submitted assessment (TN02).

Period	1: East Retail Park Access / Docks Way Priority Junction			2: Docks Way / A48 / Household Recycling Centre Roundabout Junction			3: West Way / Docks Way Priority Junction		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
Weekday AM Peak (08:00 to 09:00)	33	23	56	33	23	56	0	0	0
Weekday PM Peak (17:00 to 18:00)	54	58	112	54	58	112	0	0	0
Saturday Peak (14:00 to 15:00)	71	67	138	71	67	138	0	0	0

Table 2.1: Summary of revised traffic assignment and distribution onto adjacent network



- 2.4 **Table 2.1** indicates that 100% of vehicle trips shall route via the East Retail Park Access / Docks Way priority junction and the Docks Way / A48 / Household Recycling Centre Roundabout Junction. On this basis, as requested by NCC, no vehicle trips shall be considered to route via the West Way / Docks Way Priority Junction by virtue of its location to the east of these junctions. Therefore, no further impact of this junction shall be assessed within this analysis.

Assessment Years & TEMPro Factors

LHA Consultee Response

- 2.5 In relation to the factors obtained from the TEMPro Database and their application in future scenario years of assessment detailed in the previous TIA in TN02, the LHA provided the following comments:

“Firstly the “horizon year” is not helpful it is a vague/random year of assessment. Given potential impacts on a strategic route a 10-year assessment could be appropriate. However, as the main concerns are not on that link we would expect opening year plus 5 so we should be looking at 2025 and 2030. What weight the assessments are given can be discussed further, but this is the level of information needed to understand the potential implications.

Furthermore, the growth factors adopted are not accepted as appropriate or realistic. We note the use of “behavioural change” data. This is based on extrapolation of 2011 to 2016 data and has assumptions regarding trip decline and licence ownership etc that are not appropriate here/now. We would suggest that “High economy” or “regional” core are more appropriate. This area is seeing considerable new development and we have adopted Regional for nearby developments impacting the A48. This will of course result in background growth, so we will not need to consider committed development flows in detail.

We do not accept that network flows will reduce locally/on the A48, even marginally. Given the volume of base flows this will have little effect at the access, but it must be corrected for the assessment to be consistent with adjacent applications and to be accepted.”

Rappor Technical Response: Updated Assessment Years and TEMPro Factors

- 2.6 In response to the above, the years of assessment have been revised to feature an ‘Opening Year’ of 2025 and a ‘Horizon Year’ of 2030, in order to provide a robust assessment. Whilst with regard to TEMPro factors, alternatives have been obtained from the TEMPro database, with ‘Regional’ growth factors selected in accordance with other methodologies in support of nearby development also considered to impact the A48.
- 2.7 A summary of the assessment scenarios – accounting for revised years of analysis and growth factors – is provided in **Table 2.2**, whilst outputs from the TEMPro database are provided in **Appendix D**.

Period	Regional: Newport 018	
	2024 to 2025	2025 to 2030
Weekday AM Peak	1.0063	1.0597
Weekday PM Peak	1.0058	1.0578
Sat All Day	1.0058	1.0571

Table 2.2: Summary of revised assessment scenario periods and growth factors



Percentage Impact Assessment & Junction Capacity Assessments

LHA Consultee Response

- 2.8 In relation to the percentage impact assessment, TFDs, and associated Junction Capacity Assessment (JCA) detailed in the previous TIA in TN02, the LHA provided the following comments:

“Percentage impacts and junction models will also need to be amended and resubmitted, before we can comment on the acceptability of the impacts.”

Rappor Technical Response: Revised Percentage Impact Assessment

- 2.9 In response to the above, following the re-assignment of the forecast trip attraction detailed in **Table 2.1** and confirmation of updated assessment scenarios and traffic growth factors in **Table 2.2**, a revised percentage impact assessment on the adjacent highway network has been quantified in **Table 2.3**. As previously stated, this forecast impact provides a worst-case scenario and concentrated impact of right turn movements in / left out of the East Retail Park Access / Docks Way Priority Junction and routing via the Docks Way / A48 / Household Recycling Centre Roundabout junction.

Period	Forecast Trip Attraction	1: East Retail Park Access / Docks Way Priority Junction			2: Docks Way / A48 / Household Recycling Centre Roundabout Junction		
		Traffic Flows	Combined Flows	% Increase	Traffic Flows	Combined Flows	% Increase
Opening Year: 2025							
Weekday AM Peak (08:00 to 09:00)	56	1,088	1,144	5.1%	2,847	2,903	2.0%
Weekday PM Peak (17:00 to 18:00)	111	1,493	1,604	7.5%	2,970	3,081	3.7%
Saturday Peak (14:00 to 15:00)	139	1,872	2,010	7.4%	3,029	3,168	4.6%
Horizon Year: 2030							
Weekday AM Peak (08:00 to 09:00)	56	1,153	1,209	4.6%	3,017	3,073	1.9%
Weekday PM Peak (17:00 to 18:00)	111	1,579	1,690	6.6%	3,142	3,253	3.6%
Saturday Peak (14:00 to 15:00)	139	1,979	2,117	6.6%	3,202	3,341	4.4%

Table 2.3: Summary of revised percentage impact assessment of development traffic in 2025 and 2030, accounting for 'Regional' background traffic growth

- 2.10 **Table 2.3** indicates that the East Retail Park Access / Docks Way Priority Junction shall be associated with an increase of 5.1%, 7.5%, and 7.4% during the 2025 Weekday AM, Weekday PM, and Saturday Network Peaks, respectively. Whilst the Docks Way / A48 / Household Recycling Centre Roundabout Junction shall be associated with an increase of 2.0%, 3.7%, and 4.6% during the 2025 Weekday AM, Weekday PM, and Saturday Network Peaks, respectively.



- 2.11 Furthermore, it indicates that the East Retail Park Access / Docks Way Priority Junction shall be associated with an increase of 4.6%, 6.6%, and 6.6% during the 2030 Weekday AM, Weekday PM, and Saturday Network Peaks, respectively. Whilst the Docks Way / A48 / Household Recycling Centre Roundabout Junction shall be associated with an increase of 1.9%, 3.6%, and 4.4% during the 2030 Weekday AM, Weekday PM, and Saturday Network Peaks, respectively.
- 2.12 On this basis, it is not considered that the forecast traffic impact of the development proposal on the local highway network would be detrimental to the existing safe and suitable operation of the local highway network. Especially when considering that the analysis is based on a worst-case scenario of traffic assignment via the Docks Way / A48 / Household Recycling Centre Roundabout Junction, whereas in reality a number of vehicle movements shall instead route to / from east of the site along Docks Way. However, notwithstanding these initial conclusions, further assessment of the East Retail Park Access / Docks Way Priority Junction shall be undertaken, based on the revised assessment scenarios and background traffic growth.

Rappor Technical Response: Revised Junction Capacity Assessment

- 2.13 In further response to the consultee comment above, a revised JCA of the East Retail Park Access / Docks Way Priority Junction has been undertaken, which accounts for the aforementioned alterations to the assessment scenarios and background traffic conditions.
- 2.14 In order to illustrate wider traffic movements / conditions, updated TFDs have been provided, which feature a range of summation and formatting amendments to ensure a consistency across this supporting commentary / analysis.
- 2.15 The full TFD analysis is provided in **Appendix E** of this report.
- 2.16 For avoidance of doubt, a summary of the assessment scenarios, which account for the forecast trip attraction and future traffic conditions five years beyond the current year of assessment - during both the observed weekday peak periods and Saturday development operational peak period - is provided below.
- a) Open Year Traffic Flows (2025);
 - b) Horizon Traffic Flows (2030); and
 - c) Horizon Traffic Flows (2030) + Forecast Trip Attraction.
- 2.17 As per the initial analysis, assessment of the East Retail Park Access has been undertaken using the PICADY module within the TRL software package JUNCTIONS 10, which is an appropriate tool to assess the impact of the development on the local highway network.
- 2.18 A Geometric Junction Plan has been prepared to demonstrate the measurements used to inform the assessment and is provided in **Appendix F** of this report, whilst the traffic survey data is provided in **Appendix G**.

Weekday Results

- 2.19 NB: the traffic flows have been modelled over a 90-minute “peak within a peak” time period given the variance in traffic flows across each 15-minute segment of the identified peak network period. This is considered standard industry practice and the default data input parameter within this modelling software.



2.20 The results of the model under the loading of the 2025 and 2030 weekday traffic flow scenarios for the East Retail Park Access / Docks Way Priority Junction are presented in **Table 2.4**, whilst the full PICADY Output Report is provided in **Appendix H**.

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Existing junction configuration - 2025 Opening Year Traffic Flows						
Stream B-C	0.1	7.67	0.10	0.5	13.12	0.32
Stream B-A	0.2	15.32	0.13	1.3	33.43	0.57
Stream C-AB	0.1	6.92	0.11	0.4	8.94	0.29
Existing junction configuration - 2030 Horizon Traffic Flows						
Stream B-C	0.1	7.88	0.11	0.6	15.50	0.37
Stream B-A	0.2	16.30	0.15	1.7	42.16	0.64
Stream C-AB	0.1	7.08	0.11	0.5	9.37	0.31
Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic						
Stream B-C	0.2	8.06	0.16	1.5	28.01	0.61
Stream B-A	0.2	17.91	0.16	2.7	70.15	0.76
Stream C-AB	0.2	7.62	0.18	0.7	11.00	0.42

Table 2.4: Summary of PICADY weekday assessment (East Retail Park Access / Docks Way Priority Junction)

- 2.21 **Table 2.4** indicates that the East Retail Park Access / Docks Way priority junction shall operate well within its theoretical capacity during the 'Opening Year 2025' AM and PM peak periods, with minimal queuing and delays. This junction performance is reflective of the observed traffic conditions / queueing and is therefore considered a suitable baseline for analysis of future years / scenarios.
- 2.22 During the 'Horizon Year 2030' the junction is forecast to continue operating within its theoretical capacity during the AM and PM peak periods, with minimal queuing and delays only occurring on the minor arm of the junction.
- 2.23 With the introduction of the development traffic in the 'Horizon Year 2030 + Development Traffic', the junction is forecast to continue to operate within capacity with no material changes to the anticipated level of queuing or vehicle delays when compared to the 'Horizon Year 2030' scenario.
- 2.24 Further analysis of these results is provided later in this section.

Saturday Peak Period Results

- 2.25 NB: the traffic flows have been modelled using a flat profile, given the similarity in traffic flows across each 15-minute segment of the identified peak network period. This is considered standard industry practice when such traffic conditions are observed and a suitable approach to calculate the junction performance within this modelling software.
- 2.26 The results of the PICADY model under the loading of the 2025 and 2030 Saturday traffic flow scenarios for the East Retail Park Access / Docks Way priority junction are presented in **Table 2.5**, whilst the full PICADY Output Report is provided in **Appendix I**.



Saturday Operational Peak			
	Queue (Veh)	Delay (s)	RFC
Existing junction configuration - 2025 Opening Year Traffic Flows			
Stream B-C	10.0	126.23	0.95
Stream B-A	7.0	161.49	0.92
Stream C-AB	0.8	11.04	0.44
Existing junction configuration - 2030 Horizon Traffic Flows			
Stream B-C	26.1	303.92	1.06
Stream B-A	15.6	332.09	1.04
Stream C-AB	0.9	11.80	0.47
Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic			
Stream B-C	73.9	756.73	1.23
Stream B-A	34.6	781.43	1.21
Stream C-AB	1.5	15.02	0.59

Table 2.5: Summary of PICADY Saturday assessment (East Retail Park Access / Docks Way priority junction)

- 2.27 **Table 2.5** indicates that the East Retail Park Access / Docks Way shall generally operate within its theoretical capacity during the 'Opening Year 2025' Saturday peak period; however, it calculates a degree of queuing and associated delays on the minor arm, within East Retail Park, consequently increasing the RFC to more than 0.85, albeit less than 1.0. These results have been assessed against the traffic / queue length survey data and it should be acknowledged that on-site traffic conditions featured less vehicles queueing on the minor arm upon exiting East Retail Park. Therefore, the following results should be treated with a degree of caution when determining the impact of development traffic in the future assessment scenario.
- 2.28 During the 'Horizon Year 2030', the junction is forecast operate on a similar basis, with a degree of queuing, however, with increased associated delays on the minor arm within East Retail Park consequently increasing the RFC to more 1.0.
- 2.29 With the introduction of the development traffic in the 'Horizon Year 2030 + Development Traffic', the junction is forecast to operate over its theoretical capacity, with increased vehicle queueing and associated delays on the minor arm within East Retail Park consequently increasing the RFC to above 1.0.
- 2.30 Further analysis of these results is provided in the following section.

Analysis of Results

- 2.31 It should be reiterated that validation of the 'Base Year 2025' scenario has been undertaken for both the Weekday and Saturday peak periods. This scrutiny of traffic flows / conditions indicates that the existing junction operates suitably, with queueing and associated delays not strictly reflective of those calculated to take place during the assessment periods. In acknowledging this partial misrepresentation of traffic conditions concerning the minor arm, recognition should be afforded to the inherent degree of limitation within desktop junction modelling assessments, as stated within the Junction10 User Guide: *"when the RFC is close to 1.0, this randomness is most noticeable and means that vehicles may randomly bunch up and cause momentary queueing, which results in the throughput being less than the theoretically available capacity."* Therefore, it is likely that the calculated queueing - and thus associated delays and increase to the RFC - may be overestimated within the model



due to the minor arm of the junction operating over its theoretical capacity, with an RFC exceeding 0.85 and close to / exceeding 1.0.

- 2.32 Notwithstanding the above, it should also be noted that the capacity / operational concerns calculated by the PICADY model are localised to the minor arm of the junction (i.e. East Retail Park East Retail Park Access) and therefore located off the main arterial route of Docks Way, thus, containing any future queueing / delays and minimising the off-site impact of the proposed development.
- 2.33 On the basis of the above analysis and in the context of the National Planning Policy Framework (NPPF), the forecast trip attraction of the development proposal cannot be considered to represent 'a severe impact on highway safety or result in a material, cumulative impact on the operation of the local highway network.'



3 Proposed Mitigation & Additional Analysis

- 3.1 Notwithstanding the conclusions drawn in **Section 2**, it may be acknowledged that the JCA forecasts some operational issues, albeit localised to the minor arm of the East Retail Park Access Junction during the Saturday Operational Peak Period. Therefore, mitigation has been proposed which would seek to reduce these concerns and thus further ensure the safe and suitable operation of the local road network.
- 3.2 A summary of the proposed mitigation is provided below, in addition to a separate JCA that accounts for the improvements to the East Retail Park / Docks Way Access Junction.

Proposed Mitigation: East Retail Park Access Junction Improvements

- 3.3 In order to increase the operational capacity of the East Retail Park / Docks Way Access Junction minor arm, improvements in the form of localised widening to allow for a two-lane approach are proposed. To accommodate this, the existing refuge island shall be relocated to a more central location, whilst also being upgraded to ensure it is permeable for both pedestrian and cyclist use, in accordance with prevailing design guidance.
- 3.4 The proposed mitigation shall comprise a minimum lane width of 2.9m (entry lane) and 2.7m (exit lane) and feature a 2.5m x 2.5m hardstanding central refuge area to accommodate active travel users. Furthermore, the relocation of the refuge island shall ensure the provision is equidistant for users travelling east and westbound across the junction and along Docks Way.
- 3.5 Consideration shall be afforded to how these proposed works shall link to the existing provision within the wider East Retail Park Internal Road Network to ensure a safe and suitable arrangement, in highways and transportation terms.
- 3.6 Technical specification would be provided post-planning and secured by a suitably worded planning condition and highway works agreement. However, at this stage, comments on the principle and rationale of design are welcomed by NCC.
- 3.7 The Proposed Site Access Mitigation Plan is provided in **Appendix J** of this report, whilst an Access Arrangement Plan – detailing the extent of emerging visibility and swept path analysis of a large car – is provided in **Appendix K**.

Junction Capacity Assessment: Mitigation Scenario

- 3.8 For avoidance of doubt, a summary of the assessment scenarios, which account for the forecast trip attraction and future traffic conditions five years beyond the current year of assessment - during both the observed weekday peak periods and Saturday development operational peak period - is provided below.
- a) Open Year Traffic Flows (2025);
 - b) Horizon Traffic Flows (2030); and
 - c) Horizon Traffic Flows (2030) + Forecast Trip Attraction.
- 3.9 As per the initial analysis, assessment of the East Retail Park Access has been undertaken using the PICADY module within the TRL software package JUNCTIONS 10, which is an appropriate tool to assess the impact of the development on the local highway network.



- 3.10 A Geometric Junction Plan has been prepared to demonstrate the measurements used to inform the mitigation scenario assessment, based on the proposed junction configuration, is provided in **Appendix L** of this report.

Weekday Results

- 3.11 NB: the traffic flows have been modelled over a 90-minute “peak within a peak” time period given the variance in traffic flows across each 15-minute segment of the identified peak network period. This is considered standard industry practice and the default data input parameter within this modelling software.
- 3.12 The results of the model under the loading of the 2025 and 2030 weekday traffic flow mitigation scenarios for the East Retail Park Access / Docks Way Priority Junction are presented in **Table 2.6**, whilst the full PICADY Output Report is provided in **Appendix M**.

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows						
Stream B-C	0.1	7.35	0.10	0.4	10.32	0.27
Stream B-A	0.2	15.07	0.13	1.4	35.59	0.59
Stream C-AB	0.1	6.92	0.11	0.4	8.94	0.29
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows						
Stream B-C	0.1	7.55	0.11	0.4	11.08	0.30
Stream B-A	0.2	16.03	0.15	1.8	44.82	0.66
Stream C-AB	0.1	7.08	0.11	0.5	9.37	0.31
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic						
Stream B-C	0.2	7.98	0.15	0.8	14.32	0.44
Stream B-A	0.2	16.87	0.15	2.3	57.63	0.72
Stream C-AB	0.2	7.62	0.18	0.7	11.00	0.42

Table 2.6: Summary of PICADY weekday mitigation scenario assessment (East Retail Park Access / Docks Way Priority Junction)

- 3.13 **Table 2.6** indicates that the proposed East Retail Park Access / Docks Way priority junction configuration shall operate within its theoretical capacity during the ‘Opening Year 2025’ AM and PM peak periods, with minimal queuing and delays. This junction performance is reflective of the observed traffic conditions / queueing and is therefore considered a suitable baseline for analysis of future years / scenarios.
- 3.14 During the ‘Horizon Year 2030’ the proposed junction configuration is forecast to continue operating within its theoretical capacity during the AM and PM peak periods, with minimal queuing and delays only occurring on the minor arm of the junction.
- 3.15 With the introduction of the development traffic in the ‘Horizon Year 2030 + Development Traffic’, the proposed junction configuration is forecast to continue to operate within capacity with no material changes to the anticipated level of queuing or vehicle delays when compared to the ‘Horizon Year 2030’ scenario.
- 3.16 Further analysis of these results is provided later in this section.



Saturday Peak Period Results

- 3.17 NB: the traffic flows have been modelled using a flat profile, given the similarity in traffic flows across each 15-minute segment of the identified peak network period. This is considered standard industry practice when such traffic conditions are observed and a suitable approach to calculate the junction performance within this modelling software.

The results of the PICADY model under the loading of the 2025 and 2030 Saturday traffic flow scenarios for the East Retail Park Access / Docks Way priority junction are presented in **Table 2.7**, whilst the full PICADY Output Report is provided in **Appendix M**.

	Saturday Operational Peak		
	Queue (Veh)	Delay (s)	RFC
Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows			
Stream B-C	1.7	20.98	0.64
Stream B-A	2.3	49.98	0.70
Stream C-AB	0.8	11.89	0.46
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows			
Stream B-C	2.3	26.34	0.70
Stream B-A	3.4	71.54	0.79
Stream C-AB	1.0	12.76	0.49
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic			
Stream B-C	6.7	66.64	0.89
Stream B-A	5.7	122.71	0.88
Stream C-AB	1.7	16.52	0.62

Table 2.7: Summary of PICADY Saturday mitigation scenario assessment (East Retail Park Access / Docks Way priority junction)

- 3.18 **Table 2.7** indicates that the proposed East Retail Park Access / Docks Way priority junction configuration shall operate well within its theoretical capacity during the 'Opening Year 2025' Saturday peak period, with minimal queuing and delays overall. This junction performance is reflective of the observed traffic conditions / queueing and is therefore considered a suitable baseline for analysis of future years / scenarios.
- 3.19 During the 'Horizon Year 2030' the proposed junction configuration is forecast to continue operating within its theoretical capacity during the Saturday peak period, with some delays only occurring on the minor arm of the junction.
- 3.20 With the introduction of the development traffic in the 'Horizon Year 2030 + Development Traffic', the proposed junction configuration is forecast to continue to operate within capacity; however, there shall be an increase in delays and the RFC to marginally above 0.85, albeit less than 1.0. Although, these are localised to the minor arm of the junction.
- 3.21 Further analysis of these results is provided in the following section.

Analysis of Results

- 3.22 In order to determine the benefits of the proposed mitigation and its associated impact on junction performance, a comparison of the 'Horizon Year 2030 + Development Trips' scenarios has been undertaken between the initial assessment (detailed in **Section 2**) and the subsequent mitigation scenario.



- 3.23 During the weekday AM peak period, the proposed scheme is forecast to reduce delays, queuing, and RFC, albeit modestly, given the junction is anticipated to operate safely and suitably across both assessments. However, during the weekday PM peak period, the proposed scheme is forecast to reduce queuing by up to 7 vehicles, delays by up to c.14 seconds, and RFC by 0.17. This represents a material betterment and further ensures there shall be no internal operational issues within East Retail Park Internal Road Network.
- 3.24 Although, during the Saturday operational peak period, the proposed scheme is forecast to significantly improve the operation of the junction resulting in a reduction in queueing of 67 vehicles, delays by 690 seconds, and RFC by 0.34. Compared to the current junction configuration, this represents a significant improvement and ensures there shall be no internal operational issues within East Retail Park Internal Road Network.
- 3.25 As per the previous assessment detailed in **Section 2**, it should be acknowledged that the baseline data ('Opening Year 2025') does not strictly represent the observed traffic conditions recorded in the traffic survey (provided in **Appendix G**), and therefore the net differences in junction performance should be treated with a degree of caution. As previously referenced from the Junction10 User Guide: *"when the RFC is close to 1.0, this randomness is most noticeable and means that vehicles may randomly bunch up and cause momentary queueing, which results in the throughput being less than the theoretically available capacity."* Therefore, it is likely that the calculated queueing - and thus associated delays and increase to the RFC - may be overestimated within the model due to the minor arm of the junction operating over its theoretical capacity.
- 3.26 However, on the basis of the mitigation scenario results and in the context of the NPPF, even if more conservative estimations were to be applied to the proposed junction configuration performance given the inherent limitation of the junction model, the forecast trip attraction cannot be considered to represent 'a severe impact on highway safety or result in a material, cumulative impact on the operation of the local highway network.'
- 3.27 Following the conclusions of this additional mitigation scenario assessment, feedback from NCC on the proposed scheme and its forecast improvements, in highways and transportation terms, is welcomed.



4 Summary & Conclusion

Summary

- 4.1 Rappor has been instructed by Newport Lux S.A.R.L to prepare a TN in support of a planning application concerning the proposed use of Units 3 and 4 at East Retail Park, Newport, as a discount foodstore (Class E).
- 4.2 Planning permission (Reference: 24/0066) is sought for the amalgamation and conversion of Units 3 and 4, which currently operate on a non-food retail basis (comprising 2,638sq.m GFA), to a future discount foodstore, with a reduced GFA of 2,016sq.m.
- 4.3 This TN has been produced to respond to some of the LHA comments concerning the traffic impact analysis of the development proposal on the local highway network. On this basis, this TN has featured / undertaken the following:
 - a) Revised development traffic assignment and distribution assessment; and
 - b) Revised TIA, TFDs, and PICADY Assessment of the East Retail Park Access / Docks Way priority junction; and
 - c) Detailed a proposed mitigation scenario that features a reconfiguration of the existing East Retail Park Access / Docks Way priority junction to increase its capacity and thus minimise any future impact of the development proposal.

Conclusion

- 4.4 In conclusion, this TN has addressed the above-referenced comments / concerns raised by the LHA in relation to this scheme, with the revised and additional analysis indicating that the development proposal shall not result in an unacceptable impact on highway safety, or a severe cumulative impact on the adjacent highway network. On this basis, the LHA cannot cite highways reasons as grounds for refusal of this application.
- 4.5 Following the conclusions of this assessment, feedback from NCC on the proposed mitigation and its forecast improvements, in highways and transportation terms, is welcomed.

Appendix A: Newport County Council Consultee Response – February 2024

Highway Response

Ref: 24/0066

Date: 09/02/24

Case Officer: Ben Webster

PROPOSAL: REFURBISHMENT OF UNITS 3 & 4 (CLASS A1) COMPRISING EXTERNAL ALTERATIONS INCLUDING NEW SHOPFRONT AND LOBBY TO CREATE A SINGLE RETAIL UNIT, CREATION OF SERVICING PLATFORM TO REAR, CAR PARKING RECONFIGURATION, CYCLE STANDS AND TROLLEY BAYS, PLANT ENCLOSURE AND ASSOCIATED WORKS

SITE: Unit 3 & 4 28 East Retail Park Docks Way Newport South Wales

Highway Officer: Kevin Jackson

Highway recommendation:

Further assessment requested.

Highway Comments:

The change of use and servicing does not raise any safety or sustainability issues over the existing situation.

The TS demonstrates that the existing parking provision is excessive, and based on actual usage the change in disability provision is considered acceptable. Furthermore, Highways consider the proposed internal changes enhance pedestrian accessibility/safety within the site.

Changes in trip generation and the principles of multi-purpose and diverted trips are accepted and well established although the percentages adopted are considered optimistic and based only on two sites, so cannot be considered statistically reliable. Also, the diverted traffic still represents a change in traffic at the access and potentially adjacent junctions. It cannot be assumed that this traffic was going to be on Docks Way or even the A48.

Even with discounting of trips and the assumption that the operator would be a discount store (likely to generate less traffic than some nationals and share more customers with other businesses on the site). The conclusion is still that there would be an increase in traffic sufficient to warrant further assessment of the highway junctions.

Further information is therefore requested to assess the impacts of diverted/new traffic and to demonstrate that the access junction would continue to function satisfactorily during the peak hours (notably weekday evening peak). In addition, a percentage assessment of adjacent junction should be undertaken to confirm or otherwise the need to assess them. The junctions with West Way Road and the roundabout junction with the A48 should be considered. Subject to the results of the assessment it may be necessary to do a capacity assessment of these, but at this stage it is anticipated that a percentage impact assessment would be sufficient.

At this stage the only issue is the potential impact on adjacent junctions and the site access. This must be assessed in further detail to avoid an objection on the grounds of insufficient information.

Appendix B: Newport County Council Consultee Response – April 2024

Subject: FW: East Retail Park, Newport - 24/0066 and 24/0067

From: Jackson, Kevin (Traffic Transport & Development Engineer) <Kevin.Jackson@newport.gov.uk>
Sent: Monday, April 22, 2024 12:38 PM
To: Anna Vincent <anna.vincent@quod.com>
Cc: Hawkins, Grant (Senior Planning Officer) <Grant.Hawkins@newport.gov.uk>; Webster, Ben (Planning Officer) <Ben.Webster@newport.gov.uk>
Subject: RE: East Retail Park, Newport - 24/0066 and 24/0067

Hi Anna

I have already commented on the report. In essence it appears to have omissions/inconsistencies in it. That means I can't give it any weight at this stage. Unless this I addressed, I will have no option but to object, so I was expecting your consultant to review their work and issue an amended report. Until we agree the inputs, assumptions etc., we can't agree the output or what it means to planning.

I have set out some more detail of my concerns below to help you understand why the report has not been accepted.

The principle of diverted, multi-purpose and primary trips is well established. However, the devil is in the detail. Firstly, there are many studies /papers on the matter and there are many variables and details to consider. The report presented suggests that we should accept an average of only two sites. It suggests they are both like the case in point. However, there is a significant variance between them in terms of the data and even a cursory look at them on Google makes it clear they have significant differences to each other and the proposed site (in terms of catchments, competition and highway networks). So, whilst the principles are clear the actual percentages of trip types is not solidly established.

For example, the sample that appears most like the application site shows diverted trips at 67%, the other suggests 72%. If we were to rely on these, we would err towards the lower numbers. However, there are concerns with the surveys. It appears that there is double counting, as passengers and drivers are counted separately. I would expect many of these are the same trip and will distort the figures because those travelling by other modes are unlikely to be making dual purpose trips, but car owners are more likely to. Also, the questions are not specific enough to determine where trips are diverted from or what part of the network existing trips were on. (more later)

Other (more detailed and extensive) studies however, have concluded an average of 72% diverted trips with a range from 61 to 85%. They also show a correlation with the average daily flows on the adjacent roads, emphasising the need to use larger samples or closely matched sites. The key point is that none of this is precise, just "best guess/envelope". Therefore, at this stage we shouldn't get too bogged down in this. When we have agreed everything else, we can assess if a few percentage points may be critical or not. Then we can decide if further work is needed. Alternatively, it may be useful to run a model to demonstrate a worse case to show how sensitive the junction is. For now, however I'm not asking for that.

With reference to the tables/trip gen etc. The report suggests that only 54% of trips are new to the network. It is suggested then that the impact is only 54% of the predicted TRICS data. This is not the whole picture.

To assess the proposals thoroughly would require consideration of where the remaining trips are diverted from. This would involve gravity models and catchments to understand in detail (even then it would be an approximation). Clearly many potential customers would have gone to a different store (which could be anywhere), some may already be on the A48 or even Docks Way, but they still need to enter the store and still need to be re-assigned on the network.

For the purposes of this application, we would be content to assume all diverted trips are on the A48. This is unlikely to be accurate, but is reasonably robust for the purposes of assessing these three junctions.

The current assessment only accounts for the new trips. With respect to the access junction, changes in right in /right out movements will be critical and these must all be accounted for.

With regard to the A48 junction it is unlikely that the additional movements or re-assignment would be critical, but it should still be shown for completeness. It will inform the “screening” assessment better. A 5% increase overall or on any movement could be sufficient to trigger further assessments.

Impacts at West Way / Docks Way Junction should also be considered in more detail.

At this stage it appears unlikely further assessment would be needed, but we need to use the corrected assessment to make that judgement and properly understand the impacts at the access junction.

Whilst amending the flow calculations/diagrams to account for the additional trips we would ask that the following points are also considered.

Diagrams TFD03 / 04

These are illegible, please ensure they are checkable.

TFD 05/ 06.

Firstly the “horizon year” is not helpful it is a vague/random year of assessment. Given potential impacts on a strategic route a 10-year assessment could be appropriate. However, as the main concerns are not on that link we would expect opening year plus 5 so we should be looking at 2025 and 2030. What weight the assessments are given can be discussed further, but this is the level of information needed to understand the potential implications.

Furthermore, the growth factors adopted are not accepted as appropriate or realistic. We note the use of “behavioural change” data. This is based on extrapolation of 2011 to 2016 data and has assumptions regarding trip decline and licence ownership etc that are not appropriate here/now. We would suggest that “High economy” or “regional” core are more appropriate. This area is seeing considerable new development and we have adopted Regional for nearby developments impacting the A48. This will of course result in background growth, so we will not need to consider committed development flows in detail.

We do not accept that network flows will reduce locally/on the A48, even marginally. Given the volume of base flows this will have little effect at the access, but it must be corrected for the assessment to be consistent with adjacent applications and to be accepted.

TFD 07 and 08 These are not consistent with the tables. For example: AM peak arrivals are shown as 33 with 23 departures. The table (2.6) suggests 31 and 23 respectively and the re-assigned/ diverted trips are not shown. Similarly, the evening flows do not correspond with the tables and the differences are greater. This is critical to determining the impacts so needs to be complete and consistent. Furthermore, the rationale / methodology for diverted must be discussed in the text and shown/calculated separately to TFD7/8 then aggregated for clarity.

The survey questionnaire referenced in the report did not establish how closely existing trips were passing the developments and it wouldn't be directly transferable to the application site anyway. As suggested above, a through assessment would be very complex. We could accept that these are just diverted from the A48 to simplify and extricate matters.

TFD 09/10 these are incorrectly labelled and will need to be updated when the other amendments are completed.

Percentage impacts and junction models will also need to be amended and resubmitted, before we can comment on the acceptability of the impacts.

I trust the above is clear and helpful and that the way forward is clear, but I'd be happy to clarify any points directly if needed.

Should the amended reports/results leave any remaining uncertainty, we would welcome a meeting, but at this stage I could only repeat the comments above.

Regards
Kevin

Appendix C: Newport County Council Email Correspondence – April 2024

Matt Mauler

From: Jackson, Kevin (Traffic Transport & Development Engineer)
<Kevin.Jackson@newport.gov.uk>
Sent: 30 April 2024 08:00
To: Matt Mauler
Cc: Hawkins, Grant (Senior Planning Officer); Webster, Ben (Planning Officer)
Subject: RE: East Retail Park, Newport - Highways Matters

Hi Matt

We should involve planning officers in any correspondence, but sorry to say I have no availability this/next week anyway as I'm taking time off and it's a bank holiday too.

Could I therefore suggest that in the meantime, it would be worth you providing a "Technical Note" or rebuttal with your views and any updated flows /models as appropriate. I am just concerned that there are too many minor details / points of clarification to allow any focus or agreement on the more important questions. Most of them make little difference individually, but just muddy the waters. I feel this would be the quickest way to expedite matters under the circumstances. I don't think that agreeing technical parameters is a good use of the planners' time.

You should note that at this stage we are only asking for full information, not making any recommendations regarding refusal or approval. If you provide the information requested, we will at least know if there is a significant issue. Our debate can then be confined to whether or not there are grounds for refusal or conditions. There may not be, but we need an assessment we can be confident in, as we will have to present it to Members.

Regards
Kevin

From: Matt Mauler <Matthew.Mauler@Rappor.co.uk>
Sent: Monday, April 29, 2024 2:45 PM
To: Jackson, Kevin (Traffic Transport & Development Engineer) <Kevin.Jackson@newport.gov.uk>
Cc: Tim Slater <tim.slater@rappor.co.uk>; Nick Mansfield <Nick.Mansfield@rappor.co.uk>; Adrian Fox <adrian.fox@quod.com>
Subject: East Retail Park, Newport - Highways Matters

Good afternoon Kevin,

East Retail Park, Newport - 24/0066 and 24/0067

Thanks for your receptiveness on this application to date and providing a detailed review of our latest technical submission (attached for reference). To move matters forward, I would like to arrange a virtual meeting to discuss some key issues you have raised so we can ultimately address these concerns. Are you available any time this Thursday the 2nd of May? I think an hour would be more than sufficient to discuss what we consider the key issues you have raised. I can send on an agenda once we agree a date / time.

Thanks, and I look forward to a response at your earliest convenience.

Kind regards,

Matt Mauler (He / Him)
Senior Transport Planner
BSc (Hons), MSc, MCIHT

Appendix D: TEMPro Database Extracts – Regional Growth Factors



Scenario: Regional

Base Year: 2024

Future Year: 2025

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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

☒ Newport 018 (W02000364)

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
W02000364	Newport 018	1.0063



Scenario: **Regional**

Base Year: **2024**

Future Year: **2025**

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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

3. Select area type:

4. Select road type:

5. Select which area it serves:

☒ Newport 018 (W02000364)

☐ Urban

☐ Rural

☒ All

☐ Motorway

☐ Trunk

☒ A Road

☐ Minor

☐ All

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
W02000364	Newport 018	1.0058



Scenario: **Regional**

Base Year: **2024**

Future Year: **2025**

Time Period: **Saturdays (all times of 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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

3. Select area type:

4. Select road type:

5. Select which area it serves:

☒ Newport 018 (W02000364)

☐ Urban

☐ Rural

☐ All

☐ Motorway

☐ Trunk

☒ A Road

☐ Minor

☐ All

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
W02000364	Newport 018	1.0058



Scenario: Regional

Base Year: 2025

Future Year: 2030

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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

☒ Newport 018 (W02000364)

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
W02000364	Newport 018	1.0597



Scenario: Regional

Base Year: 2025

Future Year: 2030

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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

☒ Newport 018 (W02000364)

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
W02000364	Newport 018	1.0578



Scenario: **Regional**

Base Year: **2025**

Future Year: **2030**

Time Period: **Saturdays (all times of 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
NRTP2022 Vehicle-led Decarbonisation	2015	2060

2: Select Areas to make up the geographic region:

3. Select area type:

4. Select road type:

5. Select which area it serves:

☒ Newport 018 (W02000364)

☐ Urban

☐ Rural

☐ All

☐ Motorway

☐ Trunk

☒ A Road

☐ Minor

☐ All

☒ Region

☐ England

Calculate the adjusted local growth figure

Results

Level	Area	Local Growth Figure
W02000364	Newport 018	1.0571

Appendix E: Traffic Flow Diagrams



Client: Newport Lux S.A.R.L
Project: Unit 3 & 4, East Retail Park, Newport
Title: Traffic Flow Analysis
Project Code: 23-0603
Date: 31.05.2024

Prepared by: MM
Checked by: MM
Approved by: TS

TEMPro Growth Rates - Newport 018
Weekday AM - 2024 to 2025: 1.0063
Weekday PM - 2024 to 2025: 1.0058
Saturday (All Day) - 2024 to 2025: 1.0058
Weekday AM - 2025 to 2030: 1.0597
Weekday PM - 2025 to 2030: 1.0578
Saturday (All Day) - 2025 to 2030: 1.0571

Peak Periods
AM Network Peak: 08:15 to 09:15
PM Network Peak: 16:15 to 17:15
Saturday Development Peak: 12:30 to 13:30

Traffic Flow Diagrams
TFD_01 2024 Surveyed Traffic Flows - Weekday Network AM & PM Peak Periods
TFD_02 2024 Surveyed Traffic Flows - Saturday Development Peak Period
TFD_03 2024 Surveyed Traffic Flows - Weekday Network AM & PM Peak Periods Distribution %
TFD_04 2024 Surveyed Traffic Flows - Saturday Development Peak Period Distribution %
TFD_05 2025 Opening Year Traffic Flows - Weekday Network AM & PM Peak Periods
TFD_06 2025 Opening Year Traffic Flows - Saturday Development Peak Period
TFD_07 2030 Horizon Traffic Flows - Weekday Network AM & PM Peak Periods
TFD_08 2030 Horizon Traffic Flows - Saturday Peak Period
TFD_09 Forecast Trip Attraction - Weekday Network AM & PM Peak Periods
TFD_10 Forecast Trip Attraction - Saturday Peak Period
TFD_11 2030 Horizon Traffic Flows - Weekday Peak Periods + Forecast Trip Attraction
TFD_12 2030 Horizon Traffic Flows - Saturday Peak Period + Forecast Trip Attraction

Initial Trip Attraction Analysis

Trip Attraction - Existing Use

2638 sq.m

Time Period	Trip Rates			Trip Attraction		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak	0.117	0.015	0.132	3	0	3
PM Peak	0.599	0.673	1.272	16	18	34
Sat Peak	3.393	3.369	6.762	90	89	178

Trip Attraction - Proposed Use

2016 sq.m

Time Period	Trip Rates			Trip Attraction		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak	2.797	1.963	4.760	56	40	96
PM Peak	4.575	4.931	9.506	92	99	192
Sat Peak	6.079	5.762	11.841	123	116	239

Net Trips

Time Period				Trip Attraction		
	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak	N/a	N/a	N/a	53	39	92
PM Peak	N/a	N/a	N/a	76	82	158
Sat Peak	N/a	N/a	N/a	33	27	60

Notes

Trip Attraction between 08:00 and 09:00 and 17:00 to 18:00 have been used to inform weekday assessment scenario of 08:15 to 09:15 and 16:15 to 17:15 to provide a robust assessment
Trip Attraction between 11:00 and 12:00 has been used to inform Saturday assessment scenario of 12:30 to 13:30 to provide a robust assessment
Linked / primary trip reduction has been applied to existing use to provide a robust net trip impact assessment, notwithstanding its non discount food retail use

Revised Trip Attraction Analysis - Accounting for 58.1% New / Primary Trips

Trip Attraction - Existing Use

0.581

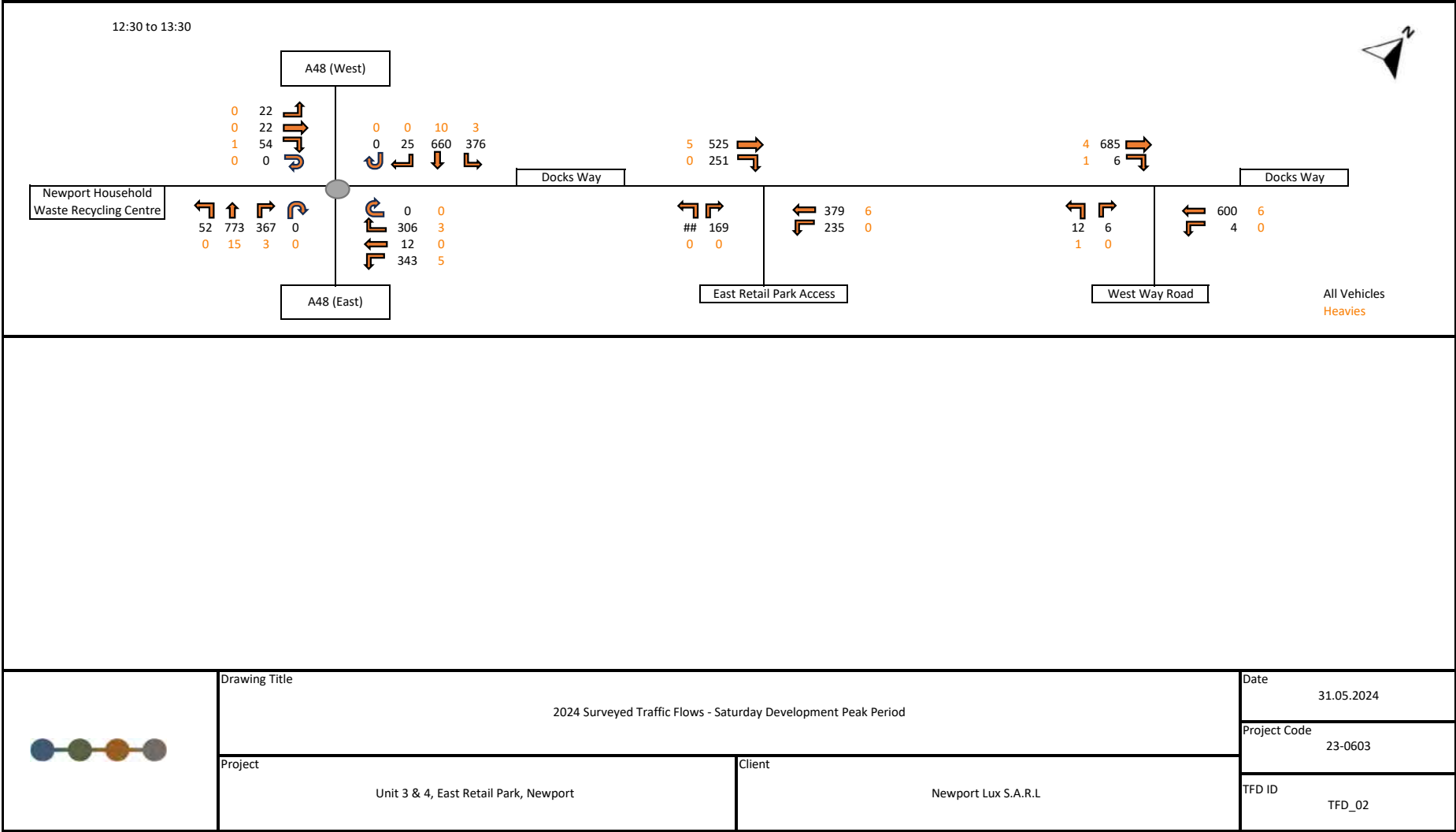
Time Period	Trip Attraction		
	Arrivals	Departures	Total
AM Peak	2	0	2
PM Peak	9	10	19
Sat Peak	52	52	104

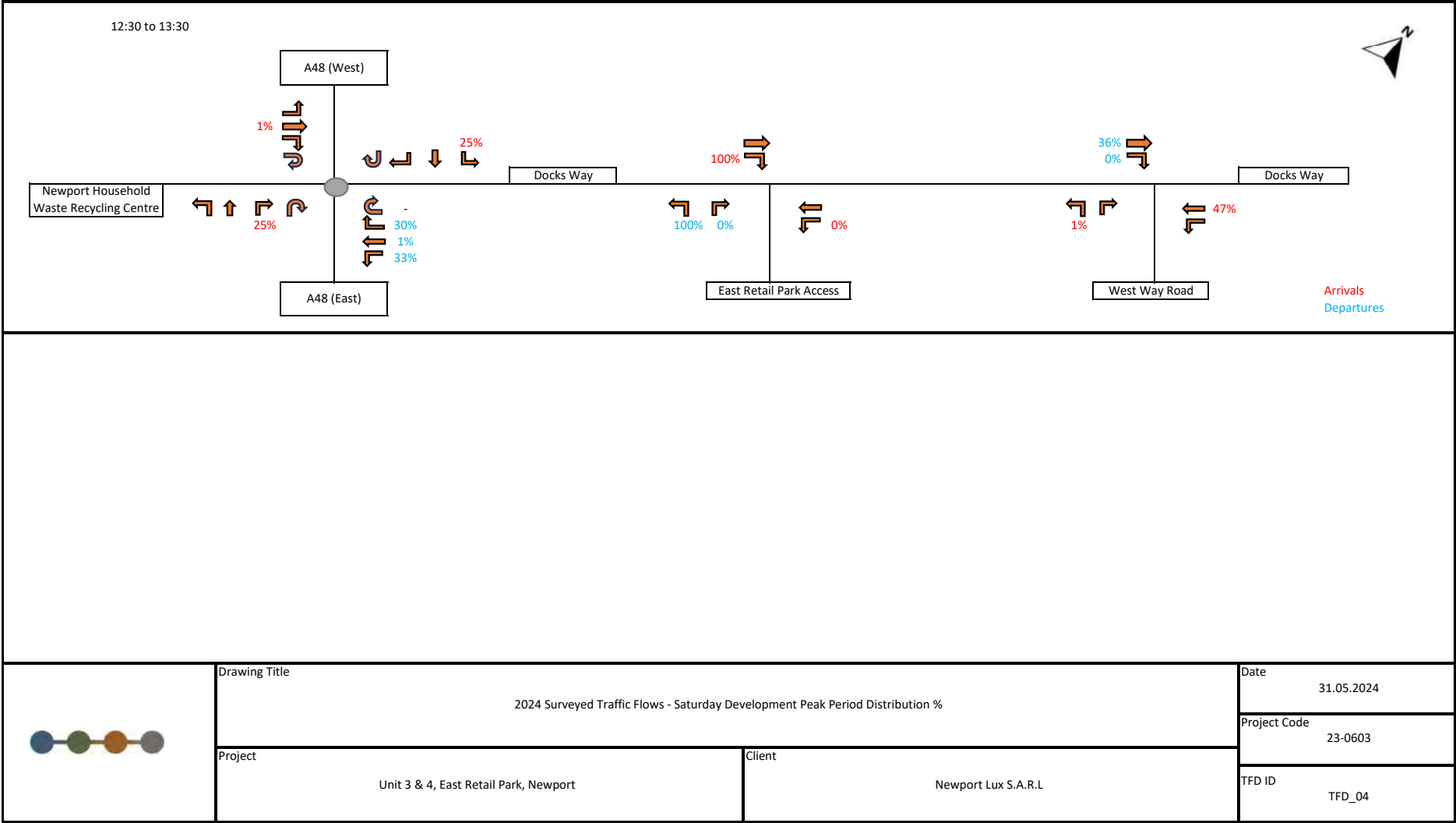
Trip Attraction - Proposed Use

Time Period	Trip Attraction		
	Arrivals	Departures	Total
AM Peak	33	23	56
PM Peak	54	58	112
Sat Peak	71	67	138

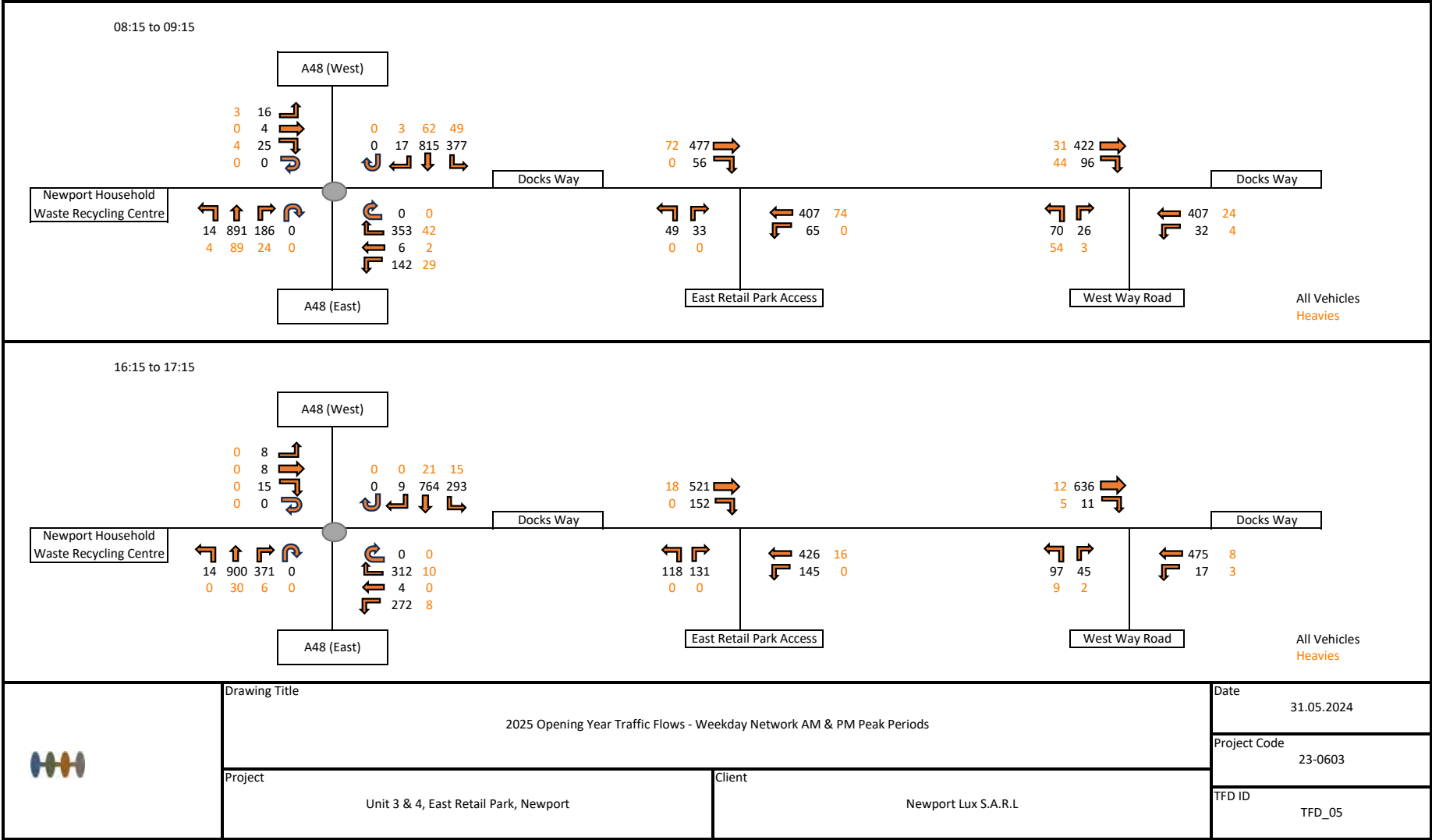
Net Trips

Time Period	Trip Attraction		
	Arrivals	Departures	Total
AM Peak	31	23	54
PM Peak	44	47	93
Sat Peak	19	15	34

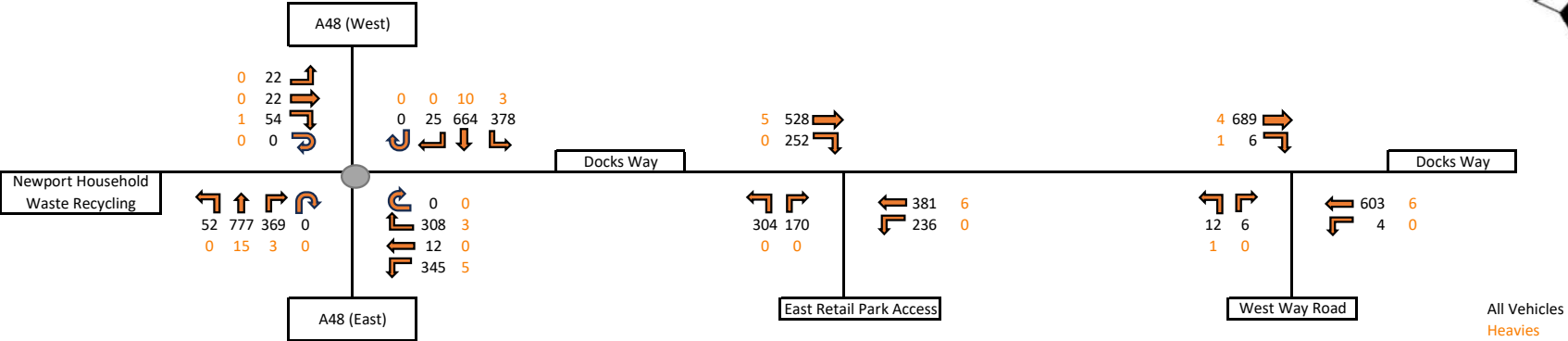




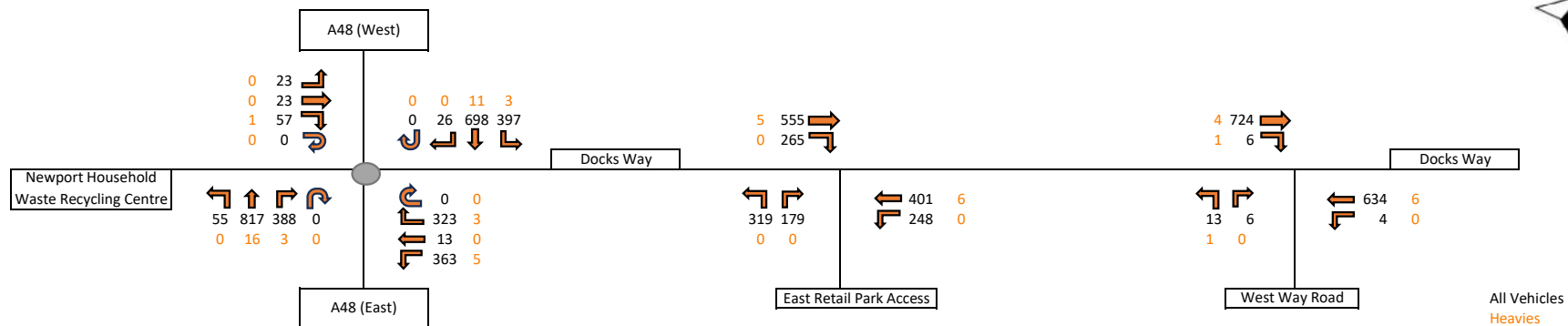
	Drawing Title		Date
	2024 Surveyed Traffic Flows - Saturday Development Peak Period Distribution %		31.05.2024
	Project		Project Code
Unit 3 & 4, East Retail Park, Newport		Client	23-0603
			TFD ID
			TFD_04



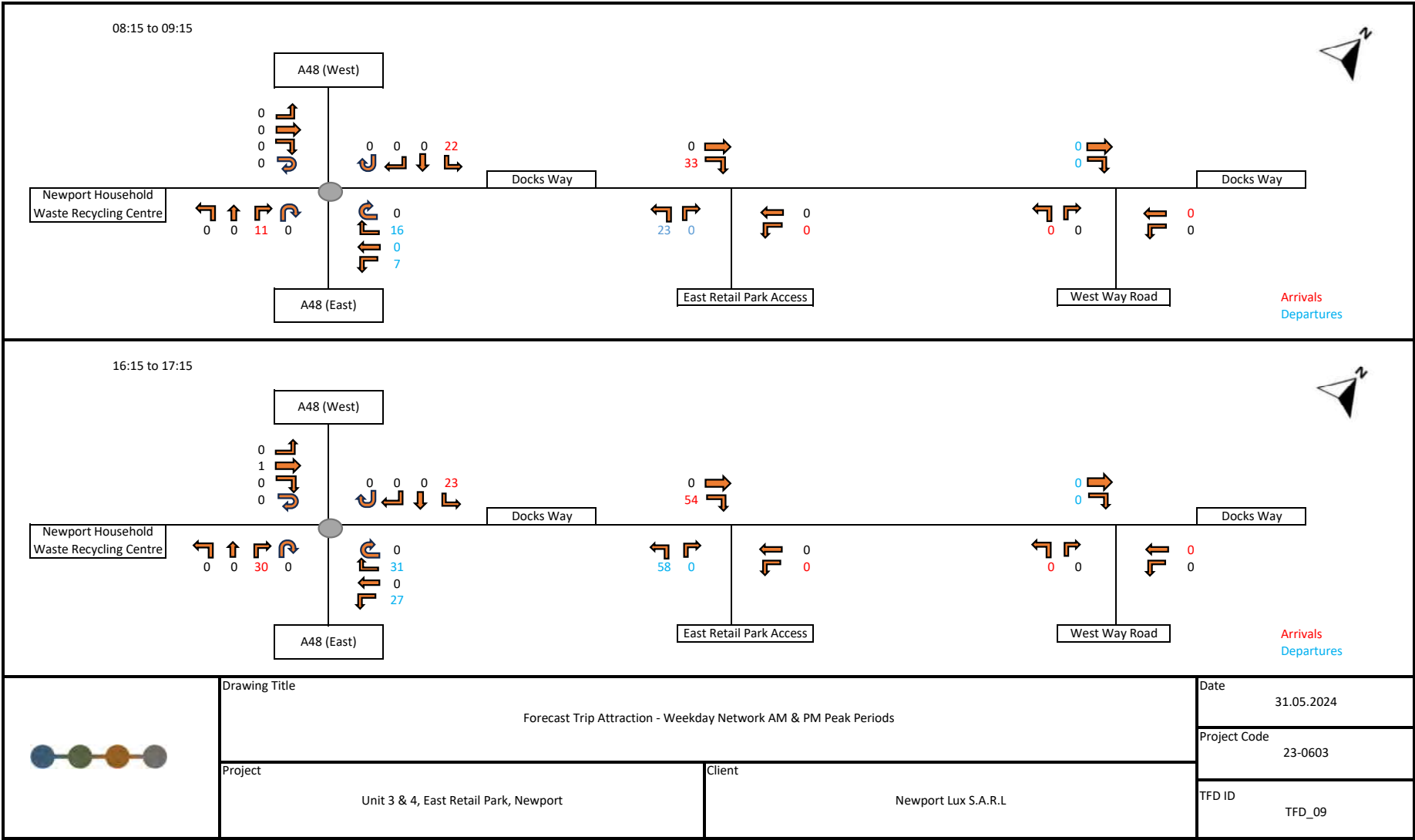
12:30 to 13:30



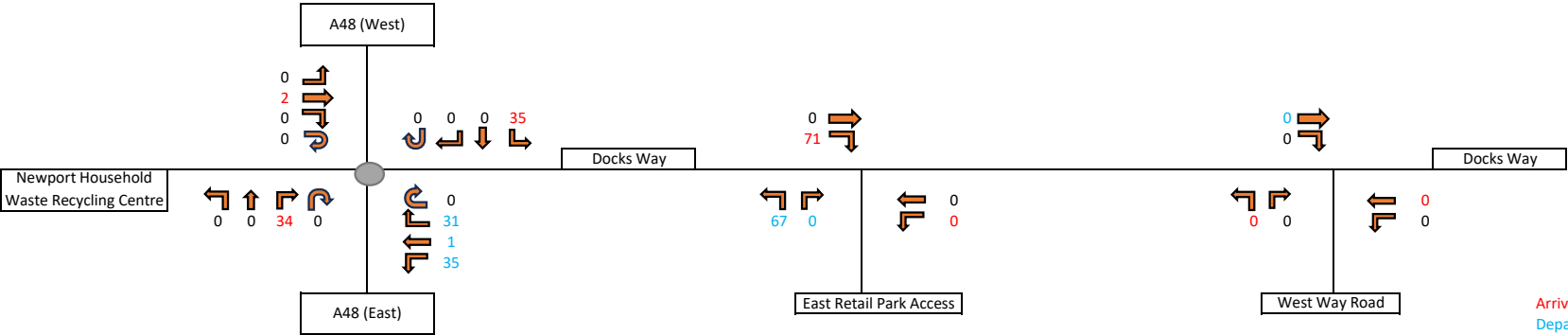
	Drawing Title		Date
	2025 Opening Year Traffic Flows - Saturday Development Peak Period		31.05.2024
	Project		Project Code
	Unit 3 & 4, East Retail Park, Newport		23-0603
Client		TFD ID	
Newport Lux S.A.R.L		TFD_06	



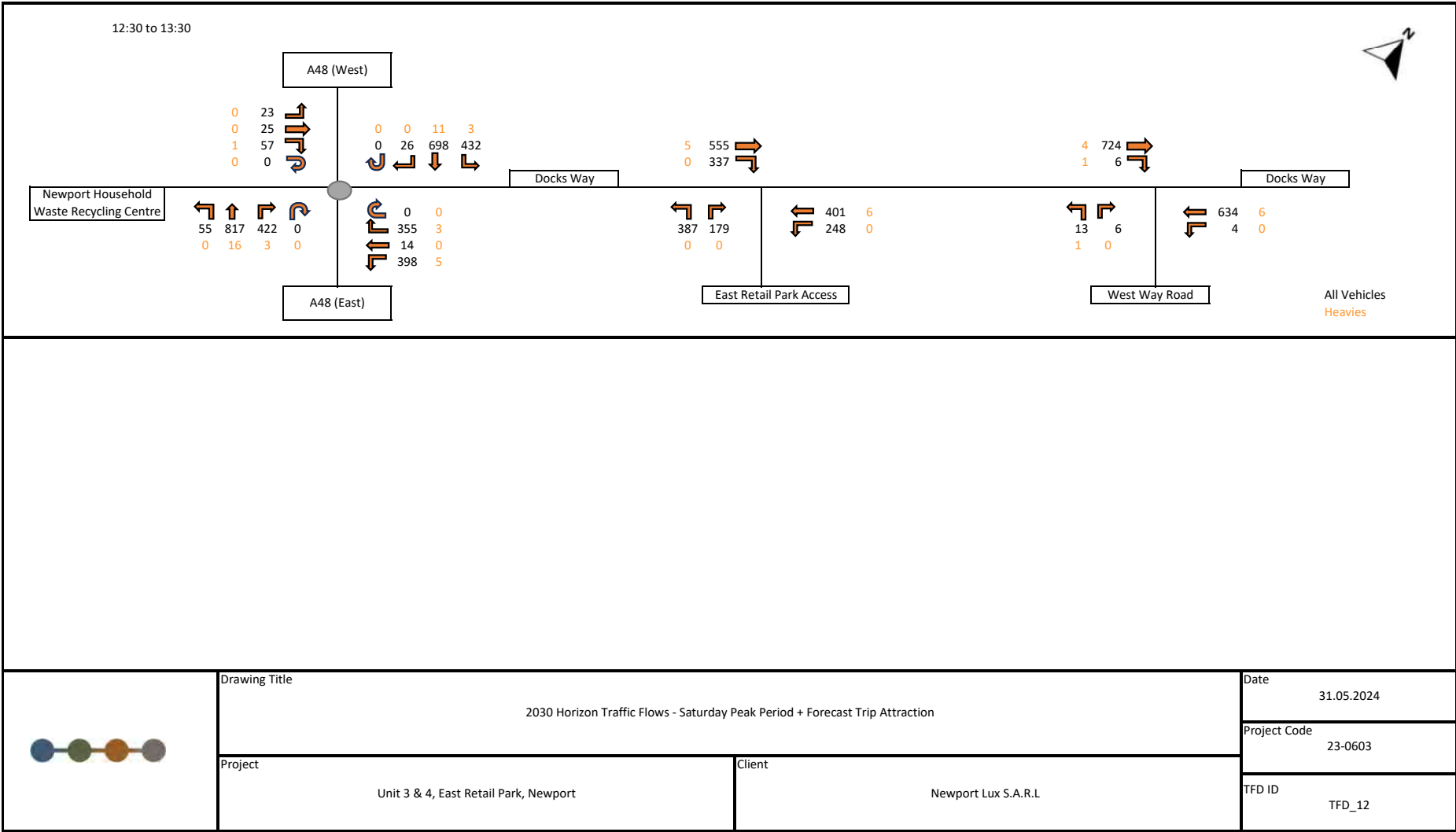
	Drawing Title		Date
	2030 Horizon Traffic Flows - Saturday Peak Period		31.05.2024
			Project Code
	Project	Client	23-0603
	Unit 3 & 4, East Retail Park, Newport	Newport Lux S.A.R.L	TFD ID
			TFD_08



12:30 to 13:30

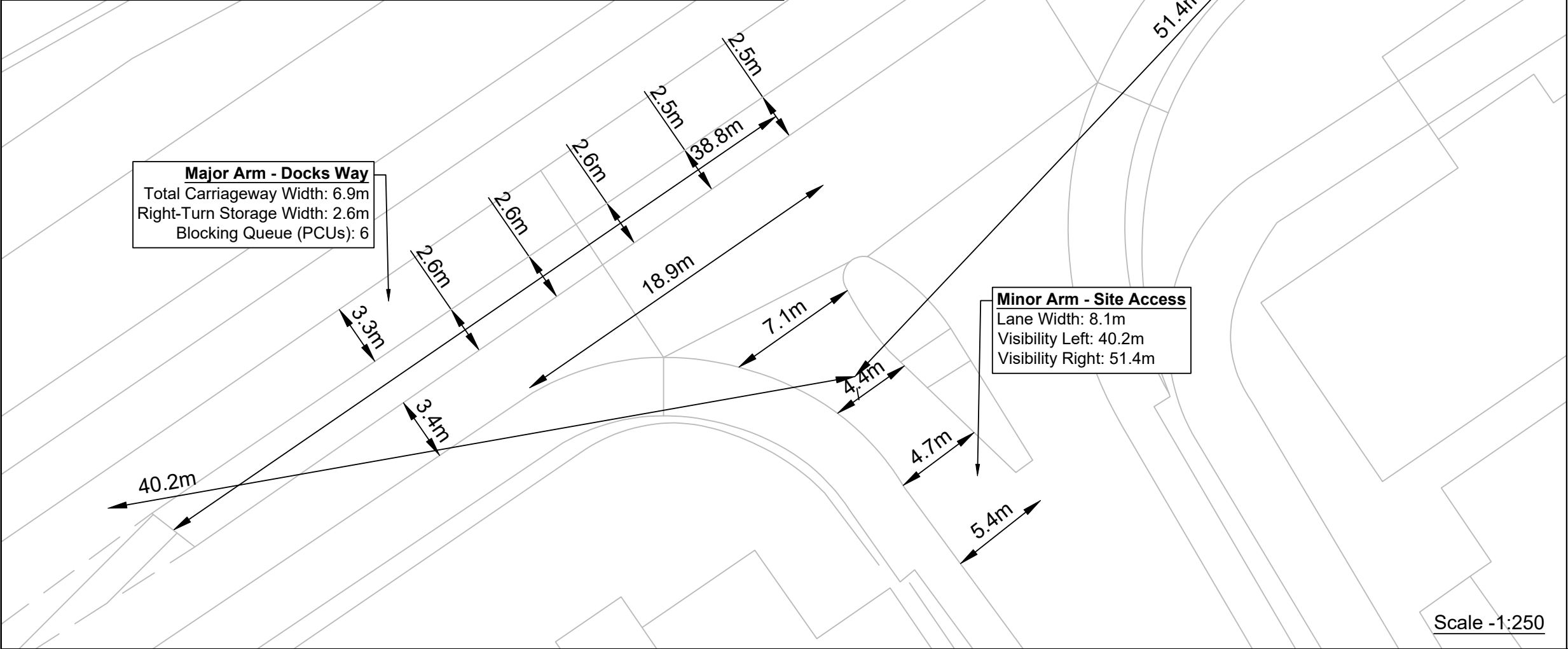
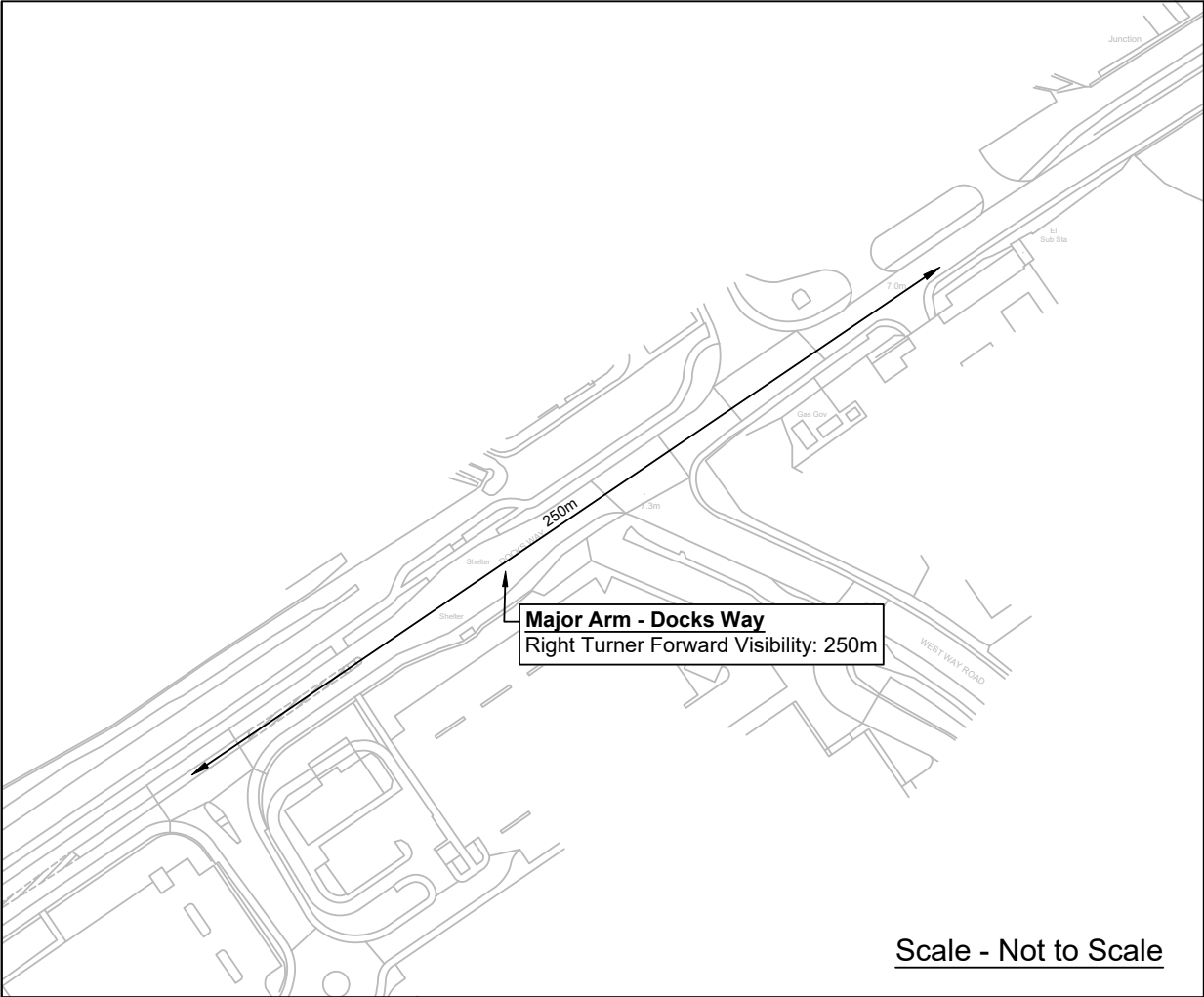


	Drawing Title		Date
	Forecast Trip Attraction - Saturday Peak Period		31.05.2024
	Project		Project Code
	Unit 3 & 4, East Retail Park, Newport		23-0603
Client		TFD ID	
Newport Lux S.A.R.L		TFD_10	



Drawing Title	2030 Horizon Traffic Flows - Saturday Peak Period + Forecast Trip Attraction		Date	31.05.2024
	Project		Project Code	23-0603
	Unit 3 & 4, East Retail Park, Newport	Client	TFD ID	TFD_12
Newport Lux S.A.R.L				

Appendix F: Existing Junction Geometry Plan - East Retail Park Access / Docks Way Priority Junction



- Notes:**
- Do not scale from this drawing. All dimensions are in metres, unless stated otherwise.
 - Ordnance Survey, (c) Crown Copyright 2023. All rights reserved. Licence number 100022432.
 - Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.

Rev	Date	Details	By	Chkd
-	-	-	-	-

rappor

rappor.co.uk

CLIENT: Newport Lux S.A.R.L

PROJECT: Units 3 and 4, East Retail Park Newport

TITLE: Site Access Priority Junction Geometry Measurements

SCALE @ A3:	DATE:	DRAWN:	CHECKED:	APPROVED:
As Shown	26.03.24	NM	MM	TS

STATUS: INFORMATION

DRAWING NO:	REVISION:
230603-RAP-XX-XX-DR-TP-3100	-

Appendix G: Traffic Survey Data



Newport, Thursday 7th March 2024

Junction: 1

Approach: Docks Way East



TIME	Left to East Retail Park					Ahead to Docks Way (West)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	4	0	0	4	4.0	36	7	0	43	52.1
07:15 - 07:30	6	1	0	7	8.3	41	17	0	58	80.1
07:30 - 07:45	5	0	0	5	5.0	62	13	0	75	91.9
07:45 - 08:00	6	0	0	6	6.0	51	11	0	62	76.3
Hourly Total	21	1	0	22	23.3	190	48	0	238	300.4
08:00 - 08:15	7	0	0	7	7.0	61	19	1	81	106.7
08:15 - 08:30	10	0	0	10	10.0	94	11	0	105	119.3
08:30 - 08:45	16	0	0	16	16.0	113	25	0	138	170.5
08:45 - 09:00	20	0	0	20	20.0	68	17	1	86	109.1
Hourly Total	53	0	0	53	53.0	336	72	2	410	505.6
09:00 - 09:15	19	0	0	19	19.0	55	19	1	75	100.7
09:15 - 09:30	27	0	0	27	27.0	55	19	0	74	98.7
09:30 - 09:45	19	0	0	19	19.0	44	20	0	64	90.0
09:45 - 10:00	23	0	0	23	23.0	54	11	0	65	79.3
Hourly Total	88	0	0	88	88.0	208	69	1	278	368.7

TOTAL	162	1	0	163	164.3	734	189	3	926	1174.7
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16:00 - 16:15	24	0	0	24	24.0	107	3	1	111	115.9
16:15 - 16:30	33	0	0	33	33.0	79	4	0	83	88.2
16:30 - 16:45	28	0	0	28	28.0	114	3	0	117	120.9
16:45 - 17:00	37	0	0	37	37.0	91	3	1	95	99.9
Hourly Total	122	0	0	122	122.0	391	13	2	406	424.9
17:00 - 17:15	46	0	0	46	46.0	124	4	1	129	135.2
17:15 - 17:30	45	0	0	45	45.0	77	1	0	78	79.3
17:30 - 17:45	39	0	0	39	39.0	74	2	1	77	80.6
17:45 - 18:00	26	0	0	26	26.0	57	2	0	59	61.6
Hourly Total	156	0	0	156	156.0	332	9	2	343	356.7
18:00 - 18:15	41	0	0	41	41.0	45	2	1	48	51.6
18:15 - 18:30	37	0	0	37	37.0	38	1	0	39	40.3
18:30 - 18:45	21	0	0	21	21.0	43	2	0	45	47.6
18:45 - 19:00	18	0	0	18	18.0	36	3	0	39	42.9
Hourly Total	117	0	0	117	117.0	162	8	1	171	182.4

TOTAL	395	0	0	395	395.0	885	30	5	920	964.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 1

Approach: East Retail Park



TIME	Left to Docks Way (West)					Right to Docks Way (East)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	9	0	0	9	9.0	3	0	0	3	3.0
07:15 - 07:30	9	1	0	10	11.3	4	0	0	4	4.0
07:30 - 07:45	7	1	0	8	9.3	6	0	0	6	6.0
07:45 - 08:00	11	0	0	11	11.0	5	0	0	5	5.0
Hourly Total	36	2	0	38	40.6	18	0	0	18	18.0
08:00 - 08:15	9	0	0	9	9.0	7	0	0	7	7.0
08:15 - 08:30	6	0	0	6	6.0	7	0	0	7	7.0
08:30 - 08:45	10	0	0	10	10.0	5	0	0	5	5.0
08:45 - 09:00	15	0	0	15	15.0	10	0	0	10	10.0
Hourly Total	40	0	0	40	40.0	29	0	0	29	29.0
09:00 - 09:15	18	0	0	18	18.0	11	0	0	11	11.0
09:15 - 09:30	9	0	0	9	9.0	13	0	0	13	13.0
09:30 - 09:45	17	0	0	17	17.0	13	0	0	13	13.0
09:45 - 10:00	24	0	0	24	24.0	14	1	0	15	16.3
Hourly Total	68	0	0	68	68.0	51	1	0	52	53.3

TOTAL	144	2	0	146	148.6	98	1	0	99	100.3
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16:00 - 16:15	35	0	0	35	35.0	30	0	0	30	30.0
16:15 - 16:30	39	0	0	39	39.0	31	0	0	31	31.0
16:30 - 16:45	22	0	0	22	22.0	32	0	0	32	32.0
16:45 - 17:00	27	0	0	27	27.0	30	0	0	30	30.0
Hourly Total	123	0	0	123	123.0	123	0	0	123	123.0
17:00 - 17:15	29	0	0	29	29.0	37	0	0	37	37.0
17:15 - 17:30	34	0	0	34	34.0	37	0	0	37	37.0
17:30 - 17:45	24	0	0	24	24.0	41	0	0	41	41.0
17:45 - 18:00	26	0	0	26	26.0	34	0	0	34	34.0
Hourly Total	113	0	0	113	113.0	149	0	0	149	149.0
18:00 - 18:15	29	0	0	29	29.0	37	0	0	37	37.0
18:15 - 18:30	43	0	0	43	43.0	45	0	0	45	45.0
18:30 - 18:45	36	0	0	36	36.0	34	0	0	34	34.0
18:45 - 19:00	34	0	0	34	34.0	32	0	0	32	32.0
Hourly Total	142	0	0	142	142.0	148	0	0	148	148.0

TOTAL	378	0	0	378	378.0	420	0	0	420	420.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 1

Approach: Docks Way West



TIME	Ahead to Docks Way (East)					Right to East Retail Park				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	71	8	0	79	89.4	8	0	0	8	8.0
07:15 - 07:30	75	11	0	86	100.3	12	0	0	12	12.0
07:30 - 07:45	83	6	0	89	96.8	9	0	0	9	9.0
07:45 - 08:00	84	12	0	96	111.6	10	0	0	10	10.0
Hourly Total	313	37	0	350	398.1	39	0	0	39	39.0
08:00 - 08:15	77	23	1	101	131.9	14	0	0	14	14.0
08:15 - 08:30	81	16	0	97	117.8	11	0	0	11	11.0
08:30 - 08:45	91	16	1	108	129.8	8	0	0	8	8.0
08:45 - 09:00	130	20	0	150	176.0	15	0	0	15	15.0
Hourly Total	379	75	2	456	555.5	48	0	0	48	48.0
09:00 - 09:15	100	14	5	119	142.2	22	0	0	22	22.0
09:15 - 09:30	95	14	1	110	129.2	32	0	0	32	32.0
09:30 - 09:45	71	6	1	78	86.8	38	0	0	38	38.0
09:45 - 10:00	69	10	1	80	94.0	31	1	0	32	33.3
Hourly Total	335	44	8	387	452.2	123	1	0	124	125.3

TOTAL	1027	156	10	1193	1405.8	210	1	0	211	212.3
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16:00 - 16:15	107	7	0	114	123.1	28	0	0	28	28.0
16:15 - 16:30	127	5	1	133	140.5	44	0	0	44	44.0
16:30 - 16:45	105	4	0	109	114.2	33	0	0	33	33.0
16:45 - 17:00	139	4	0	143	148.2	30	0	0	30	30.0
Hourly Total	478	20	1	499	526.0	135	0	0	135	135.0
17:00 - 17:15	129	3	1	133	137.9	44	0	0	44	44.0
17:15 - 17:30	96	6	0	102	109.8	40	0	0	40	40.0
17:30 - 17:45	111	8	0	119	129.4	37	0	0	37	37.0
17:45 - 18:00	65	6	0	71	78.8	26	0	0	26	26.0
Hourly Total	401	23	1	425	455.9	147	0	0	147	147.0
18:00 - 18:15	47	1	0	48	49.3	45	0	0	45	45.0
18:15 - 18:30	40	1	0	41	42.3	37	0	0	37	37.0
18:30 - 18:45	40	4	0	44	49.2	24	0	0	24	24.0
18:45 - 19:00	37	3	1	41	45.9	31	0	0	31	31.0
Hourly Total	164	9	1	174	186.7	137	0	0	137	137.0

TOTAL	1043	52	3	1098	1168.6	419	0	0	419	419.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 1

Approach: Docks Way East



TIME	Left to East Retail Park					Ahead to Docks Way (West)					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	46	0	0	46	46.0	73	2	1	76	79.6	1	0	0	1	1.0
11:15 - 11:30	49	0	0	49	49.0	82	0	0	82	82.0	0	0	0	0	0.0
11:30 - 11:45	56	0	0	56	56.0	75	1	0	76	77.3	0	0	0	0	0.0
11:45 - 12:00	57	0	0	57	57.0	91	0	0	91	91.0	0	0	0	0	0.0
Hourly Total	208	0	0	208	208.0	321	3	1	325	329.9	1	0	0	1	1.0
12:00 - 12:15	53	0	0	53	53.0	68	0	1	69	70.0	0	0	0	0	0.0
12:15 - 12:30	53	0	0	53	53.0	87	1	0	88	89.3	0	0	0	0	0.0
12:30 - 12:45	58	0	0	58	58.0	97	0	0	97	97.0	0	0	0	0	0.0
12:45 - 13:00	58	0	0	58	58.0	74	1	0	75	76.3	0	0	0	0	0.0
Hourly Total	222	0	0	222	222.0	326	2	1	329	332.6	0	0	0	0	0.0
13:00 - 13:15	63	0	0	63	63.0	100	2	1	103	106.6	0	0	0	0	0.0
13:15 - 13:30	56	0	0	56	56.0	102	2	0	104	106.6	0	0	0	0	0.0
13:30 - 13:45	59	0	0	59	59.0	74	1	0	75	76.3	0	0	0	0	0.0
13:45 - 14:00	62	0	0	62	62.0	91	1	0	92	93.3	0	0	0	0	0.0
Hourly Total	240	0	0	240	240.0	367	6	1	374	382.8	0	0	0	0	0.0
14:00 - 14:15	64	0	0	64	64.0	93	0	1	94	95.0	0	0	0	0	0.0
14:15 - 14:30	54	0	0	54	54.0	85	0	0	85	85.0	1	0	0	1	1.0
14:30 - 14:45	55	0	0	55	55.0	79	2	0	81	83.6	0	0	0	0	0.0
14:45 - 15:00	48	0	0	48	48.0	67	1	1	69	71.3	0	0	0	0	0.0
Hourly Total	221	0	0	221	221.0	324	3	2	329	334.9	1	0	0	1	1.0
15:00 - 15:15	63	0	0	63	63.0	75	1	0	76	77.3	0	0	0	0	0.0
15:15 - 15:30	60	0	0	60	60.0	75	1	0	76	77.3	0	0	0	0	0.0
15:30 - 15:45	64	0	0	64	64.0	69	0	0	69	69.0	0	0	0	0	0.0
15:45 - 16:00	43	0	0	43	43.0	63	0	1	64	65.0	0	0	0	0	0.0
Hourly Total	230	0	0	230	230.0	282	2	1	285	288.6	0	0	0	0	0.0
TOTAL	1121	0	0	1121	1121.0	1620	16	6	1642	1668.8	2	0	0	2	2.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 1
Approach: East Retail Park



	Left to Docks Way (West)					Right to Docks Way (East)				
TIME	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	49	0	0	49	49.0	44	0	0	44	44.0
11:15 - 11:30	49	0	0	49	49.0	34	0	0	34	34.0
11:30 - 11:45	64	0	0	64	64.0	49	0	0	49	49.0
11:45 - 12:00	83	0	0	83	83.0	38	0	0	38	38.0
Hourly Total	245	0	0	245	245.0	165	0	0	165	165.0
12:00 - 12:15	56	0	0	56	56.0	52	0	0	52	52.0
12:15 - 12:30	79	0	0	79	79.0	49	0	0	49	49.0
12:30 - 12:45	85	0	0	85	85.0	47	0	0	47	47.0
12:45 - 13:00	65	0	0	65	65.0	40	0	0	40	40.0
Hourly Total	285	0	0	285	285.0	188	0	0	188	188.0
13:00 - 13:15	64	0	0	64	64.0	40	0	0	40	40.0
13:15 - 13:30	88	0	0	88	88.0	42	0	0	42	42.0
13:30 - 13:45	81	0	0	81	81.0	43	0	0	43	43.0
13:45 - 14:00	79	0	0	79	79.0	37	0	0	37	37.0
Hourly Total	312	0	0	312	312.0	162	0	0	162	162.0
14:00 - 14:15	78	0	0	78	78.0	48	0	0	48	48.0
14:15 - 14:30	89	0	0	89	89.0	56	0	0	56	56.0
14:30 - 14:45	74	0	0	74	74.0	52	0	0	52	52.0
14:45 - 15:00	73	0	0	73	73.0	38	0	0	38	38.0
Hourly Total	314	0	0	314	314.0	194	0	0	194	194.0
15:00 - 15:15	73	0	0	73	73.0	42	0	0	42	42.0
15:15 - 15:30	88	0	0	88	88.0	51	0	0	51	51.0
15:30 - 15:45	82	0	0	82	82.0	45	0	0	45	45.0
15:45 - 16:00	77	0	0	77	77.0	56	0	0	56	56.0
Hourly Total	320	0	0	320	320.0	194	0	0	194	194.0
TOTAL	1476	0	0	1476	1476.0	903	0	0	903	903.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024



Junction: 1
Approach: Docks Way West

TIME	Ahead to Docks Way (East)					Right to East Retail Park				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	120	4	0	124	129.2	43	0	0	43	43.0
11:15 - 11:30	91	0	0	91	91.0	67	0	0	67	67.0
11:30 - 11:45	101	0	1	102	103.0	45	0	0	45	45.0
11:45 - 12:00	144	0	0	144	144.0	61	0	0	61	61.0
Hourly Total	456	4	1	461	467.2	216	0	0	216	216.0
12:00 - 12:15	133	2	0	135	137.6	63	0	0	63	63.0
12:15 - 12:30	127	2	0	129	131.6	72	0	0	72	72.0
12:30 - 12:45	127	2	1	130	133.6	42	0	0	42	42.0
12:45 - 13:00	139	0	0	139	139.0	74	0	0	74	74.0
Hourly Total	526	6	1	533	541.8	251	0	0	251	251.0
13:00 - 13:15	123	1	0	124	125.3	77	0	0	77	77.0
13:15 - 13:30	131	1	0	132	133.3	58	0	0	58	58.0
13:30 - 13:45	87	1	0	88	89.3	62	0	0	62	62.0
13:45 - 14:00	116	4	1	121	127.2	77	0	0	77	77.0
Hourly Total	457	7	1	465	475.1	274	0	0	274	274.0
14:00 - 14:15	106	0	0	106	106.0	64	0	0	64	64.0
14:15 - 14:30	112	1	0	113	114.3	67	0	0	67	67.0
14:30 - 14:45	94	1	0	95	96.3	45	0	0	45	45.0
14:45 - 15:00	108	0	1	109	110.0	49	0	0	49	49.0
Hourly Total	420	2	1	423	426.6	225	0	0	225	225.0
15:00 - 15:15	110	0	0	110	110.0	64	0	0	64	64.0
15:15 - 15:30	79	1	0	80	81.3	74	0	0	74	74.0
15:30 - 15:45	80	2	0	82	84.6	54	0	0	54	54.0
15:45 - 16:00	67	1	0	68	69.3	57	0	0	57	57.0
Hourly Total	336	4	0	340	345.2	249	0	0	249	249.0
TOTAL	2195	23	4	2222	2255.9	1215	0	0	1215	1215.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 2

Approach: Docks Way



TIME	Left to A48 (East)					Ahead to Recycling Centre					Right to A48 (West)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	17	3	0	20	23.9	1	0	0	1	1.0	24	4	0	28	33.2
07:15 - 07:30	17	7	0	24	33.1	1	0	0	1	1.0	24	12	0	36	51.6
07:30 - 07:45	20	4	0	24	29.2	1	0	0	1	1.0	40	8	0	48	58.4
07:45 - 08:00	20	2	0	22	24.6	0	0	0	0	0.0	45	13	0	58	74.9
Hourly Total	74	16	0	90	110.8	3	0	0	3	3.0	133	37	0	170	218.1
08:00 - 08:15	21	7	0	28	37.1	0	0	0	0	0.0	67	12	1	80	96.6
08:15 - 08:30	17	3	0	20	23.9	1	0	0	1	1.0	92	10	0	102	115.0
08:30 - 08:45	27	8	0	35	45.4	1	1	0	2	3.3	88	13	0	101	117.9
08:45 - 09:00	35	8	0	43	53.4	1	0	0	1	1.0	78	11	0	89	103.3
Hourly Total	100	26	0	126	159.8	3	1	0	4	5.3	325	46	1	372	432.8
09:00 - 09:15	33	10	0	43	56.0	1	1	0	2	3.3	51	8	0	59	69.4
09:15 - 09:30	27	7	0	34	43.1	2	0	0	2	2.0	44	10	0	54	67.0
09:30 - 09:45	38	8	0	46	56.4	2	0	0	2	2.0	37	12	0	49	64.6
09:45 - 10:00	38	3	0	41	44.9	2	0	0	2	2.0	44	9	0	53	64.7
Hourly Total	136	28	0	164	200.4	7	1	0	8	9.3	176	39	0	215	265.7

TOTAL	310	70	0	380	471.0	13	2	0	15	17.6	634	122	1	757	916.6
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16:00 - 16:15	62	1	0	63	64.3	2	0	0	2	2.0	80	1	1	82	84.3
16:15 - 16:30	66	1	0	67	68.3	1	0	0	1	1.0	52	4	0	56	61.2
16:30 - 16:45	69	2	0	71	73.6	1	0	0	1	1.0	85	2	0	87	89.6
16:45 - 17:00	53	1	1	55	57.3	1	0	0	1	1.0	63	2	0	65	67.6
Hourly Total	250	5	1	256	263.5	5	0	0	5	5.0	280	9	1	290	302.7
17:00 - 17:15	74	3	0	77	80.9	1	0	0	1	1.0	100	1	1	102	104.3
17:15 - 17:30	57	1	0	58	59.3	1	0	0	1	1.0	73	1	0	74	75.3
17:30 - 17:45	43	0	0	43	43.0	0	0	0	0	0.0	58	2	0	60	62.6
17:45 - 18:00	38	0	0	38	38.0	0	0	0	0	0.0	53	2	0	55	57.6
Hourly Total	212	4	0	216	221.2	2	0	0	2	2.0	284	6	1	291	299.8
18:00 - 18:15	31	2	0	33	35.6	0	0	0	0	0.0	59	1	1	61	63.3
18:15 - 18:30	34	0	0	34	34.0	0	0	0	0	0.0	47	1	0	48	49.3
18:30 - 18:45	37	2	0	39	41.6	0	0	0	0	0.0	50	1	0	51	52.3
18:45 - 19:00	36	0	0	36	36.0	0	0	0	0	0.0	44	2	0	46	48.6
Hourly Total	138	4	0	142	147.2	0	0	0	0	0.0	200	5	1	206	213.5

TOTAL	600	13	1	614	631.9	7	0	0	7	7.0	764	20	3	787	816.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 2
Approach: A48 East



TIME	Left to Recycling Centre					Ahead to A48 (West)					Right to Docks Way				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	2	1	0	3	4.3	115	23	0	138	167.9	32	1	0	33	34.3
07:15 - 07:30	5	3	0	8	11.9	156	14	0	170	188.2	30	2	0	32	34.6
07:30 - 07:45	5	1	0	6	7.3	186	17	2	205	229.1	28	1	0	29	30.3
07:45 - 08:00	3	1	0	4	5.3	226	16	0	242	262.8	36	1	0	37	38.3
Hourly Total	15	6	0	21	28.8	683	70	2	755	848.0	126	5	0	131	137.5
08:00 - 08:15	4	0	0	4	4.0	242	15	1	258	278.5	33	8	0	41	51.4
08:15 - 08:30	4	1	0	5	6.3	250	17	6	273	301.1	32	4	0	36	41.2
08:30 - 08:45	2	0	0	2	2.0	219	19	0	238	262.7	32	5	0	37	43.5
08:45 - 09:00	3	1	0	4	5.3	183	22	2	207	237.6	59	8	0	67	77.4
Hourly Total	13	2	0	15	17.6	894	73	9	976	1079.9	156	25	0	181	213.5
09:00 - 09:15	1	2	0	3	5.6	145	22	0	167	195.6	38	3	4	45	52.9
09:15 - 09:30	6	1	0	7	8.3	146	21	0	167	194.3	46	4	0	50	55.2
09:30 - 09:45	5	2	0	7	9.6	106	27	1	134	170.1	52	4	1	57	63.2
09:45 - 10:00	8	2	0	10	12.6	112	9	0	121	132.7	56	6	0	62	69.8
Hourly Total	20	7	0	27	36.1	509	79	1	589	692.7	192	17	5	214	241.1

TOTAL	48	15	0	63	82.5	2086	222	12	2320	2620.6	474	47	5	526	592.1
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16:00 - 16:15	6	0	0	6	6.0	274	10	0	284	297.0	79	3	0	82	85.9
16:15 - 16:30	2	0	0	2	2.0	278	7	0	285	294.1	70	2	0	72	74.6
16:30 - 16:45	3	0	0	3	3.0	225	9	0	234	245.7	95	2	0	97	99.6
16:45 - 17:00	4	0	0	4	4.0	169	4	0	173	178.2	95	2	0	97	99.6
Hourly Total	15	0	0	15	15.0	946	30	0	976	1015.0	339	9	0	348	359.7
17:00 - 17:15	5	0	0	5	5.0	193	9	1	203	215.7	103	0	0	103	103.0
17:15 - 17:30	8	0	0	8	8.0	226	6	1	233	241.8	82	6	0	88	95.8
17:30 - 17:45	2	0	0	2	2.0	198	4	0	202	207.2	83	6	0	89	96.8
17:45 - 18:00	1	0	0	1	1.0	185	7	0	192	201.1	56	4	0	60	65.2
Hourly Total	16	0	0	16	16.0	802	26	2	830	865.8	324	16	0	340	360.8
18:00 - 18:15	0	0	0	0	0.0	195	6	0	201	208.8	44	0	0	44	44.0
18:15 - 18:30	1	0	0	1	1.0	187	9	0	196	207.7	39	1	0	40	41.3
18:30 - 18:45	0	0	0	0	0.0	199	5	0	204	210.5	29	3	0	32	35.9
18:45 - 19:00	1	0	0	1	1.0	148	6	0	154	161.8	36	2	1	39	42.6
Hourly Total	2	0	0	2	2.0	729	26	0	755	788.8	148	6	1	155	163.8

TOTAL	33	0	0	33	33.0	2477	82	2	2561	2669.6	811	31	1	843	884.3
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 2

Approach: Recycling Centre



TIME	Left to A48 (West)					Ahead to Docks Way					Right to A48 (East)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	1	1	0	2	3.3	1	1	0	2	3.3	1	7	0	8	17.1
07:15 - 07:30	0	0	0	0	0.0	1	0	0	1	1.0	5	2	0	7	9.6
07:30 - 07:45	3	0	0	3	3.0	0	0	0	0	0.0	4	0	0	4	4.0
07:45 - 08:00	2	1	0	3	4.3	0	1	0	1	2.3	4	5	0	9	15.5
Hourly Total	6	2	0	8	10.6	2	2	0	4	6.6	14	14	0	28	46.2
08:00 - 08:15	1	0	0	1	1.0	0	2	0	2	4.6	2	2	0	4	6.6
08:15 - 08:30	6	1	0	7	8.3	1	0	0	1	1.0	4	1	0	5	6.3
08:30 - 08:45	2	1	0	3	4.3	0	0	0	0	0.0	4	1	0	5	6.3
08:45 - 09:00	4	0	0	4	4.0	1	0	0	1	1.0	5	1	0	6	7.3
Hourly Total	13	2	0	15	17.6	2	2	0	4	6.6	15	5	0	20	26.5
09:00 - 09:15	1	1	0	2	3.3	2	0	0	2	2.0	8	1	0	9	10.3
09:15 - 09:30	0	2	0	2	4.6	1	0	0	1	1.0	6	1	0	7	8.3
09:30 - 09:45	3	0	0	3	3.0	6	0	0	6	6.0	14	0	0	14	14.0
09:45 - 10:00	6	0	0	6	6.0	3	1	0	4	5.3	6	2	0	8	10.6
Hourly Total	10	3	0	13	16.9	12	1	0	13	14.3	34	4	0	38	43.2

TOTAL	29	7	0	36	45.1	16	5	0	21	27.5	63	23	0	86	115.9
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16:00 - 16:15	6	0	0	6	6.0	3	0	0	3	3.0	9	0	0	9	9.0
16:15 - 16:30	1	0	0	1	1.0	2	0	0	2	2.0	7	0	0	7	7.0
16:30 - 16:45	2	0	0	2	2.0	1	0	0	1	1.0	2	0	0	2	2.0
16:45 - 17:00	2	0	0	2	2.0	3	0	0	3	3.0	4	0	0	4	4.0
Hourly Total	11	0	0	11	11.0	9	0	0	9	9.0	22	0	0	22	22.0
17:00 - 17:15	3	0	0	3	3.0	2	0	0	2	2.0	2	0	0	2	2.0
17:15 - 17:30	0	0	0	0	0.0	3	0	0	3	3.0	6	0	0	6	6.0
17:30 - 17:45	0	0	0	0	0.0	3	0	0	3	3.0	5	0	0	5	5.0
17:45 - 18:00	1	0	0	1	1.0	1	0	0	1	1.0	1	0	0	1	1.0
Hourly Total	4	0	0	4	4.0	9	0	0	9	9.0	14	0	0	14	14.0
18:00 - 18:15	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
18:15 - 18:30	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
18:45 - 19:00	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	0	0	0	0	0.0	0	0	0	0	0.0	0	0	0	0	0.0

TOTAL	15	0	0	15	15.0	18	0	0	18	18.0	36	0	0	36	36.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 2
Approach: A48 West



TIME	Left to Docks Way					Ahead to A48 (East)					Right to Recycling Centre				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	70	8	0	78	88.4	244	9	0	253	264.7	4	0	0	4	4.0
07:15 - 07:30	76	7	0	83	92.1	241	15	0	256	275.5	5	0	0	5	5.0
07:30 - 07:45	77	4	0	81	86.2	224	14	0	238	256.2	4	0	0	4	4.0
07:45 - 08:00	78	9	0	87	98.7	223	12	0	235	250.6	2	0	0	2	2.0
Hourly Total	301	28	0	329	365.4	932	50	0	982	1047.0	15	0	0	15	15.0
08:00 - 08:15	57	16	1	74	95.8	193	17	0	210	232.1	2	1	0	3	4.3
08:15 - 08:30	67	12	0	79	94.6	183	14	0	197	215.2	3	1	0	4	5.3
08:30 - 08:45	74	12	1	87	103.6	198	17	3	218	243.1	2	1	0	3	4.3
08:45 - 09:00	92	12	0	104	119.6	173	14	1	188	207.2	6	0	0	6	6.0
Hourly Total	290	52	2	344	413.6	747	62	4	813	897.6	13	3	0	16	19.9
09:00 - 09:15	93	11	1	105	120.3	194	13	0	207	223.9	3	1	0	4	5.3
09:15 - 09:30	73	11	0	84	98.3	161	10	0	171	184.0	4	0	0	4	4.0
09:30 - 09:45	48	5	0	53	59.5	167	14	1	182	201.2	6	1	0	7	8.3
09:45 - 10:00	43	5	0	48	54.5	167	15	0	182	201.5	6	0	0	6	6.0
Hourly Total	257	32	1	290	332.6	689	52	1	742	810.6	19	2	0	21	23.6

TOTAL	848	112	3	963	1111.6	2368	164	5	2537	2755.2	47	5	0	52	58.5
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16:00 - 16:15	58	4	0	62	67.2	161	9	0	170	181.7	5	0	0	5	5.0
16:15 - 16:30	85	4	0	89	94.2	199	5	0	204	210.5	3	0	0	3	3.0
16:30 - 16:45	56	3	0	59	62.9	199	4	0	203	208.2	2	0	0	2	2.0
16:45 - 17:00	71	4	0	75	80.2	187	6	0	193	200.8	1	0	0	1	1.0
Hourly Total	270	15	0	285	304.5	746	24	0	770	801.2	11	0	0	11	11.0
17:00 - 17:15	64	3	1	68	72.9	154	6	0	160	167.8	3	0	0	3	3.0
17:15 - 17:30	59	2	0	61	63.6	168	6	1	175	183.8	3	0	0	3	3.0
17:30 - 17:45	43	3	0	46	49.9	185	5	0	190	196.5	2	0	0	2	2.0
17:45 - 18:00	52	4	0	56	61.2	193	3	0	196	199.9	0	0	0	0	0.0
Hourly Total	218	12	1	231	247.6	700	20	1	721	748.0	8	0	0	8	8.0
18:00 - 18:15	52	2	1	55	58.6	161	7	0	168	177.1	0	0	0	0	0.0
18:15 - 18:30	40	2	0	42	44.6	148	6	1	155	163.8	0	0	0	0	0.0
18:30 - 18:45	34	3	0	37	40.9	102	2	0	104	106.6	0	0	0	0	0.0
18:45 - 19:00	34	2	1	37	40.6	122	5	0	127	133.5	0	0	0	0	0.0
Hourly Total	160	9	2	171	184.7	533	20	1	554	581.0	0	0	0	0	0.0

TOTAL	648	36	3	687	736.8	1979	64	2	2045	2130.2	19	0	0	19	19.0
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 2

Approach: Docks Way



TIME	Left to A48 (East)					Ahead to Recycling Centre					Right to A48 (West)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	69	1	0	70	71.3	2	0	0	2	2.0	53	1	1	55	57.3
11:15 - 11:30	75	0	0	75	75.0	3	0	0	3	3.0	61	0	0	61	61.0
11:30 - 11:45	71	1	0	72	73.3	3	0	0	3	3.0	51	0	0	51	51.0
11:45 - 12:00	83	0	0	83	83.0	6	0	0	6	6.0	78	0	0	78	78.0
Hourly Total	298	2	0	300	302.6	14	0	0	14	14.0	243	1	1	245	247.3
12:00 - 12:15	65	0	0	65	65.0	2	0	0	2	2.0	64	0	0	64	64.0
12:15 - 12:30	65	0	0	65	65.0	5	0	0	5	5.0	83	0	0	83	83.0
12:30 - 12:45	96	1	0	97	98.3	5	0	0	5	5.0	74	1	0	75	76.3
12:45 - 13:00	80	1	0	81	82.3	2	0	0	2	2.0	62	0	0	62	62.0
Hourly Total	306	2	0	308	310.6	14	0	0	14	14.0	283	1	0	284	285.3
13:00 - 13:15	71	2	0	73	75.6	2	0	0	2	2.0	76	0	1	77	78.0
13:15 - 13:30	91	1	0	92	93.3	3	0	0	3	3.0	91	1	0	92	93.3
13:30 - 13:45	77	1	0	78	79.3	3	0	0	3	3.0	78	1	0	79	80.3
13:45 - 14:00	80	0	0	80	80.0	4	0	0	4	4.0	84	1	1	86	88.3
Hourly Total	319	4	0	323	328.2	12	0	0	12	12.0	329	3	2	334	339.9
14:00 - 14:15	82	0	0	82	82.0	4	0	0	4	4.0	80	0	1	81	82.0
14:15 - 14:30	92	0	0	92	92.0	2	0	0	2	2.0	72	0	0	72	72.0
14:30 - 14:45	71	2	0	73	75.6	3	0	0	3	3.0	79	0	0	79	79.0
14:45 - 15:00	67	0	0	67	67.0	3	0	0	3	3.0	72	1	1	74	76.3
Hourly Total	312	2	0	314	316.6	12	0	0	12	12.0	303	1	2	306	309.3
15:00 - 15:15	70	1	0	71	72.3	4	0	0	4	4.0	71	0	0	71	71.0
15:15 - 15:30	68	2	0	70	72.6	4	0	0	4	4.0	88	0	0	88	88.0
15:30 - 15:45	68	0	0	68	68.0	4	0	0	4	4.0	72	0	0	72	72.0
15:45 - 16:00	55	0	0	55	55.0	2	0	0	2	2.0	87	0	1	88	89.0
Hourly Total	261	3	0	264	267.9	14	0	0	14	14.0	318	0	1	319	320.0
TOTAL	1496	13	0	1509	1525.9	66	0	0	66	66.0	1476	6	6	1488	1501.8

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 2
Approach: A48 East



TIME	Left to Recycling Centre					Ahead to A48 (West)					Right to Docks Way				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	7	0	0	7	7.0	188	3	0	191	194.9	72	1	0	73	74.3
11:15 - 11:30	5	0	0	5	5.0	178	3	0	181	184.9	76	0	0	76	76.0
11:30 - 11:45	12	0	0	12	12.0	168	1	0	169	170.3	68	0	0	68	68.0
11:45 - 12:00	1	0	0	1	1.0	166	2	0	168	170.6	103	0	0	103	103.0
Hourly Total	25	0	0	25	25.0	700	9	0	709	720.7	319	1	0	320	321.3
12:00 - 12:15	8	0	0	8	8.0	206	5	1	212	219.5	97	0	0	97	97.0
12:15 - 12:30	9	2	0	11	13.6	172	3	0	175	178.9	101	0	0	101	101.0
12:30 - 12:45	18	0	0	18	18.0	183	2	0	185	187.6	92	2	0	94	96.6
12:45 - 13:00	19	0	0	19	19.0	184	6	0	190	197.8	85	0	0	85	85.0
Hourly Total	54	2	0	56	58.6	745	16	1	762	783.8	375	2	0	377	379.6
13:00 - 13:15	7	0	0	7	7.0	211	4	0	215	220.2	92	0	0	92	92.0
13:15 - 13:30	8	0	0	8	8.0	180	3	0	183	186.9	95	1	0	96	97.3
13:30 - 13:45	10	0	0	10	10.0	149	3	0	152	155.9	87	0	0	87	87.0
13:45 - 14:00	7	0	0	7	7.0	149	3	0	152	155.9	104	1	0	105	106.3
Hourly Total	32	0	0	32	32.0	689	13	0	702	718.9	378	2	0	380	382.6
14:00 - 14:15	6	0	0	6	6.0	156	5	0	161	167.5	78	0	0	78	78.0
14:15 - 14:30	9	0	0	9	9.0	153	0	0	153	153.0	89	0	0	89	89.0
14:30 - 14:45	6	0	0	6	6.0	148	2	0	150	152.6	71	0	0	71	71.0
14:45 - 15:00	9	0	0	9	9.0	170	4	0	174	179.2	73	1	0	74	75.3
Hourly Total	30	0	0	30	30.0	627	11	0	638	652.3	311	1	0	312	313.3
15:00 - 15:15	12	0	0	12	12.0	147	2	1	150	153.6	72	0	0	72	72.0
15:15 - 15:30	9	0	0	9	9.0	131	3	0	134	137.9	70	0	0	70	70.0
15:30 - 15:45	9	0	0	9	9.0	144	4	0	148	153.2	66	0	0	66	66.0
15:45 - 16:00	8	0	0	8	8.0	122	4	0	126	131.2	73	0	0	73	73.0
Hourly Total	38	0	0	38	38.0	544	13	1	558	575.9	281	0	0	281	281.0
TOTAL	179	2	0	181	183.6	3305	62	2	3369	3451.6	1664	6	0	1670	1677.8

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 2
Approach: Recycling Centre



TIME	Left to A48 (West)					Ahead to Docks Way					Right to A48 (East)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	6	0	0	6	6.0	4	0	0	4	4.0	8	0	0	8	8.0
11:15 - 11:30	5	0	0	5	5.0	5	0	0	5	5.0	10	0	0	10	10.0
11:30 - 11:45	4	0	0	4	4.0	4	0	0	4	4.0	12	0	0	12	12.0
11:45 - 12:00	4	0	0	4	4.0	6	0	0	6	6.0	9	0	0	9	9.0
Hourly Total	19	0	0	19	19.0	19	0	0	19	19.0	39	0	0	39	39.0
12:00 - 12:15	10	0	0	10	10.0	5	0	0	5	5.0	9	0	0	9	9.0
12:15 - 12:30	7	0	0	7	7.0	3	0	0	3	3.0	5	0	0	5	5.0
12:30 - 12:45	6	0	0	6	6.0	5	0	0	5	5.0	15	0	0	15	15.0
12:45 - 13:00	10	0	0	10	10.0	8	0	0	8	8.0	17	1	0	18	19.3
Hourly Total	33	0	0	33	33.0	21	0	0	21	21.0	46	1	0	47	48.3
13:00 - 13:15	3	0	0	3	3.0	4	0	0	4	4.0	9	0	0	9	9.0
13:15 - 13:30	3	0	0	3	3.0	5	0	0	5	5.0	12	0	0	12	12.0
13:30 - 13:45	6	0	0	6	6.0	2	0	0	2	2.0	5	0	0	5	5.0
13:45 - 14:00	4	0	0	4	4.0	7	0	0	7	7.0	11	0	0	11	11.0
Hourly Total	16	0	0	16	16.0	18	0	0	18	18.0	37	0	0	37	37.0
14:00 - 14:15	4	0	0	4	4.0	5	0	0	5	5.0	9	0	0	9	9.0
14:15 - 14:30	9	0	0	9	9.0	4	0	0	4	4.0	9	0	0	9	9.0
14:30 - 14:45	3	0	0	3	3.0	6	0	0	6	6.0	8	0	0	8	8.0
14:45 - 15:00	2	0	0	2	2.0	6	0	0	6	6.0	9	0	0	9	9.0
Hourly Total	18	0	0	18	18.0	21	0	0	21	21.0	35	0	0	35	35.0
15:00 - 15:15	4	0	0	4	4.0	4	0	0	4	4.0	13	0	0	13	13.0
15:15 - 15:30	8	0	0	8	8.0	6	0	0	6	6.0	8	0	0	8	8.0
15:30 - 15:45	6	0	0	6	6.0	4	0	0	4	4.0	11	0	0	11	11.0
15:45 - 16:00	4	0	0	4	4.0	5	0	0	5	5.0	6	0	0	6	6.0
Hourly Total	22	0	0	22	22.0	19	0	0	19	19.0	38	0	0	38	38.0
TOTAL	108	0	0	108	108.0	98	0	0	98	98.0	195	1	0	196	197.3

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 2
Approach: A48 West



TIME	Left to Docks Way					Ahead to A48 (East)					Right to Recycling Centre				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	95	2	0	97	99.6	146	2	0	148	150.6	7	0	0	7	7.0
11:15 - 11:30	72	0	0	72	72.0	159	2	0	161	163.6	6	0	0	6	6.0
11:30 - 11:45	73	0	1	74	75.0	181	3	0	184	187.9	7	0	0	7	7.0
11:45 - 12:00	95	1	0	96	97.3	143	4	0	147	152.2	14	0	0	14	14.0
Hourly Total	335	3	1	339	343.9	629	11	0	640	654.3	34	0	0	34	34.0
12:00 - 12:15	84	3	0	87	90.9	160	3	0	163	166.9	8	0	0	8	8.0
12:15 - 12:30	84	0	0	84	84.0	144	2	0	146	148.6	8	0	0	8	8.0
12:30 - 12:45	75	1	1	77	79.3	143	1	0	144	145.3	8	0	0	8	8.0
12:45 - 13:00	110	0	0	110	110.0	169	1	0	170	171.3	6	0	0	6	6.0
Hourly Total	353	4	1	358	364.2	616	7	0	623	632.1	30	0	0	30	30.0
13:00 - 13:15	97	0	0	97	97.0	159	7	0	166	175.1	6	0	0	6	6.0
13:15 - 13:30	91	1	0	92	93.3	179	1	0	180	181.3	5	0	0	5	5.0
13:30 - 13:45	87	0	1	88	89.0	158	1	0	159	160.3	7	0	0	7	7.0
13:45 - 14:00	93	2	0	95	97.6	138	3	0	141	144.9	7	0	0	7	7.0
Hourly Total	368	3	1	372	376.9	634	12	0	646	661.6	25	0	0	25	25.0
14:00 - 14:15	68	0	0	68	68.0	139	6	0	145	152.8	8	0	0	8	8.0
14:15 - 14:30	81	0	0	81	81.0	140	0	0	140	140.0	3	0	0	3	3.0
14:30 - 14:45	61	1	1	63	65.3	120	5	0	125	131.5	5	0	0	5	5.0
14:45 - 15:00	74	0	0	74	74.0	117	4	0	121	126.2	7	0	0	7	7.0
Hourly Total	284	1	1	286	288.3	516	15	0	531	550.5	23	0	0	23	23.0
15:00 - 15:15	83	0	0	83	83.0	130	1	0	131	132.3	6	0	0	6	6.0
15:15 - 15:30	77	0	0	77	77.0	117	2	0	119	121.6	8	0	0	8	8.0
15:30 - 15:45	77	0	1	78	79.0	126	0	0	126	126.0	9	0	0	9	9.0
15:45 - 16:00	56	1	0	57	58.3	111	0	0	111	111.0	3	0	0	3	3.0
Hourly Total	293	1	1	295	297.3	484	3	0	487	490.9	26	0	0	26	26.0
TOTAL	1633	12	5	1650	1670.6	2879	48	0	2927	2989.4	138	0	0	138	138.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 3

Approach: Docks Way East



TIME	Left to West Way Road					Ahead to Docks Way (West)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	9	1	0	10	11.3	37	4	0	41	46.2
07:15 - 07:30	7	1	0	8	9.3	46	5	0	51	57.5
07:30 - 07:45	13	0	0	13	13.0	65	4	0	69	74.2
07:45 - 08:00	13	0	0	13	13.0	51	2	0	53	55.6
Hourly Total	42	2	0	44	46.6	199	15	0	214	233.5
08:00 - 08:15	8	0	0	8	8.0	63	6	1	70	78.8
08:15 - 08:30	9	2	0	11	13.6	100	4	0	104	109.2
08:30 - 08:45	3	0	0	3	3.0	123	12	0	135	150.6
08:45 - 09:00	5	0	0	5	5.0	84	3	1	88	92.9
Hourly Total	25	2	0	27	29.6	370	25	2	397	431.5
09:00 - 09:15	11	2	0	13	15.6	73	3	1	77	81.9
09:15 - 09:30	11	1	0	12	13.3	75	6	0	81	88.8
09:30 - 09:45	8	1	0	9	10.3	56	10	0	66	79.0
09:45 - 10:00	7	0	0	7	7.0	70	6	1	77	85.8
Hourly Total	37	4	0	41	46.2	274	25	2	301	335.5

TOTAL	104	8	0	112	122.4	843	65	4	912	1000.5
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16:00 - 16:15	4	0	0	4	4.0	103	0	1	104	105.0
16:15 - 16:30	4	0	0	4	4.0	91	1	0	92	93.3
16:30 - 16:45	3	1	0	4	5.3	117	0	0	117	117.0
16:45 - 17:00	3	1	0	4	5.3	117	2	1	120	123.6
Hourly Total	14	2	0	16	18.6	428	3	2	433	438.9
17:00 - 17:15	4	1	0	5	6.3	142	3	1	146	150.9
17:15 - 17:30	1	1	0	2	3.3	114	0	0	114	114.0
17:30 - 17:45	2	0	0	2	2.0	105	1	1	107	109.3
17:45 - 18:00	1	0	0	1	1.0	84	1	0	85	86.3
Hourly Total	8	2	0	10	12.6	445	5	2	452	460.5
18:00 - 18:15	0	1	0	1	2.3	81	1	1	83	85.3
18:15 - 18:30	0	0	0	0	0.0	75	1	0	76	77.3
18:30 - 18:45	0	0	0	0	0.0	64	3	0	67	70.9
18:45 - 19:00	0	0	0	0	0.0	52	2	0	54	56.6
Hourly Total	0	1	0	1	2.3	272	7	1	280	290.1

TOTAL	22	5	0	27	33.5	1145	15	5	1165	1189.5
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 3

Approach: West Way Road



TIME	Left to Docks Way (West)					Right to Docks Way (East)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	4	3	0	7	10.9	0	0	0	0	0.0
07:15 - 07:30	0	13	0	13	29.9	1	1	0	2	3.3
07:30 - 07:45	5	9	0	14	25.7	1	0	0	1	1.0
07:45 - 08:00	4	9	0	13	24.7	2	2	0	4	6.6
Hourly Total	13	34	0	47	91.2	4	3	0	7	10.9
08:00 - 08:15	9	11	0	20	34.3	2	0	0	2	2.0
08:15 - 08:30	6	10	0	16	29.0	7	0	0	7	7.0
08:30 - 08:45	3	12	0	15	30.6	4	0	0	4	4.0
08:45 - 09:00	3	15	0	18	37.5	4	2	0	6	8.6
Hourly Total	21	48	0	69	131.4	17	2	0	19	21.6
09:00 - 09:15	4	17	0	21	43.1	8	1	0	9	10.3
09:15 - 09:30	4	12	0	16	31.6	7	0	0	7	7.0
09:30 - 09:45	8	9	0	17	28.7	5	0	0	5	5.0
09:45 - 10:00	7	6	0	13	20.8	1	0	0	1	1.0
Hourly Total	23	44	0	67	124.2	21	1	0	22	23.3

TOTAL	57	126	0	183	346.8	42	6	0	48	55.8
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16:00 - 16:15	27	2	0	29	31.6	23	1	0	24	25.3
16:15 - 16:30	19	3	0	22	25.9	7	1	0	8	9.3
16:30 - 16:45	26	4	0	30	35.2	10	0	0	10	10.0
16:45 - 17:00	11	1	0	12	13.3	12	1	0	13	14.3
Hourly Total	83	10	0	93	106.0	52	3	0	55	58.9
17:00 - 17:15	32	1	0	33	34.3	14	0	0	14	14.0
17:15 - 17:30	6	1	0	7	8.3	3	0	0	3	3.0
17:30 - 17:45	7	1	0	8	9.3	3	0	0	3	3.0
17:45 - 18:00	6	1	0	7	8.3	2	0	0	2	2.0
Hourly Total	51	4	0	55	60.2	22	0	0	22	22.0
18:00 - 18:15	2	2	0	4	6.6	4	0	0	4	4.0
18:15 - 18:30	0	0	0	0	0.0	0	0	0	0	0.0
18:30 - 18:45	0	0	0	0	0.0	0	0	0	0	0.0
18:45 - 19:00	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	3	2	0	5	7.6	4	0	0	4	4.0

TOTAL	137	16	0	153	173.8	78	3	0	81	84.9
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Junction: 3

Approach: Docks Way West



TIME	Ahead to Docks Way (East)					Right to West Way Road				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
07:00 - 07:15	49	1	0	50	51.3	26	7	0	33	42.1
07:15 - 07:30	63	3	0	66	69.9	15	8	0	23	33.4
07:30 - 07:45	62	3	0	65	68.9	24	3	0	27	30.9
07:45 - 08:00	71	2	0	73	75.6	18	9	0	27	38.7
Hourly Total	245	9	0	254	265.7	83	27	0	110	145.1
08:00 - 08:15	77	10	1	88	102.0	5	12	0	17	32.6
08:15 - 08:30	72	5	0	77	83.5	20	11	0	31	45.3
08:30 - 08:45	89	5	1	95	102.5	5	11	0	16	30.3
08:45 - 09:00	130	8	1	139	150.4	11	12	0	23	38.6
Hourly Total	368	28	3	399	438.4	41	46	0	87	146.8
09:00 - 09:15	97	6	5	108	120.8	15	10	0	25	38.0
09:15 - 09:30	94	4	0	98	103.2	11	9	0	20	31.7
09:30 - 09:45	82	3	1	86	90.9	2	2	0	4	6.6
09:45 - 10:00	79	6	1	86	94.8	7	6	0	13	20.8
Hourly Total	352	19	7	378	409.7	35	27	0	62	97.1

TOTAL	965	56	10	1031	1113.8	159	100	0	259	389.0
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16:00 - 16:15	134	5	0	139	145.5	5	1	0	6	7.3
16:15 - 16:30	156	4	1	161	167.2	1	2	0	3	5.6
16:30 - 16:45	137	2	0	139	141.6	0	2	0	2	4.6
16:45 - 17:00	167	2	0	169	171.6	4	1	0	5	6.3
Hourly Total	594	13	1	608	625.9	10	6	0	16	23.8
17:00 - 17:15	164	2	1	167	170.6	1	0	0	1	1.0
17:15 - 17:30	133	7	0	140	149.1	0	0	0	0	0.0
17:30 - 17:45	151	8	0	159	169.4	1	0	0	1	1.0
17:45 - 18:00	101	6	0	107	114.8	0	0	0	0	0.0
Hourly Total	549	23	1	573	603.9	2	0	0	2	2.0
18:00 - 18:15	84	1	0	85	86.3	0	0	0	0	0.0
18:15 - 18:30	83	1	0	84	85.3	0	0	0	0	0.0
18:30 - 18:45	73	4	0	77	82.2	1	0	0	1	1.0
18:45 - 19:00	70	3	0	73	76.9	0	1	1	2	4.3
Hourly Total	310	9	0	319	330.7	1	1	1	3	5.3

TOTAL	1453	45	2	1500	1560.5	13	7	1	21	31.1
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PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 3

Approach: Docks Way East



TIME	Left to West Way Road					Ahead to Docks Way (West)					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	1	0	0	1	1.0	115	1	1	117	119.3	0	0	0	0	0.0
11:15 - 11:30	0	0	0	0	0.0	126	0	0	126	126.0	0	0	0	0	0.0
11:30 - 11:45	2	1	0	3	4.3	130	0	0	130	130.0	0	0	0	0	0.0
11:45 - 12:00	2	0	0	2	2.0	145	0	0	145	145.0	0	0	0	0	0.0
Hourly Total	5	1	0	6	7.3	516	1	1	518	520.3	0	0	0	0	0.0
12:00 - 12:15	1	0	0	1	1.0	118	0	1	119	120.0	0	0	0	0	0.0
12:15 - 12:30	0	0	0	0	0.0	136	0	0	136	136.0	0	0	0	0	0.0
12:30 - 12:45	0	0	0	0	0.0	151	2	0	153	155.6	0	0	0	0	0.0
12:45 - 13:00	2	0	0	2	2.0	132	0	0	132	132.0	1	0	0	1	1.0
Hourly Total	3	0	0	3	3.0	537	2	1	540	543.6	1	0	0	1	1.0
13:00 - 13:15	1	0	0	1	1.0	160	2	1	163	166.6	0	0	0	0	0.0
13:15 - 13:30	1	0	0	1	1.0	151	1	0	152	153.3	0	0	0	0	0.0
13:30 - 13:45	1	0	0	1	1.0	132	1	0	133	134.3	0	0	0	0	0.0
13:45 - 14:00	1	0	0	1	1.0	152	1	0	153	154.3	0	0	0	0	0.0
Hourly Total	4	0	0	4	4.0	595	5	1	601	608.5	0	0	0	0	0.0
14:00 - 14:15	0	0	0	0	0.0	156	0	1	157	158.0	0	0	0	0	0.0
14:15 - 14:30	0	1	0	1	2.3	136	0	0	136	136.0	0	0	0	0	0.0
14:30 - 14:45	0	0	0	0	0.0	141	2	0	143	145.6	0	0	0	0	0.0
14:45 - 15:00	0	0	0	0	0.0	111	0	1	112	113.0	0	0	0	0	0.0
Hourly Total	0	1	0	1	2.3	544	2	2	548	552.6	0	0	0	0	0.0
15:00 - 15:15	1	0	0	1	1.0	134	1	0	135	136.3	0	0	0	0	0.0
15:15 - 15:30	1	0	0	1	1.0	138	0	0	138	138.0	1	0	0	1	1.0
15:30 - 15:45	0	0	0	0	0.0	131	0	0	131	131.0	0	0	0	0	0.0
15:45 - 16:00	0	0	0	0	0.0	106	0	1	107	108.0	0	0	0	0	0.0
Hourly Total	2	0	0	2	2.0	509	1	1	511	513.3	1	0	0	1	1.0
TOTAL	14	2	0	16	18.6	2701	11	6	2718	2738.3	2	0	0	2	2.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 3
Approach: West Way Road



TIME	Left to Docks Way (West)					Right to Docks Way (East)				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	2	1	0	3	4.3	4	0	0	4	4.0
11:15 - 11:30	6	0	0	6	6.0	0	0	0	0	0.0
11:30 - 11:45	2	1	0	3	4.3	3	0	0	3	3.0
11:45 - 12:00	1	0	0	1	1.0	3	0	0	3	3.0
Hourly Total	11	2	0	13	15.6	10	0	0	10	10.0
12:00 - 12:15	3	0	0	3	3.0	2	0	0	2	2.0
12:15 - 12:30	1	0	0	1	1.0	2	0	0	2	2.0
12:30 - 12:45	3	0	0	3	3.0	2	0	0	2	2.0
12:45 - 13:00	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	7	0	0	7	7.0	6	0	0	6	6.0
13:00 - 13:15	2	1	0	3	4.3	2	0	0	2	2.0
13:15 - 13:30	6	0	0	6	6.0	2	0	0	2	2.0
13:30 - 13:45	2	0	0	2	2.0	0	0	0	0	0.0
13:45 - 14:00	1	0	0	1	1.0	2	1	0	3	4.3
Hourly Total	11	1	0	12	13.3	6	1	0	7	8.3
14:00 - 14:15	1	0	0	1	1.0	1	0	0	1	1.0
14:15 - 14:30	1	0	0	1	1.0	0	1	0	1	2.3
14:30 - 14:45	1	0	0	1	1.0	1	0	0	1	1.0
14:45 - 15:00	0	1	0	1	2.3	0	0	0	0	0.0
Hourly Total	3	1	0	4	5.3	2	1	0	3	4.3
15:00 - 15:15	0	1	0	1	2.3	0	0	0	0	0.0
15:15 - 15:30	2	0	0	2	2.0	1	0	0	1	1.0
15:30 - 15:45	0	0	0	0	0.0	0	0	0	0	0.0
15:45 - 16:00	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	2	1	0	3	4.3	1	0	0	1	1.0
TOTAL	34	5	0	39	45.5	25	2	0	27	29.6

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Saturday 9th March 2024

Junction: 3

Approach: Docks Way West



TIME	Ahead to Docks Way (East)					Right to West Way Road					U-Turn				
	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs	LIGHT	HEAVY	BUS	TOTAL	PCUs
11:00 - 11:15	159	2	0	161	163.6	4	1	0	5	6.3	0	0	0	0	0.0
11:15 - 11:30	126	1	0	127	128.3	1	0	0	1	1.0	0	0	0	0	0.0
11:30 - 11:45	143	0	0	143	143.0	2	0	0	2	2.0	0	0	0	0	0.0
11:45 - 12:00	181	0	1	182	183.0	2	1	0	3	4.3	1	0	0	1	1.0
Hourly Total	609	3	1	613	617.9	9	2	0	11	13.6	1	0	0	1	1.0
12:00 - 12:15	179	1	0	180	181.3	0	1	0	1	2.3	1	0	0	1	1.0
12:15 - 12:30	174	1	0	175	176.3	2	1	0	3	4.3	0	0	0	0	0.0
12:30 - 12:45	175	1	0	176	177.3	1	1	0	2	3.3	0	0	0	0	0.0
12:45 - 13:00	172	0	1	173	174.0	2	0	0	2	2.0	0	0	0	0	0.0
Hourly Total	700	3	1	704	708.9	5	3	0	8	11.9	1	0	0	1	1.0
13:00 - 13:15	168	1	0	169	170.3	2	0	0	2	2.0	0	0	0	0	0.0
13:15 - 13:30	166	1	0	167	168.3	0	0	0	0	0.0	1	0	0	1	1.0
13:30 - 13:45	131	1	0	132	133.3	1	0	0	1	1.0	0	0	0	0	0.0
13:45 - 14:00	156	2	1	159	162.6	0	1	0	1	2.3	0	0	0	0	0.0
Hourly Total	621	5	1	627	634.5	3	1	0	4	5.3	1	0	0	1	1.0
14:00 - 14:15	157	0	0	157	157.0	1	1	0	2	3.3	0	0	0	0	0.0
14:15 - 14:30	168	1	0	169	170.3	1	0	0	1	1.0	0	0	0	0	0.0
14:30 - 14:45	145	0	0	145	145.0	0	1	0	1	2.3	1	0	0	1	1.0
14:45 - 15:00	150	0	1	151	152.0	1	0	0	1	1.0	0	0	0	0	0.0
Hourly Total	620	1	1	622	624.3	3	2	0	5	7.6	1	0	0	1	1.0
15:00 - 15:15	149	0	0	149	149.0	0	0	0	0	0.0	1	0	0	1	1.0
15:15 - 15:30	131	1	0	132	133.3	1	0	0	1	1.0	0	0	0	0	0.0
15:30 - 15:45	124	2	0	126	128.6	0	0	0	0	0.0	0	0	0	0	0.0
15:45 - 16:00	123	1	0	124	125.3	0	0	0	0	0.0	0	0	0	0	0.0
Hourly Total	527	4	0	531	536.2	1	0	0	1	1.0	1	0	0	1	1.0
TOTAL	3077	16	4	3097	3121.8	21	8	0	29	39.4	5	0	0	5	5.0

PCU Factors:	
LIGHT	1.0
HEAVY	2.3
BUS	2.0

Newport, Thursday 7th March 2024

Site 1

Queues are stationary vehicles each 5 minutes
LANE 1 is nearside lane



TIME	East Retail Park		Docks Way (West) RIGHT TURN
	LANE 1	LANE 2	
07:00	0	0	0
07:05	0	0	0
07:10	0	0	0
07:15	0	0	0
07:20	0	0	0
07:25	0	0	0
07:30	0	0	0
07:35	1	0	0
07:40	0	0	0
07:45	0	0	0
07:50	0	0	0
07:55	0	0	0
08:00	0	0	0
08:05	0	0	0
08:10	0	0	0
08:15	0	0	0
08:20	0	0	0
08:25	0	0	0
08:30	0	1	0
08:35	0	0	0
08:40	0	0	0
08:45	0	0	0
08:50	0	2	0
08:55	0	0	0
09:00	0	1	0
09:05	0	0	0
09:10	0	0	0
09:15	0	1	0
09:20	0	0	0
09:25	0	1	1
09:30	0	1	0
09:35	0	0	0
09:40	0	0	0
09:45	0	0	0
09:50	0	3	0
09:55	0	0	0
10:00	0	1	1

16:00	0	0	0
16:05	1	1	0
16:10	0	3	0
16:15	0	0	1
16:20	0	0	1
16:25	1	1	0
16:30	0	1	0
16:35	1	1	1
16:40	0	0	0
16:45	0	0	0
16:50	0	4	0
16:55	0	0	0
17:00	0	4	1
17:05	0	4	1
17:10	0	5	0
17:15	0	5	1
17:20	0	0	0
17:25	0	2	0
17:30	0	1	0
17:35	0	0	0
17:40	3	4	0
17:45	0	0	0
17:50	0	1	0
17:55	0	0	0
18:00	0	0	0
18:05	0	0	0
18:10	0	0	0
18:15	1	0	0
18:20	0	1	0
18:25	0	0	0
18:30	0	1	0
18:35	0	0	0
18:40	0	0	0
18:45	0	0	0
18:50	0	1	0
18:55	0	0	0
19:00	0	1	0

Newport, Saturday 9th March 2024

Site 1

Queues are stationary vehicles each 5 minutes
LANE 1 is nearside lane



TIME	East Retail Park		Docks Way (West) RIGHT TURN
	LANE 1	LANE 2	
11:00	1	1	0
11:05	1	0	0
11:10	0	3	0
11:15	0	0	1
11:20	2	1	1
11:25	0	0	0
11:30	3	1	0
11:35	0	1	0
11:40	0	0	0
11:45	0	5	0
11:50	0	7	0
11:55	0	3	0
12:00	3	4	1
12:05	1	4	0
12:10	0	2	0
12:15	0	0	1
12:20	0	2	0
12:25	0	10	1
12:30	0	4	0
12:35	0	2	0
12:40	0	8	0
12:45	1	0	0
12:50	2	5	0
12:55	0	2	1
13:00	0	0	1
13:05	2	1	0
13:10	0	3	0
13:15	0	3	2
13:20	0	9	1
13:25	1	1	0
13:30	1	1	0
13:35	0	0	0
13:40	0	3	1
13:45	1	4	1
13:50	4	3	3
13:55	0	0	0
14:00	0	1	0
14:05	0	8	2
14:10	0	2	1
14:15	0	1	5
14:20	0	5	2
14:25	0	10	0
14:30	0	3	0
14:35	4	3	0
14:40	0	1	0
14:45	0	0	0
14:50	0	8	2
14:55	0	0	0
15:00	0	0	0
15:05	2	2	0
15:10	0	0	0
15:15	1	5	0
15:20	0	1	0
15:25	1	1	0
15:30	0	1	0
15:35	0	0	1
15:40	0	2	1
15:45	0	3	0
15:50	0	4	0
15:55	0	0	0
16:00	0	2	0

Newport, Thursday 7th March 2024

Site 2

Queues are stationary vehicles each 5 minutes
LANE 1 is nearside lane



TIME	Docks Way		A48 (East)		Recycling Centre	A48 (West)	
	LANE 1	LANE 2	LANE 1	LANE 2		LANE 1	LANE 2
07:00	0	0	0	0	1	0	0
07:05	1	0	0	0	1	0	0
07:10	1	1	0	0	0	0	0
07:15	0	0	0	0	0	0	0
07:20	0	2	0	0	0	0	0
07:25	0	1	4	0	0	0	0
07:30	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	0
07:40	0	3	4	0	0	4	4
07:45	0	0	0	0	0	0	0
07:50	0	5	0	0	0	0	0
07:55	1	0	0	0	2	6	3
08:00	0	0	0	0	1	5	3
08:05	0	1	0	0	0	0	0
08:10	0	1	0	0	0	0	0
08:15	0	0	3	0	0	0	0
08:20	0	1	6	0	1	0	0
08:25	0	0	4	3	0	0	0
08:30	0	0	2	3	0	0	0
08:35	0	0	0	0	0	0	0
08:40	1	4	0	0	0	0	0
08:45	0	0	0	0	3	0	0
08:50	0	0	0	0	0	0	0
08:55	0	5	0	0	0	0	0
09:00	1	1	0	0	1	0	0
09:05	0	1	0	0	0	0	0
09:10	2	3	1	1	0	0	0
09:15	0	0	0	0	0	5	0
09:20	0	0	0	0	0	0	0
09:25	0	1	0	0	0	0	0
09:30	0	0	0	0	0	0	0
09:35	1	0	0	0	0	0	0
09:40	0	1	0	0	1	6	0
09:45	0	0	1	0	0	1	0
09:50	0	1	0	0	1	0	0
09:55	1	0	0	0	0	0	0
10:00	0	2	0	0	0	0	0
16:00	0	0	0	0	0	5	0
16:05	1	1	0	0	2	1	0
16:10	0	0	0	0	1	0	0
16:15	4	0	0	0	0	0	0
16:20	1	3	0	0	0	0	0
16:25	0	0	0	0	0	0	0
16:30	0	1	0	0	0	0	0
16:35	0	0	0	0	1	6	5
16:40	0	0	10	6	0	0	0
16:45	2	0	1	0	1	0	0
16:50	0	2	3	0	0	0	0
16:55	0	0	3	0	0	0	0
17:00	0	0	12	0	0	1	0
17:05	0	0	0	0	0	5	3
17:10	1	0	0	1	0	0	0
17:15	0	0	15	0	0	0	0
17:20	1	1	0	0	0	7	5
17:25	0	5	0	0	0	0	0
17:30	0	1	0	0	0	0	0
17:35	0	0	0	0	0	4	0
17:40	0	0	0	0	0	0	0
17:45	1	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0
17:55	0	0	0	0	0	4	2
18:00	0	0	0	0	0	0	0
18:05	0	1	0	0	0	0	0
18:10	0	0	0	0	0	0	0
18:15	1	0	0	0	0	0	0
18:20	1	1	0	0	0	0	0
18:25	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0
18:50	0	0	4	3	0	0	0
18:55	1	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0

Newport, Saturday 9th March 2024

Site 2

Queues are stationary vehicles each 5 minutes
LANE 1 is nearside lane



TIME	Docks Way		A48 (East)		Recycling Centre	A48 (West)	
	LANE 1	LANE 2	LANE 1	LANE 2		LANE 1	LANE 2
11:00	0	0	0	0	0	0	0
11:05	1	1	0	0	0	0	0
11:10	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0
11:20	0	0	0	0	0	3	0
11:25	0	0	0	0	0	0	1
11:30	1	0	0	0	0	8	4
11:35	1	0	0	0	0	0	0
11:40	0	0	0	0	2	3	1
11:45	0	0	0	0	0	0	0
11:50	1	1	0	0	0	0	0
11:55	0	0	0	0	0	0	0
12:00	0	0	0	0	0	3	0
12:05	0	0	0	0	0	3	3
12:10	1	1	0	0	0	0	0
12:15	0	0	0	0	0	0	0
12:20	0	0	0	0	0	0	0
12:25	0	0	0	0	0	1	0
12:30	0	0	0	0	0	6	2
12:35	2	1	0	0	1	2	1
12:40	0	0	0	0	0	0	2
12:45	1	2	0	0	0	0	0
12:50	0	6	2	1	2	7	3
12:55	2	2	2	1	0	4	1
13:00	0	0	0	0	0	0	0
13:05	2	0	0	0	0	0	0
13:10	0	0	0	0	0	5	1
13:15	0	0	0	1	0	0	0
13:20	0	0	0	7	0	0	0
13:25	0	0	0	0	1	0	0
13:30	1	1	1	0	0	0	0
13:35	2	1	4	0	0	6	5
13:40	0	0	0	0	0	0	0
13:45	0	2	4	2	0	1	0
13:50	0	0	0	0	0	0	0
13:55	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0
14:05	0	0	2	1	0	0	0
14:10	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:20	0	0	0	0	0	0	0
14:25	0	0	0	0	2	0	0
14:30	0	0	0	2	0	0	0
14:35	0	4	0	0	0	0	0
14:40	1	6	2	1	0	0	0
14:45	0	0	0	0	0	0	0
14:50	1	0	0	0	0	0	0
14:55	0	0	1	1	0	0	0
15:00	0	0	0	0	2	0	0
15:05	0	0	1	1	0	0	0
15:10	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0
15:20	0	0	0	0	1	0	0
15:25	1	1	1	1	0	0	0
15:30	0	0	0	0	1	0	0
15:35	0	0	1	1	0	0	0
15:40	0	0	1	0	0	0	0
15:45	0	0	1	0	0	0	0
15:50	0	0	0	0	0	0	0
15:55	0	0	0	0	0	0	0
16:00	0	2	0	0	0	0	0

Newport, Thursday 7th March 2024

Site 3

Queues are stationary vehicles each 5 minutes



TIME	West Way	Docks Way (West) RIGHT TURN
07:00	0	0
07:05	0	0
07:10	1	1
07:15	0	0
07:20	0	0
07:25	0	0
07:30	0	1
07:35	0	0
07:40	0	0
07:45	2	1
07:50	0	0
07:55	0	1
08:00	0	0
08:05	1	0
08:10	0	0
08:15	0	0
08:20	0	2
08:25	3	0
08:30	0	0
08:35	0	0
08:40	0	0
08:45	0	0
08:50	0	0
08:55	0	0
09:00	0	0
09:05	0	0
09:10	0	0
09:15	5	0
09:20	1	0
09:25	0	0
09:30	0	0
09:35	0	0
09:40	0	0
09:45	0	0
09:50	0	0
09:55	0	0
10:00	0	0

16:00	6	0
16:05	0	0
16:10	2	0
16:15	0	0
16:20	0	0
16:25	0	0
16:30	0	0
16:35	5	0
16:40	0	0
16:45	0	0
16:50	0	0
16:55	0	0
17:00	3	0
17:05	0	0
17:10	0	0
17:15	0	0
17:20	0	0
17:25	0	0
17:30	0	0
17:35	0	0
17:40	0	0
17:45	1	0
17:50	0	0
17:55	0	0
18:00	0	0
18:05	1	0
18:10	0	0
18:15	0	0
18:20	0	0
18:25	0	0
18:30	0	0
18:35	0	0
18:40	0	0
18:45	0	0
18:50	0	0
18:55	0	0
19:00	0	0

Newport, Saturday 9th March 2024

Site 3

Queues are stationary vehicles each 5 minutes



TIME	West Way	Docks Way (West) RIGHT TURN
11:00	0	0
11:05	0	0
11:10	0	1
11:15	0	0
11:20	0	0
11:25	0	0
11:30	0	0
11:35	1	0
11:40	0	0
11:45	0	0
11:50	0	0
11:55	0	0
12:00	0	0
12:05	0	0
12:10	0	0
12:15	0	0
12:20	0	0
12:25	1	0
12:30	0	0
12:35	0	0
12:40	0	0
12:45	0	0
12:50	0	0
12:55	0	0
13:00	0	0
13:05	0	0
13:10	0	0
13:15	0	0
13:20	0	0
13:25	0	0
13:30	0	0
13:35	0	0
13:40	0	0
13:45	0	0
13:50	0	0
13:55	0	0
14:00	0	0
14:05	0	0
14:10	0	0
14:15	0	0
14:20	0	0
14:25	0	0
14:30	0	0
14:35	0	0
14:40	0	0
14:45	0	0
14:50	0	0
14:55	0	0
15:00	0	0
15:05	0	0
15:10	1	0
15:15	0	0
15:20	0	0
15:25	0	0
15:30	0	0
15:35	0	0
15:40	0	0
15:45	0	0
15:50	0	0
15:55	0	0
16:00	0	0

Appendix H: PICADY Output Report – Weekday Results

Junctions 10		
PICADY 10 - Priority Intersection Module		
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021		
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com		
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution		

Filename: 23-0603-PICADY WEEKDAY-DRAFT-MM.j10

Path: C:\Users\MattMauler\Cotswold Transport Planning Ltd\Project 2023 - 23-0603 - East Retail Park, Newport (Proposed Aldi)
 \06 Calculations\Junction Modelling\Regional\Weekday

Report generation date: 28/05/2024 17:33:36

- »Existing junction configuration - 2025 Opening Year Traffic Flows, AM
- »Existing junction configuration - 2025 Opening Year Traffic Flows, PM
- »Existing junction configuration - 2030 Horizon Traffic Flows, AM
- »Existing junction configuration - 2030 Horizon Traffic Flows, PM
- »Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, AM
- »Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Existing junction configuration - 2025 Opening Year Traffic Flows						
Stream B-C	0.1	7.67	0.10	0.5	13.12	0.32
Stream B-A	0.2	15.32	0.13	1.3	33.43	0.57
Stream C-AB	0.1	6.92	0.11	0.4	8.94	0.29
Existing junction configuration - 2030 Horizon Traffic Flows						
Stream B-C	0.1	7.88	0.11	0.6	15.50	0.37
Stream B-A	0.2	16.30	0.15	1.7	42.16	0.64
Stream C-AB	0.1	7.08	0.11	0.5	9.37	0.31
Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic						
Stream B-C	0.2	8.06	0.16	1.5	28.01	0.61
Stream B-A	0.2	17.91	0.16	2.7	70.15	0.76
Stream C-AB	0.2	7.62	0.18	0.7	11.00	0.42

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

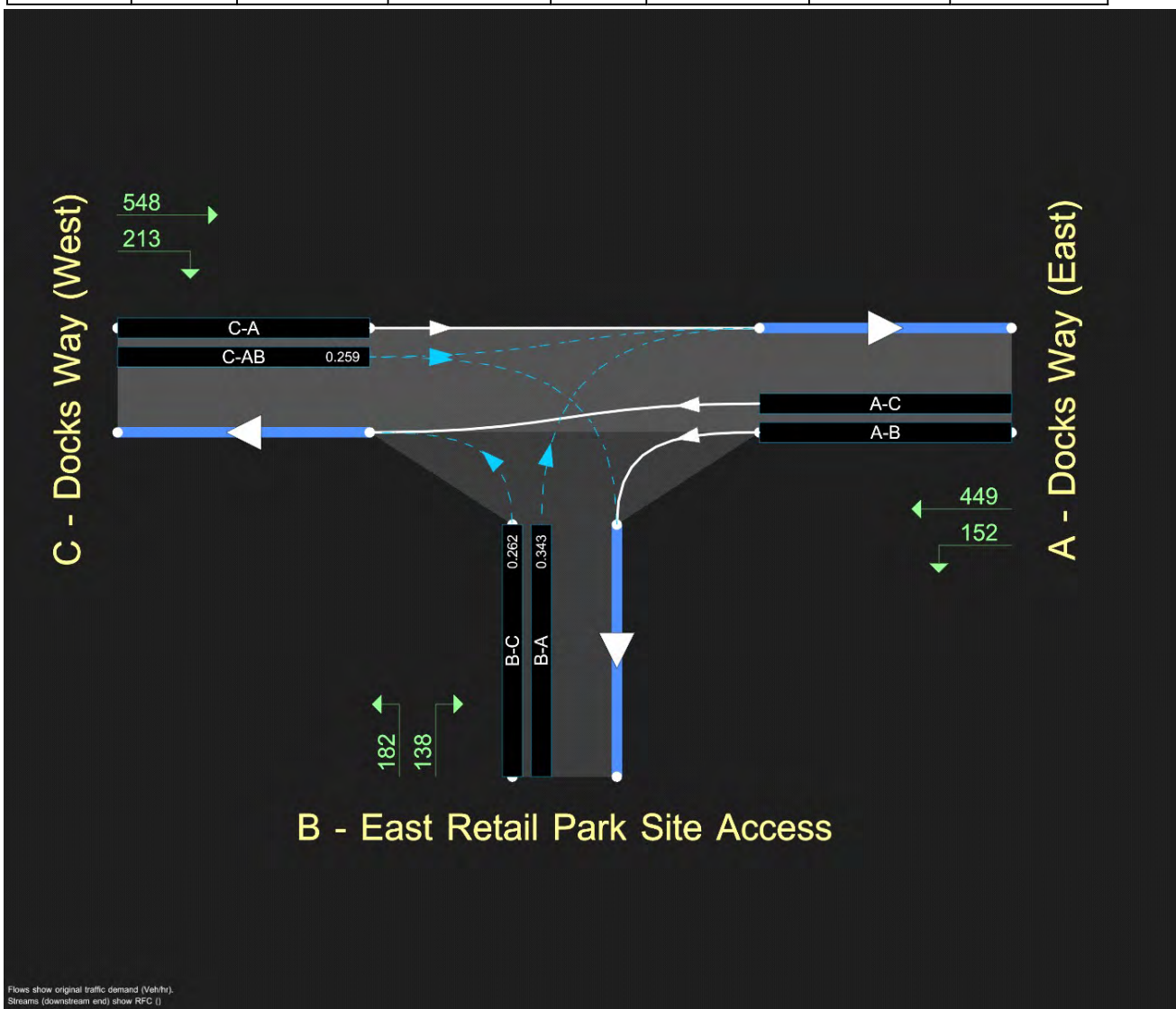
File summary

File Description

Title	Junction Capacity Assessment
Location	East Retail Park, Docks Way, Newport
Site number	Junction 1
Date	28/05/2024
Version	ISSUE
Status	Planning
Identifier	
Client	Newport Lux S.A.R.L
Jobnumber	23-0603
Enumerator	MM
Description	Junction capacity assessment of East Retail Park Access / Docks Way Junction

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Opening Year Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D2	2025 Opening Year Traffic Flows	PM	ONE HOUR	16:00	17:30	15
D3	2030 Horizon Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D4	2030 Horizon Traffic Flows	PM	ONE HOUR	16:00	17:30	15
D5	2030 Horizon Traffic Flows + Development Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2030 Horizon Traffic Flows + Development Traffic	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Existing junction configuration	100.000

Existing junction configuration - 2025 Opening Year Traffic Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.03	A

Arms

Arms

Arm	Name	Description	Arm type
A	Docks Way (East)		Major
B	East Retail Park Site Access		Minor
C	Docks Way (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Docks Way (West)	6.90		✓	2.60	250.0	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - East Retail Park Site Access	One lane plus flare	10.00	7.10	4.40	4.40	4.40		2.00	40	51

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	497	0.087	0.220	0.138	0.314
B-C	684	0.101	0.255	-	-
C-B	750	0.279	0.279	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Opening Year Traffic Flows	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	472	100.000
B - East Retail Park Site Access		✓	82	100.000
C - Docks Way (West)		✓	533	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	From			
	A - Docks Way (East)	0	65	407
	B - East Retail Park Site Access	33	0	49
	C - Docks Way (West)	477	56	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	From			
	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.10	7.67	0.1	A
B-A	0.13	15.32	0.2	C
C-AB	0.11	6.92	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	576	0.064	37	0.1	6.667	A
B-A	25	343	0.073	25	0.1	11.308	B
C-AB	42	635	0.066	42	0.1	6.065	A
C-A	359			359			
A-B	49			49			
A-C	306			306			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	554	0.079	44	0.1	7.055	A
B-A	30	313	0.095	30	0.1	12.712	B
C-AB	50	613	0.082	50	0.1	6.399	A
C-A	429			429			
A-B	58			58			
A-C	366			366			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	523	0.103	54	0.1	7.666	A
B-A	36	271	0.134	36	0.2	15.303	C
C-AB	62	582	0.106	62	0.1	6.914	A
C-A	525			525			
A-B	72			72			
A-C	448			448			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	523	0.103	54	0.1	7.673	A
B-A	36	271	0.134	36	0.2	15.323	C
C-AB	62	582	0.106	62	0.1	6.917	A
C-A	525			525			
A-B	72			72			
A-C	448			448			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	554	0.080	44	0.1	7.064	A
B-A	30	313	0.095	30	0.1	12.730	B
C-AB	50	613	0.082	50	0.1	6.401	A
C-A	429			429			
A-B	58			58			
A-C	366			366			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	576	0.064	37	0.1	6.681	A
B-A	25	343	0.072	25	0.1	11.330	B
C-AB	42	635	0.066	42	0.1	6.074	A
C-A	359			359			
A-B	49			49			
A-C	306			306			

Existing junction configuration - 2025 Opening Year Traffic Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		4.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.77	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Opening Year Traffic Flows	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	571	100.000
B - East Retail Park Site Access		✓	249	100.000
C - Docks Way (West)		✓	673	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	145	426
	B - East Retail Park Site Access	131	0	118
	C - Docks Way (West)	521	152	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.32	13.12	0.5	B
B-A	0.57	33.43	1.3	D
C-AB	0.29	8.94	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	89	517	0.172	88	0.2	8.380	A
B-A	99	339	0.291	97	0.4	14.796	B
C-AB	114	627	0.183	114	0.2	7.005	A
C-A	392			392			
A-B	109			109			
A-C	321			321			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	106	481	0.221	106	0.3	9.597	A
B-A	118	302	0.389	117	0.6	19.308	C
C-AB	137	603	0.227	136	0.3	7.714	A
C-A	468			468			
A-B	130			130			
A-C	383			383			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	130	408	0.318	129	0.5	12.871	B
B-A	144	251	0.574	142	1.2	32.137	D
C-AB	167	570	0.294	167	0.4	8.923	A
C-A	574			574			
A-B	160			160			
A-C	469			469			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	130	404	0.321	130	0.5	13.121	B
B-A	144	251	0.574	144	1.3	33.425	D
C-AB	167	570	0.294	167	0.4	8.944	A
C-A	574			574			
A-B	160			160			
A-C	469			469			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	106	477	0.222	107	0.3	9.740	A
B-A	118	303	0.389	120	0.7	19.996	C
C-AB	137	603	0.227	137	0.3	7.739	A
C-A	468			468			
A-B	130			130			
A-C	383			383			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	89	515	0.173	89	0.2	8.464	A
B-A	99	339	0.291	100	0.4	15.106	C
C-AB	114	627	0.183	115	0.2	7.035	A
C-A	392			392			
A-B	109			109			
A-C	321			321			

Existing junction configuration - 2030 Horizon Traffic Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Horizon Traffic Flows	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	497	100.000
B - East Retail Park Site Access		✓	87	100.000
C - Docks Way (West)		✓	561	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	69	428
	B - East Retail Park Site Access	35	0	52
	C - Docks Way (West)	502	59	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.88	0.1	A
B-A	0.15	16.30	0.2	C
C-AB	0.11	7.08	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	570	0.069	39	0.1	6.769	A
B-A	26	335	0.079	26	0.1	11.656	B
C-AB	44	629	0.071	44	0.1	6.151	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	47	547	0.085	47	0.1	7.194	A
B-A	31	303	0.104	31	0.1	13.246	B
C-AB	53	606	0.088	53	0.1	6.514	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	57	514	0.111	57	0.1	7.876	A
B-A	39	259	0.149	38	0.2	16.269	C
C-AB	65	573	0.113	65	0.1	7.080	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	57	514	0.111	57	0.1	7.885	A
B-A	39	259	0.149	39	0.2	16.297	C
C-AB	65	573	0.113	65	0.1	7.083	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	47	547	0.086	47	0.1	7.207	A
B-A	31	303	0.104	32	0.1	13.271	B
C-AB	53	606	0.088	53	0.1	6.519	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	570	0.069	39	0.1	6.787	A
B-A	26	335	0.079	26	0.1	11.685	B
C-AB	44	629	0.071	44	0.1	6.158	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

Existing junction configuration - 2030 Horizon

Traffic Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		5.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Horizon Traffic Flows	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	601	100.000
B - East Retail Park Site Access		✓	262	100.000
C - Docks Way (West)		✓	708	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	152	449
	B - East Retail Park Site Access	138	0	124
	C - Docks Way (West)	548	160	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.37	15.50	0.6	C
B-A	0.64	42.16	1.7	E
C-AB	0.31	9.37	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	93	508	0.184	92	0.2	8.649	A
B-A	104	329	0.316	102	0.4	15.742	C
C-AB	120	620	0.194	120	0.2	7.178	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	111	467	0.239	111	0.3	10.112	B
B-A	124	291	0.427	123	0.7	21.329	C
C-AB	144	595	0.242	144	0.3	7.968	A
C-A	493			493			
A-B	137			137			
A-C	404			404			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	376	0.363	136	0.6	14.932	B
B-A	152	236	0.643	148	1.6	39.475	E
C-AB	176	561	0.315	176	0.5	9.341	A
C-A	603			603			
A-B	167			167			
A-C	494			494			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	369	0.370	136	0.6	15.500	C
B-A	152	236	0.644	152	1.7	42.164	E
C-AB	176	561	0.315	176	0.5	9.367	A
C-A	603			603			
A-B	167			167			
A-C	494			494			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	111	462	0.242	112	0.3	10.345	B
B-A	124	291	0.426	128	0.8	22.509	C
C-AB	144	595	0.242	144	0.3	7.998	A
C-A	493			493			
A-B	137			137			
A-C	404			404			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	93	505	0.185	94	0.2	8.755	A
B-A	104	329	0.316	105	0.5	16.154	C
C-AB	120	620	0.194	121	0.2	7.212	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.43	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Horizon Traffic Flows + Development Traffic	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	497	100.000
B - East Retail Park Site Access		✓	110	100.000
C - Docks Way (West)		✓	594	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	69	428
	B - East Retail Park Site Access	35	0	75
	C - Docks Way (West)	502	92	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.16	8.06	0.2	A
B-A	0.16	17.91	0.2	C
C-AB	0.18	7.62	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	589	0.096	56	0.1	6.748	A
B-A	26	315	0.084	26	0.1	12.424	B
C-AB	69	629	0.110	69	0.1	6.416	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	564	0.119	67	0.1	7.242	A
B-A	31	284	0.111	31	0.1	14.265	B
C-AB	83	606	0.136	83	0.2	6.876	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	529	0.156	82	0.2	8.048	A
B-A	39	239	0.161	38	0.2	17.872	C
C-AB	101	574	0.177	101	0.2	7.615	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	529	0.156	83	0.2	8.061	A
B-A	39	239	0.161	39	0.2	17.913	C
C-AB	101	574	0.177	101	0.2	7.621	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	564	0.120	68	0.1	7.261	A
B-A	31	284	0.111	32	0.1	14.305	B
C-AB	83	606	0.136	83	0.2	6.885	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	588	0.096	57	0.1	6.777	A
B-A	26	315	0.084	26	0.1	12.464	B
C-AB	69	629	0.110	69	0.1	6.429	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		9.98	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.98	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Horizon Traffic Flows + Development Traffic	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	601	100.000
B - East Retail Park Site Access		✓	320	100.000
C - Docks Way (West)		✓	761	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	152	449
	B - East Retail Park Site Access	138	0	182
	C - Docks Way (West)	548	213	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.61	28.01	1.5	D
B-A	0.76	70.15	2.7	F
C-AB	0.42	11.00	0.7	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	522	0.262	136	0.4	9.277	A
B-A	104	303	0.343	102	0.5	17.730	C
C-AB	160	620	0.259	159	0.3	7.785	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	164	473	0.346	163	0.5	11.583	B
B-A	124	262	0.473	123	0.9	25.557	D
C-AB	192	595	0.322	191	0.5	8.899	A
C-A	492			492			
A-B	137			137			
A-C	404			404			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	200	345	0.580	197	1.3	23.810	C
B-A	152	201	0.756	146	2.5	59.374	F
C-AB	236	563	0.419	235	0.7	10.939	B
C-A	602			602			
A-B	167			167			
A-C	494			494			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	200	327	0.613	200	1.5	28.006	D
B-A	152	200	0.761	151	2.7	70.150	F
C-AB	236	563	0.419	236	0.7	11.002	B
C-A	602			602			
A-B	167			167			
A-C	494			494			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	164	462	0.354	167	0.6	12.380	B
B-A	124	262	0.473	131	0.9	28.836	D
C-AB	192	595	0.322	193	0.5	8.962	A
C-A	492			492			
A-B	137			137			
A-C	404			404			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	519	0.264	138	0.4	9.470	A
B-A	104	303	0.343	106	0.5	18.390	C
C-AB	160	620	0.259	161	0.4	7.849	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

Appendix I: PICADY Output Report – Saturday Results

Junctions 10			
PICADY 10 - Priority Intersection Module			
Version: 10.0.4.1693			
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Filename: 23-0603-PICADY SATURDAY-DRAFT-MM.j10

Path: C:\Users\MattMauler\Cotswold Transport Planning Ltd\Project 2023 - 23-0603 - East Retail Park, Newport (Proposed Aldi) \06 Calculations\Junction Modelling\Regional\Saturday

Report generation date: 29/05/2024 10:50:11

«Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, Saturday Operational Peak

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	Saturday Operational Peak		
	Queue (Veh)	Delay (s)	RFC
Existing junction configuration - 2025 Opening Year Traffic Flows			
Stream B-C	10.0	126.23	0.95
Stream B-A	7.0	161.49	0.92
Stream C-AB	0.8	11.04	0.44
Existing junction configuration - 2030 Horizon Traffic Flows			
Stream B-C	26.1	303.92	1.06
Stream B-A	15.6	332.09	1.04
Stream C-AB	0.9	11.80	0.47
Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic			
Stream B-C	73.9	756.73	1.23
Stream B-A	34.6	781.43	1.21
Stream C-AB	1.5	15.02	0.59

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

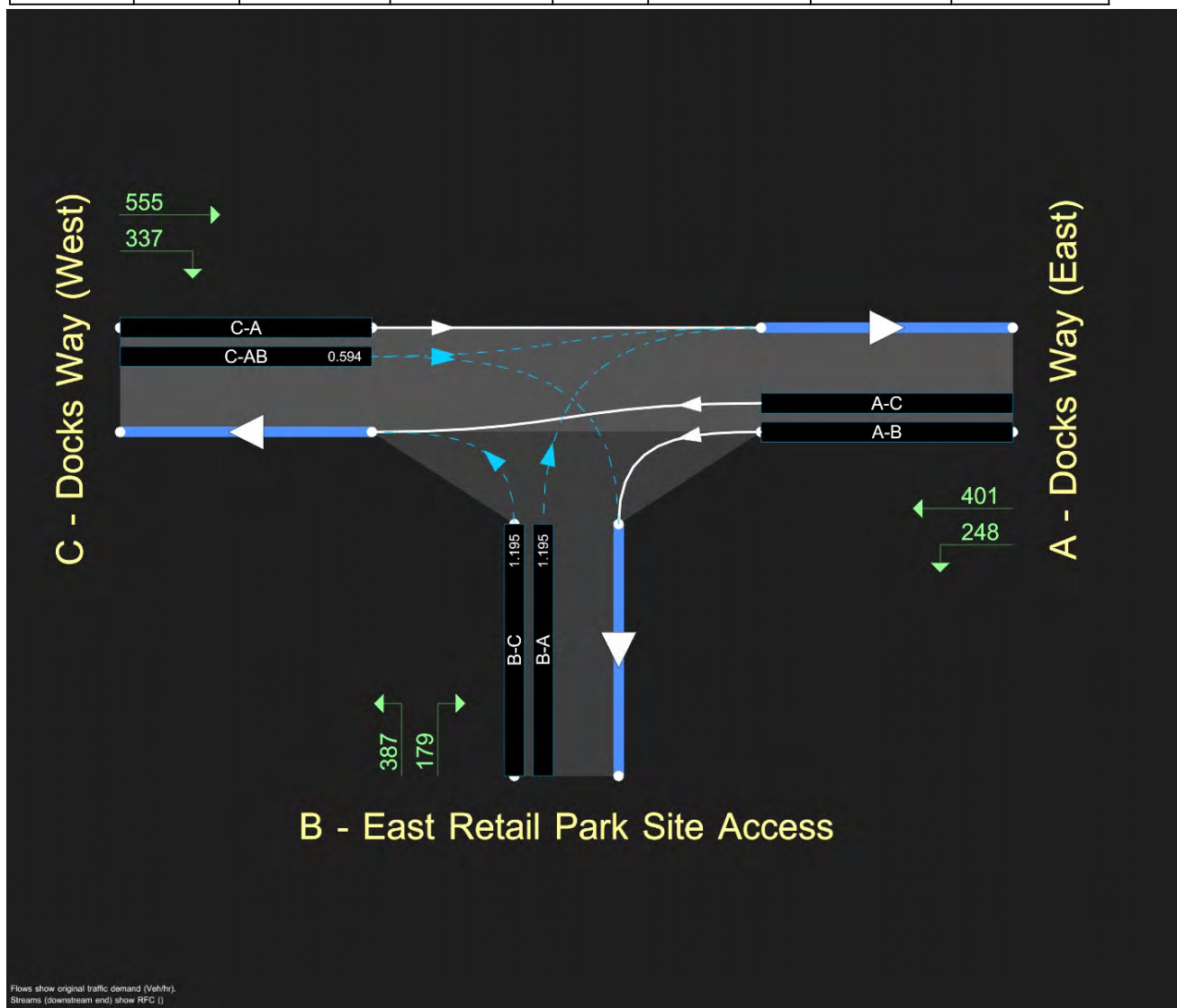
File summary

File Description

Title	Junction Capacity Assessment
Location	East Retail Park, Docks Way, Newport
Site number	Junction 1
Date	28/05/2024
Version	ISSUE
Status	Planning
Identifier	
Client	Newport Lux S.A.R.L
Jobnumber	23-0603
Enumerator	MM
Description	Junction capacity assessment of East Retail Park Access / Docks Way Junction

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Existing junction configuration	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2030 Horizon Traffic Flows + Development Traffic	Saturday Operational Peak	FLAT	12:15	13:15	60	15

Existing junction configuration - 2030 Horizon Traffic Flows + Development Traffic, Saturday Operational Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - East Retail Park Site Access - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		206.75	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	206.75	F

Arms

Arms

Arm	Name	Description	Arm type
A	Docks Way (East)		Major
B	East Retail Park Site Access		Minor
C	Docks Way (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Docks Way (West)	6.90		✓	2.60	250.0	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - East Retail Park Site Access	One lane plus flare	10.00	7.10	4.40	4.40	4.40		2.00	40	51

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	479	0.084	0.212	0.133	0.303
B-C	707	0.104	0.263	-	-
C-B	750	0.279	0.279	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	649	100.000
B - East Retail Park Site Access		✓	566	100.000
C - Docks Way (West)		✓	892	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	248	401
	B - East Retail Park Site Access	179	0	387
	C - Docks Way (West)	555	337	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	2
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	1.23	756.73	73.9	F
B-A	1.21	781.43	34.6	F
C-AB	0.59	15.02	1.5	C
C-A				
A-B				
A-C				

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	324	1.195	308	19.7	136.359	F
B-A	179	150	1.195	137	10.5	174.016	F
C-AB	352	592	0.594	346	1.5	14.353	B
C-A	540			540			
A-B	248			248			
A-C	401			401			

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	314	1.233	312	38.3	355.713	F
B-A	179	149	1.201	147	18.6	396.980	F
C-AB	352	592	0.594	351	1.5	14.998	B
C-A	540			540			
A-B	248			248			
A-C	401			401			

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	316	1.225	315	56.3	557.934	F
B-A	179	148	1.208	147	26.6	589.089	F
C-AB	352	592	0.594	351	1.5	15.016	C
C-A	540			540			
A-B	248			248			
A-C	401			401			

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	317	1.221	317	73.9	756.733	F
B-A	179	148	1.211	147	34.6	781.425	F
C-AB	352	592	0.594	352	1.5	15.018	C
C-A	540			540			
A-B	248			248			
A-C	401			401			

Appendix J: Proposed Access Junction Mitigation Plan

Proposed Site Acces / Internal Access Road Dimensions

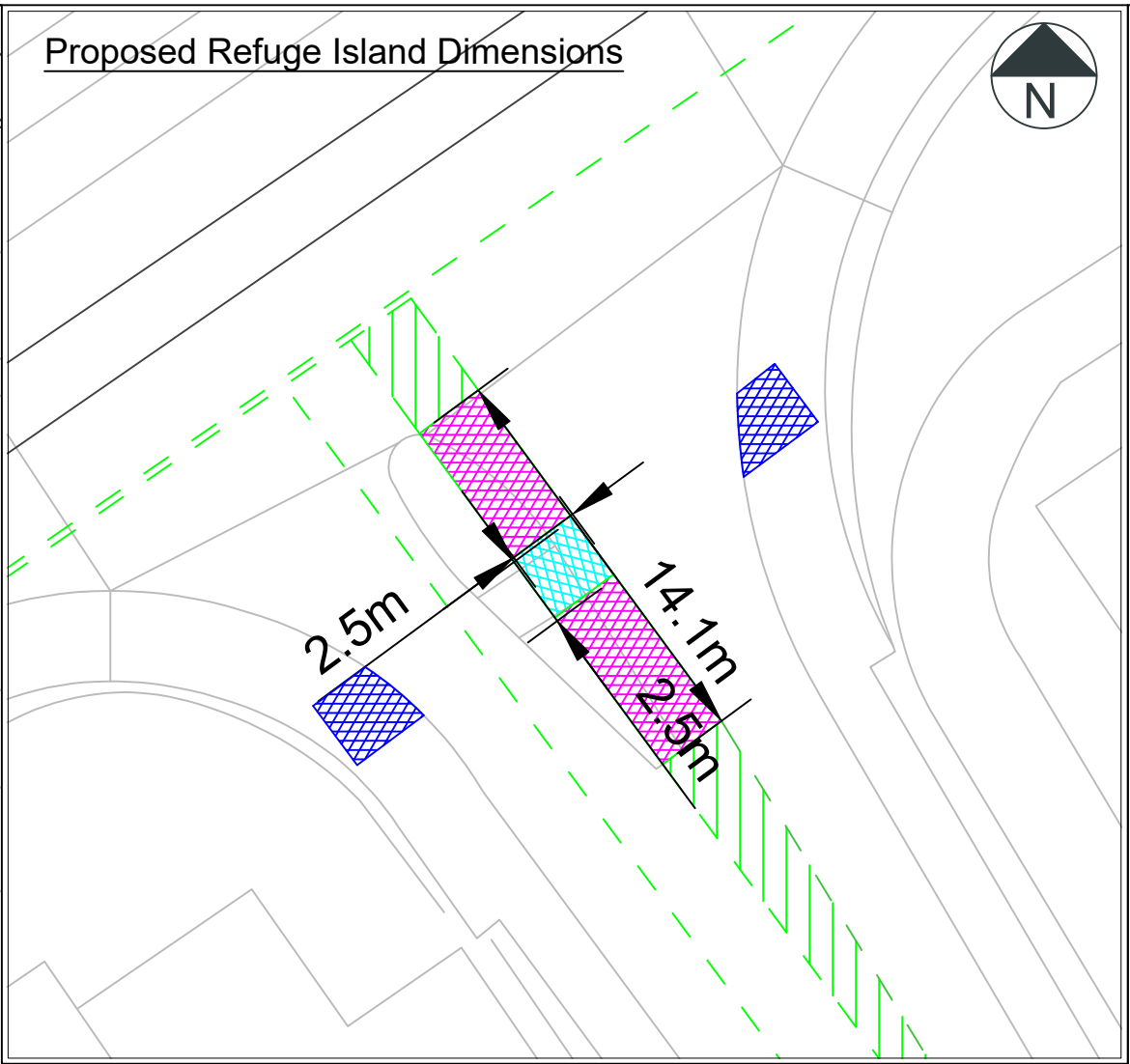
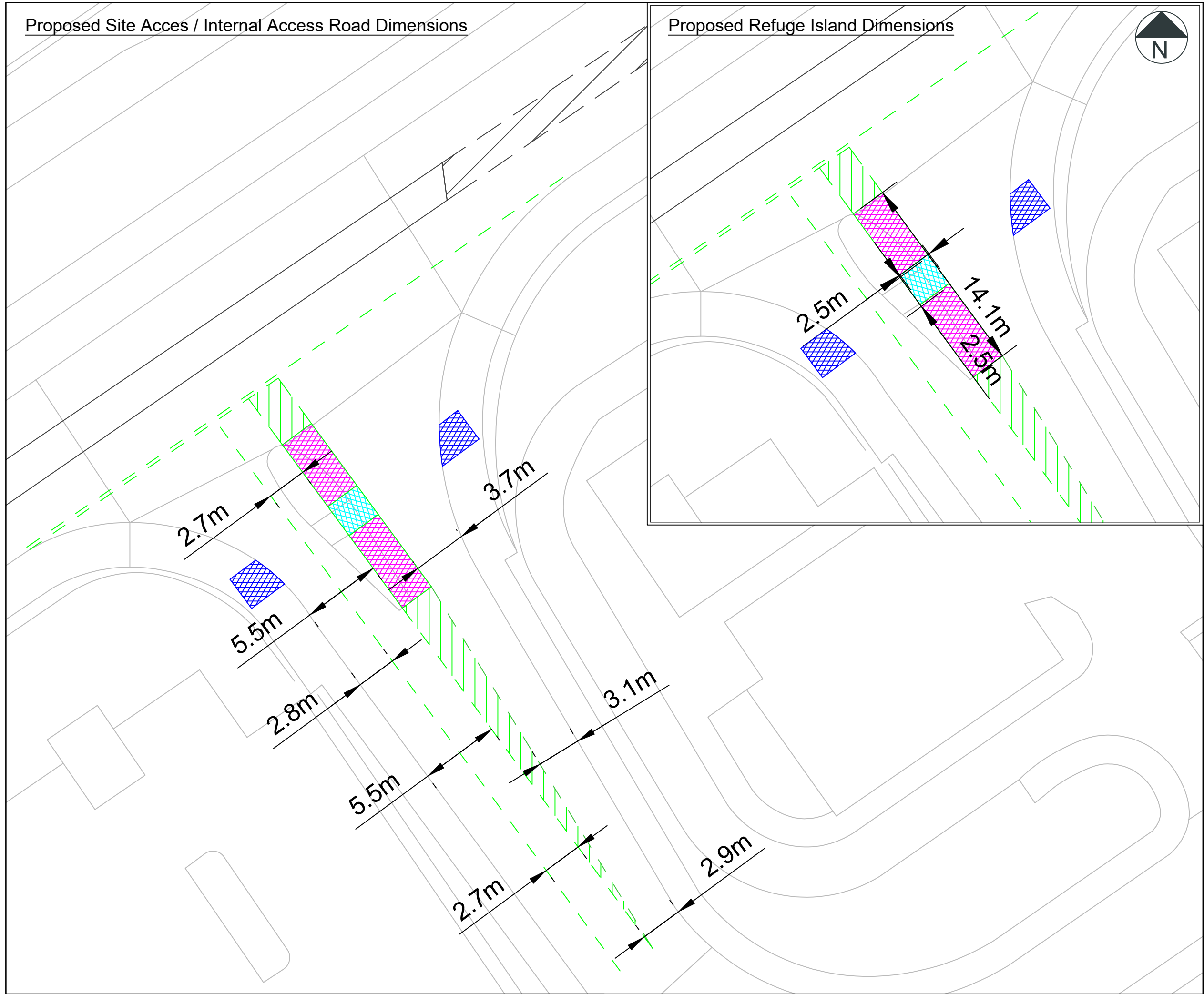
Proposed Refuge Island Dimensions



- Notes:
- 1. Do not scale from this drawing. All dimensions are in metres, unless stated otherwise.
 - 2. Ordnance Survey, (c) Crown Copyright 2023. All rights reserved. Licence number 100022432.
 - 3. Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.

Key:

-  Proposed carriageway hatching
-  Proposed carriageway markings to allow for widening and two-lane approach
-  Proposed refuge island level surface
-  Proposed refuge island crossing point, in accordance with guidance within LTN1/20
-  Indicative existing crossing provision



Rev	Date	Details	By	Chkd
-	-	-	-	-



CLIENT:
Newport Lux S.A.R.L

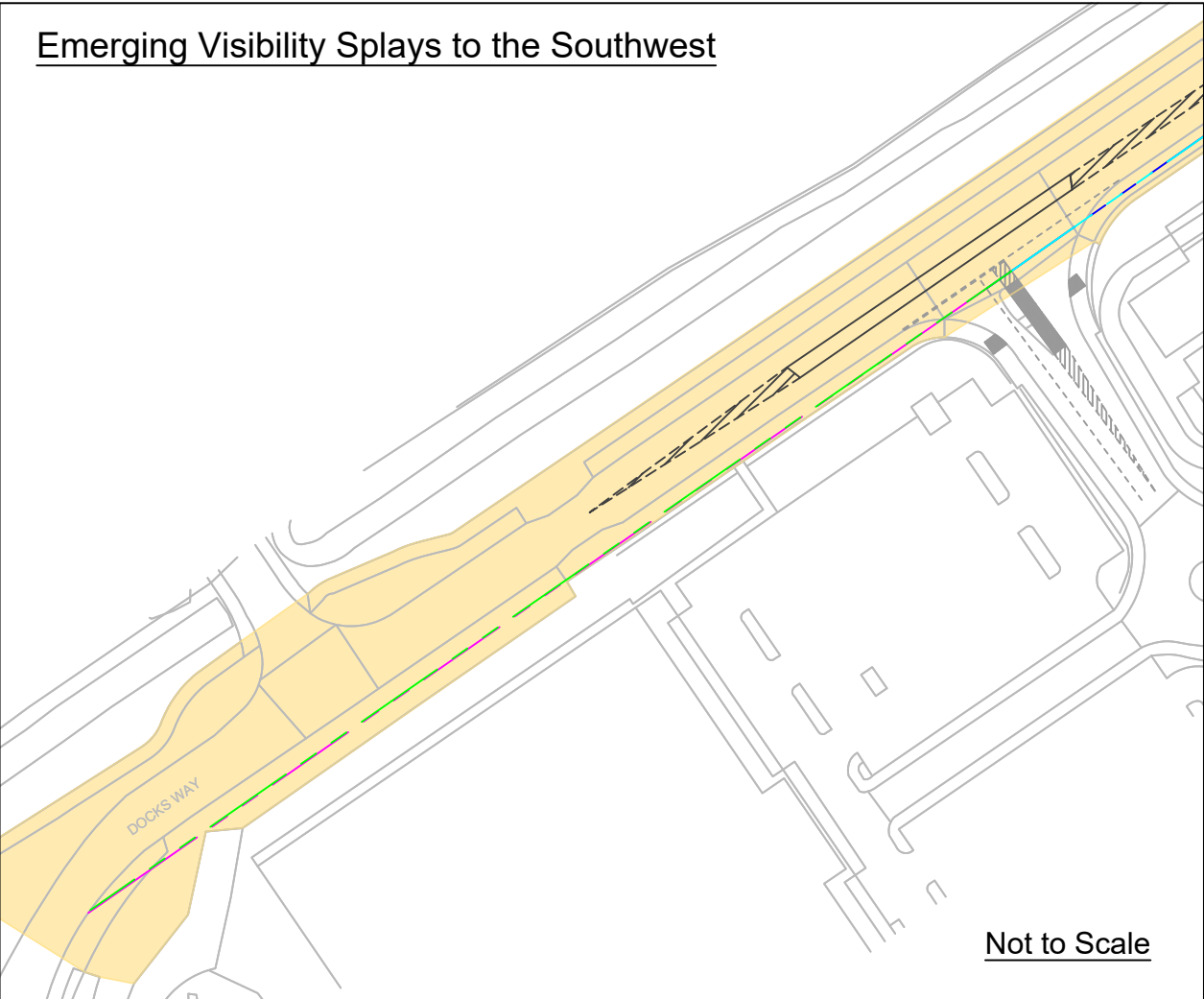
PROJECT:
Units 3 and 4, East Retail Park
Newport

TITLE:
Proposed Site Access Mitigation

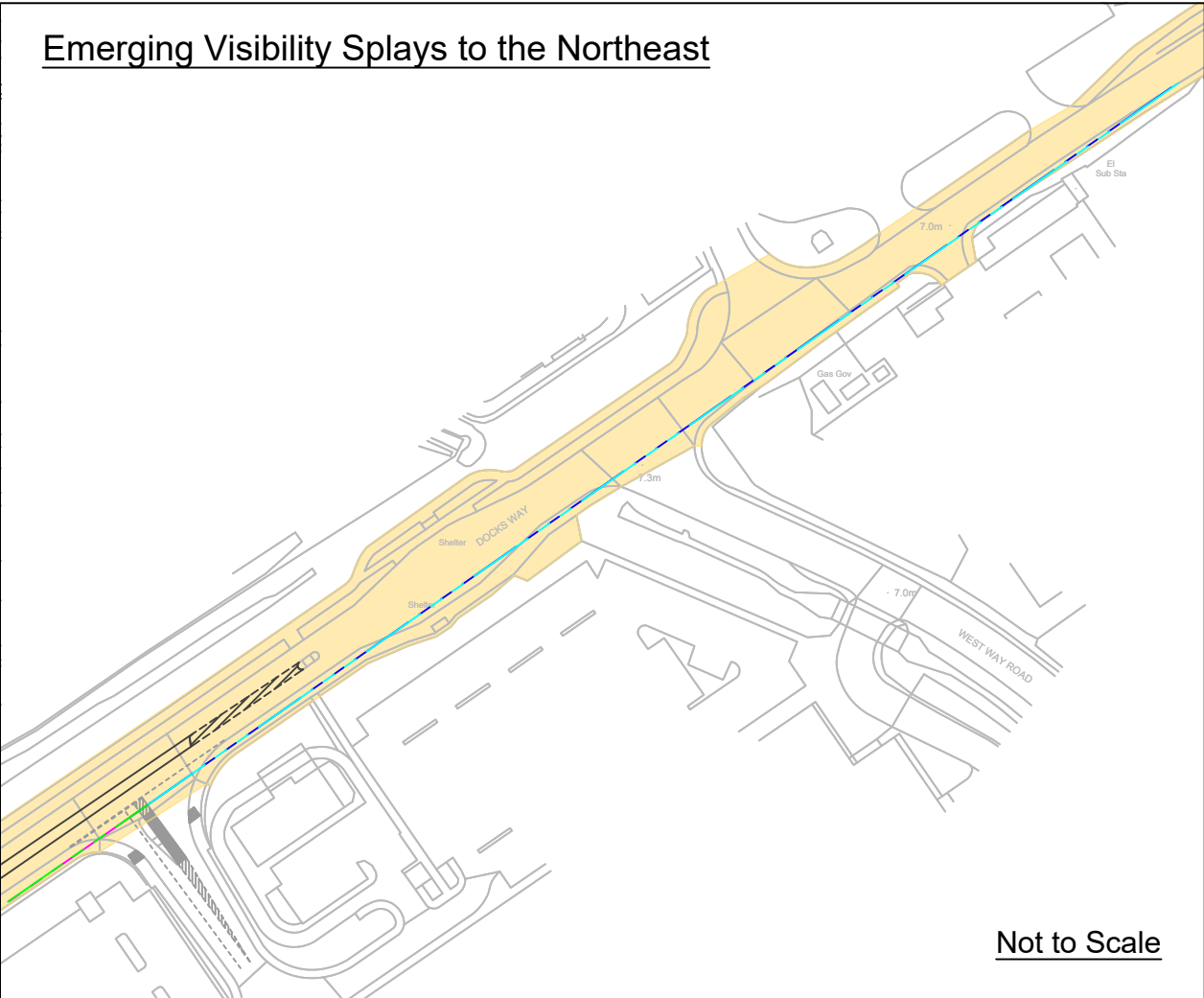
SCALE @ A3: 1:250	DATE: 31.05.24	DRAWN: MM	CHECKED: TS	APPROVED: AP
STATUS: INFORMATION				
DRAWING NO: 230603-RAP-XX-XX-DR-TP-3200				REVISION: -

Appendix K: Proposed Access Arrangement Analysis Plan

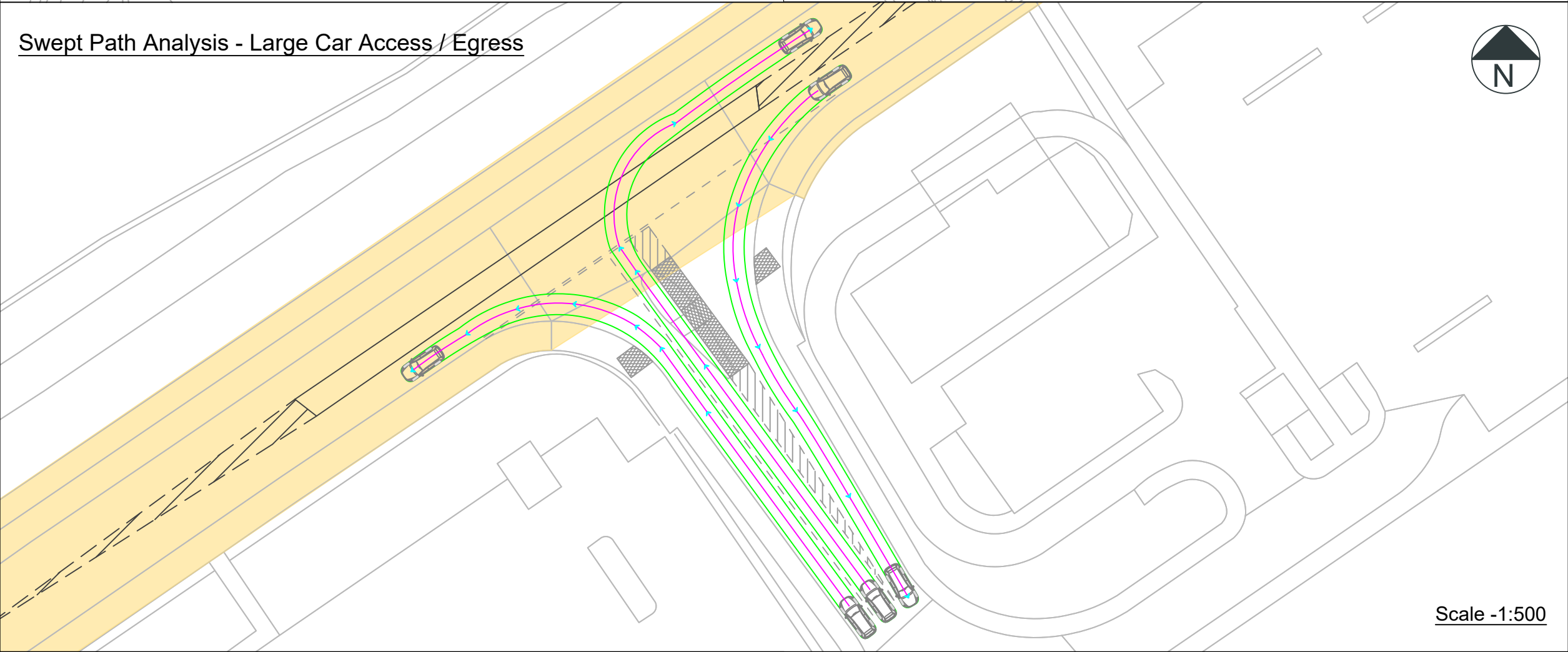
Emerging Visibility Splays to the Southwest



Emerging Visibility Splays to the Northeast



Swept Path Analysis - Large Car Access / Egress

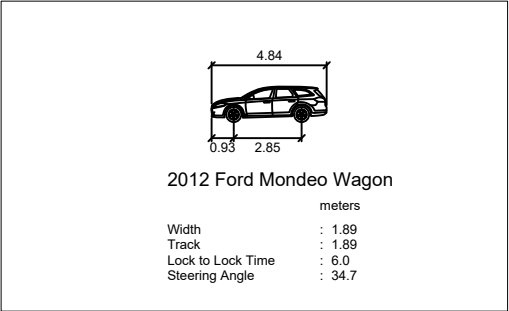


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3. Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.

Key:

- Assumed extent of adopted highway - to be updated in due course upon receipt of highway record information
- Maximum achievable emerging visibility splay of 2.4m x 188.4m to the southwest (measured from centreline marking between exit lanes)
- Maximum achievable emerging visibility splay of 2.4m x 370.2m to the northeast (measured from centreline marking between exit lanes)
- Maximum achievable emerging visibility splay of 2.4m x 193.2m to the southwest (measured from centreline of minor arm)
- Maximum achievable emerging visibility splay of 2.4m x 303.8m to the northeast (measured from centreline of minor arm)



Rev	Date	Details	By	Chkd
-	-	-	-	-



CLIENT: Newport Lux S.A.R.L

PROJECT: Units 3 and 4, East Retail Park
Newport

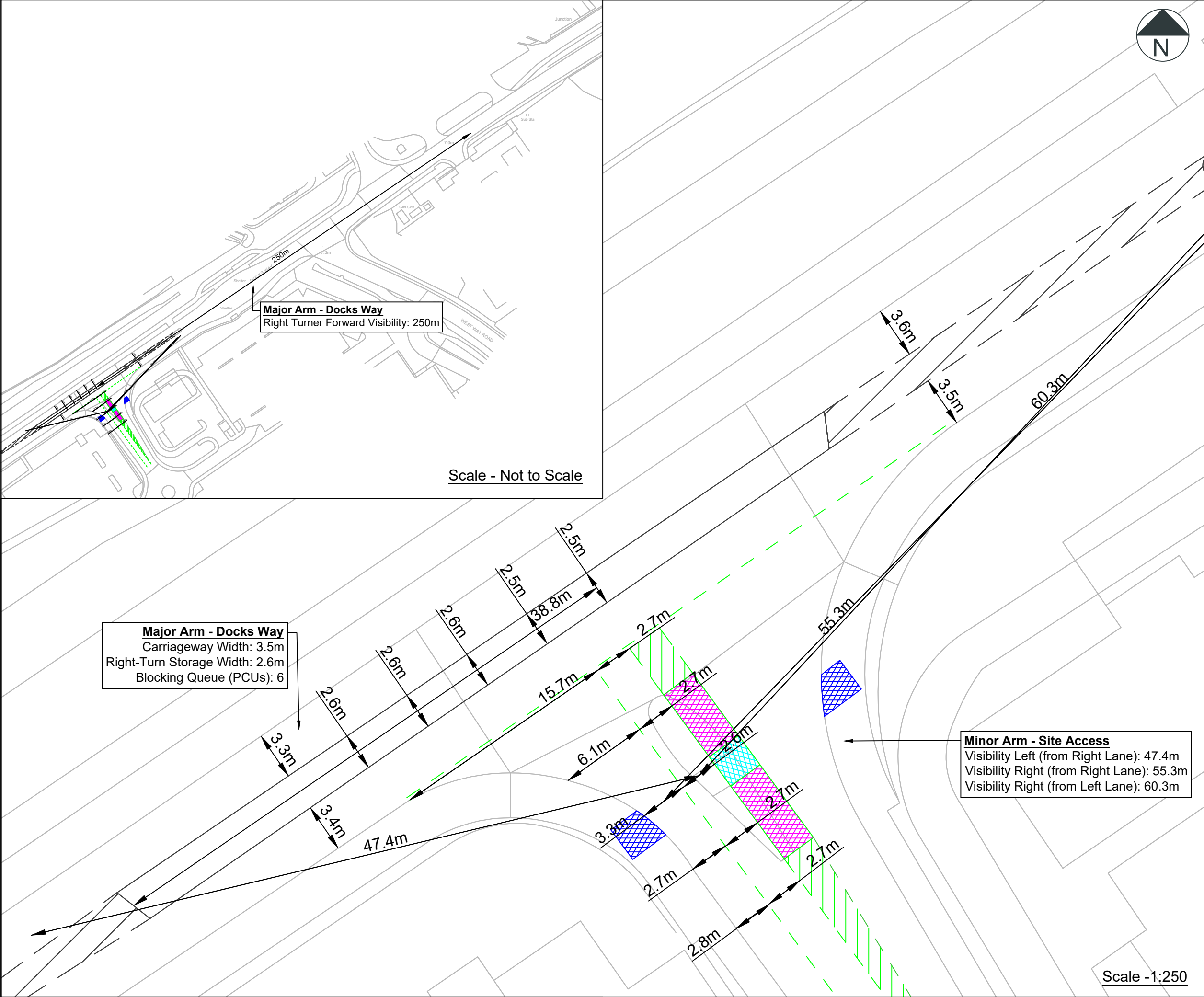
TITLE: Proposed Access Arrangements -
Visibility Splay & Swept Path Analysis

SCALE @ A3:	DATE:	DRAWN:	CHECKED:	APPROVED:
As Shown	31.05.24	MM	TS	AP

STATUS: INFORMATION

DRAWING NO:	REVISION:
230603-RAP-XX-XX-DR-TP-3301	-

Appendix L: Proposed Access Junction Mitigation Geometry Plan



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 - Drawing to be read in conjunction with all other drawings. Any discrepancies are to be reported to the engineer 5 working days in advance of undertaking any work.

- Key:**
- Proposed carriageway hatching
 - Proposed carriageway markings to allow for widening and two-lane approach
 - Proposed refuge island level surface
 - Proposed refuge island crossing point, in accordance with guidance within LTN1/20
 - Indicative existing crossing provision

Rev	Date	Details	By	Chkd
-	-	-	-	-



CLIENT: Newport Lux S.A.R.L

PROJECT: Units 3 and 4, East Retail Park
Newport

TITLE: Proposed East Retail Park Access Mitigation
Geometry Measurements

SCALE @ A3: As Shown	DATE: 31.05.24	DRAWN: MM	CHECKED: TS	APPROVED: AP
STATUS: INFORMATION				
DRAWING NO: 230603-RAP-XX-XX-DR-TP-3301				REVISION: -

Appendix M: PICADY Output Report (Mitigation Scenario) – Weekday Results

Junctions 10		
PICADY 10 - Priority Intersection Module		
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021		
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Filename: 23-0603-PICADY WEEKDAY-DRAFT-SENS-MM.j10

Path: C:\Users\MattMauler\Cotswold Transport Planning Ltd\Project 2023 - 23-0603 - East Retail Park, Newport (Proposed Aldi) \06 Calculations\Junction Modelling\Regional\Sensitivity

Report generation date: 31/05/2024 10:09:33

- »Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows, AM
- »Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows, PM
- »Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows, AM
- »Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows, PM
- »Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, AM
- »Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows						
Stream B-C	0.1	7.35	0.10	0.4	10.32	0.27
Stream B-A	0.2	15.07	0.13	1.4	35.59	0.59
Stream C-AB	0.1	6.92	0.11	0.4	8.94	0.29
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows						
Stream B-C	0.1	7.55	0.11	0.4	11.08	0.30
Stream B-A	0.2	16.03	0.15	1.8	44.82	0.66
Stream C-AB	0.1	7.08	0.11	0.5	9.37	0.31
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic						
Stream B-C	0.2	7.98	0.15	0.8	14.32	0.44
Stream B-A	0.2	16.87	0.15	2.3	57.63	0.72
Stream C-AB	0.2	7.62	0.18	0.7	11.00	0.42

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

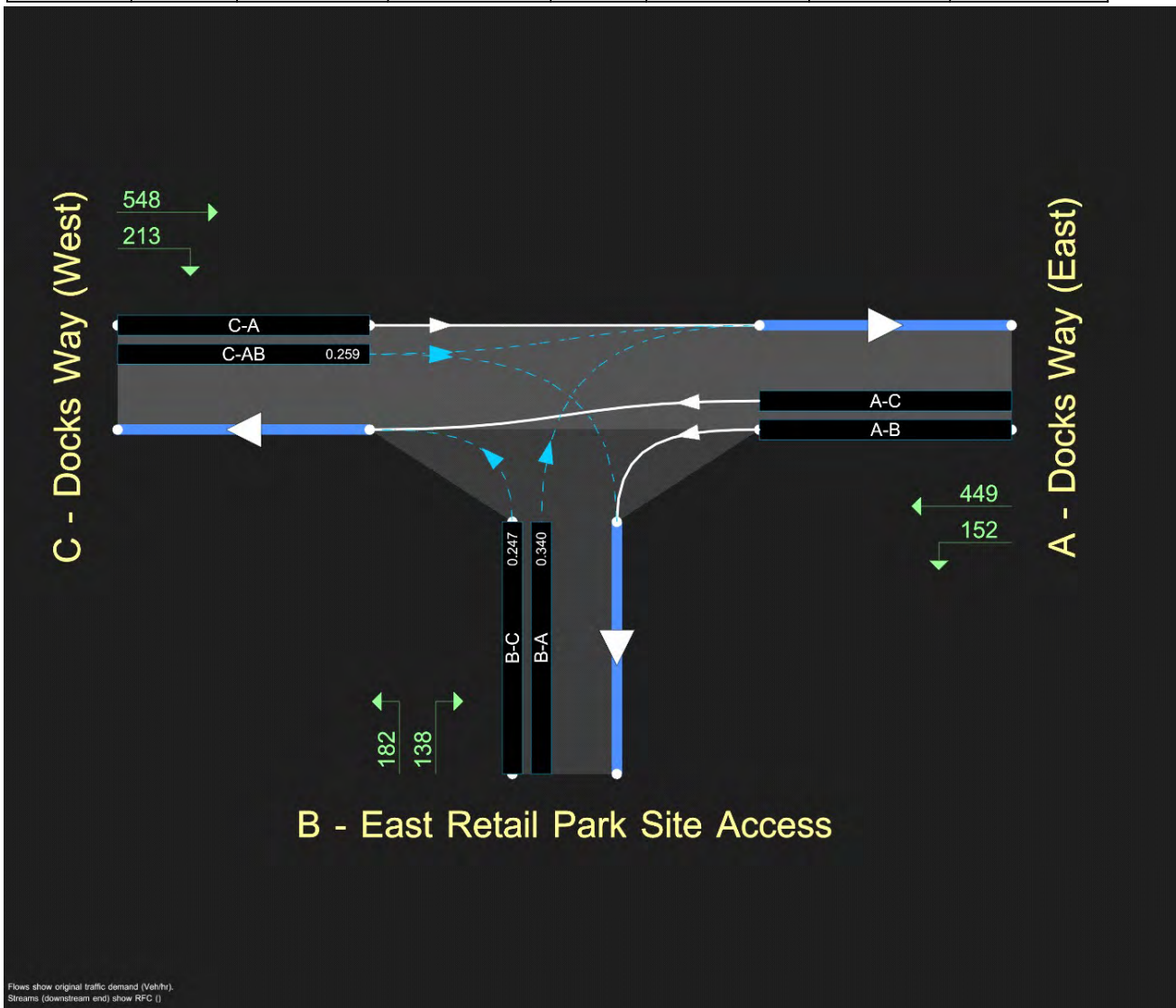
File summary

File Description

Title	Junction Capacity Assessment
Location	East Retail Park, Docks Way, Newport
Site number	Junction 1
Date	31/05/2024
Version	ISSUE
Status	Planning
Identifier	
Client	Newport Lux S.A.R.L
Jobnumber	23-0603
Enumerator	MM
Description	Junction capacity assessment of East Retail Park Access / Docks Way Junction

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Opening Year Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D2	2025 Opening Year Traffic Flows	PM	ONE HOUR	16:00	17:30	15
D3	2030 Horizon Traffic Flows	AM	ONE HOUR	08:00	09:30	15
D4	2030 Horizon Traffic Flows	PM	ONE HOUR	16:00	17:30	15
D5	2030 Horizon Traffic Flows + Development Traffic	AM	ONE HOUR	08:00	09:30	15
D6	2030 Horizon Traffic Flows + Development Traffic	PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Proposed Junction Mitigation Configuration	100.000

Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.01	A

Arms

Arms

Arm	Name	Description	Arm type
A	Docks Way (East)		Major
B	East Retail Park Site Access		Minor
C	Docks Way (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Docks Way (West)	6.90		✓	2.60	250.0	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - East Retail Park Site Access	Two lanes	3.76	2.68	47	58

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	505	0.088	0.223	0.140	0.319
B-C	710	0.105	0.264	-	-
C-B	750	0.279	0.279	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2025 Opening Year Traffic Flows	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	472	100.000
B - East Retail Park Site Access		✓	82	100.000
C - Docks Way (West)		✓	533	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	65	407
	B - East Retail Park Site Access	33	0	49
	C - Docks Way (West)	477	56	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.10	7.35	0.1	A
B-A	0.13	15.07	0.2	C
C-AB	0.11	6.92	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	598	0.062	37	0.1	6.404	A
B-A	25	348	0.071	25	0.1	11.127	B
C-AB	42	635	0.066	42	0.1	6.065	A
C-A	359			359			
A-B	49			49			
A-C	306			306			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	576	0.077	44	0.1	6.768	A
B-A	30	317	0.094	30	0.1	12.509	B
C-AB	50	613	0.082	50	0.1	6.399	A
C-A	429			429			
A-B	58			58			
A-C	366			366			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	544	0.099	54	0.1	7.344	A
B-A	36	275	0.132	36	0.1	15.048	C
C-AB	62	582	0.106	62	0.1	6.914	A
C-A	525			525			
A-B	72			72			
A-C	448			448			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	544	0.099	54	0.1	7.348	A
B-A	36	275	0.132	36	0.2	15.073	C
C-AB	62	582	0.106	62	0.1	6.917	A
C-A	525			525			
A-B	72			72			
A-C	448			448			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	576	0.077	44	0.1	6.773	A
B-A	30	317	0.094	30	0.1	12.537	B
C-AB	50	613	0.082	50	0.1	6.401	A
C-A	429			429			
A-B	58			58			
A-C	366			366			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	598	0.062	37	0.1	6.413	A
B-A	25	348	0.071	25	0.1	11.158	B
C-AB	42	635	0.066	42	0.1	6.074	A
C-A	359			359			
A-B	49			49			
A-C	306			306			

Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		4.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.74	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2025 Opening Year Traffic Flows	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	571	100.000
B - East Retail Park Site Access		✓	249	100.000
C - Docks Way (West)		✓	673	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	145	426
	B - East Retail Park Site Access	131	0	118
	C - Docks Way (West)	521	152	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.27	10.32	0.4	B
B-A	0.59	35.59	1.4	E
C-AB	0.29	8.94	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	89	565	0.157	88	0.2	7.540	A
B-A	99	327	0.301	97	0.4	15.529	C
C-AB	114	627	0.183	114	0.2	7.005	A
C-A	392			392			
A-B	109			109			
A-C	321			321			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	106	531	0.200	106	0.2	8.456	A
B-A	118	292	0.403	117	0.7	20.389	C
C-AB	137	603	0.227	136	0.3	7.714	A
C-A	468			468			
A-B	130			130			
A-C	383			383			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	130	480	0.271	129	0.4	10.247	B
B-A	144	245	0.589	142	1.3	34.020	D
C-AB	167	570	0.294	167	0.4	8.923	A
C-A	574			574			
A-B	160			160			
A-C	469			469			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	130	479	0.271	130	0.4	10.323	B
B-A	144	245	0.590	144	1.4	35.589	E
C-AB	167	570	0.294	167	0.4	8.944	A
C-A	574			574			
A-B	160			160			
A-C	469			469			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	106	529	0.200	107	0.3	8.525	A
B-A	118	292	0.403	120	0.7	21.268	C
C-AB	137	603	0.227	137	0.3	7.739	A
C-A	468			468			
A-B	130			130			
A-C	383			383			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	89	564	0.158	89	0.2	7.594	A
B-A	99	327	0.302	100	0.4	15.920	C
C-AB	114	627	0.183	115	0.2	7.035	A
C-A	392			392			
A-B	109			109			
A-C	321			321			

Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.06	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Horizon Traffic Flows	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	497	100.000
B - East Retail Park Site Access		✓	87	100.000
C - Docks Way (West)		✓	561	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	69	428
	B - East Retail Park Site Access	35	0	52
	C - Docks Way (West)	502	59	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.11	7.55	0.1	A
B-A	0.15	16.03	0.2	C
C-AB	0.11	7.08	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	592	0.066	39	0.1	6.501	A
B-A	26	340	0.078	26	0.1	11.470	B
C-AB	44	629	0.071	44	0.1	6.151	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	47	568	0.082	47	0.1	6.900	A
B-A	31	307	0.102	31	0.1	13.032	B
C-AB	53	606	0.088	53	0.1	6.514	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	57	534	0.107	57	0.1	7.540	A
B-A	39	263	0.146	38	0.2	15.994	C
C-AB	65	573	0.113	65	0.1	7.080	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	57	534	0.107	57	0.1	7.545	A
B-A	39	263	0.146	39	0.2	16.027	C
C-AB	65	573	0.113	65	0.1	7.083	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	47	568	0.082	47	0.1	6.905	A
B-A	31	307	0.102	32	0.1	13.068	B
C-AB	53	606	0.088	53	0.1	6.519	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	39	592	0.066	39	0.1	6.510	A
B-A	26	339	0.078	26	0.1	11.506	B
C-AB	44	629	0.071	44	0.1	6.158	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		5.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.64	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Horizon Traffic Flows	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	601	100.000
B - East Retail Park Site Access		✓	262	100.000
C - Docks Way (West)		✓	708	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	152	449
	B - East Retail Park Site Access	138	0	124
	C - Docks Way (West)	548	160	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.30	11.08	0.4	B
B-A	0.66	44.82	1.8	E
C-AB	0.31	9.37	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	93	556	0.168	93	0.2	7.753	A
B-A	104	318	0.327	102	0.5	16.544	C
C-AB	120	620	0.194	120	0.2	7.178	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	111	520	0.214	111	0.3	8.804	A
B-A	124	281	0.441	123	0.8	22.566	C
C-AB	144	595	0.242	144	0.3	7.968	A
C-A	493			493			
A-B	137			137			
A-C	404			404			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	464	0.294	136	0.4	10.964	B
B-A	152	231	0.658	148	1.7	41.640	E
C-AB	176	561	0.315	176	0.5	9.341	A
C-A	603			603			
A-B	167			167			
A-C	494			494			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	461	0.296	137	0.4	11.078	B
B-A	152	231	0.658	152	1.8	44.820	E
C-AB	176	561	0.315	176	0.5	9.367	A
C-A	603			603			
A-B	167			167			
A-C	494			494			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	111	517	0.216	112	0.3	8.902	A
B-A	124	281	0.442	128	0.8	24.072	C
C-AB	144	595	0.242	144	0.3	7.998	A
C-A	493			493			
A-B	137			137			
A-C	404			404			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	93	554	0.168	94	0.2	7.818	A
B-A	104	317	0.327	105	0.5	17.065	C
C-AB	120	620	0.194	121	0.2	7.212	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		1.40	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.40	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Horizon Traffic Flows + Development Traffic	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	497	100.000
B - East Retail Park Site Access		✓	110	100.000
C - Docks Way (West)		✓	594	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	69	428
	B - East Retail Park Site Access	35	0	75
	C - Docks Way (West)	502	92	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	18
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.15	7.98	0.2	A
B-A	0.15	16.87	0.2	C
C-AB	0.18	7.62	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	592	0.095	56	0.1	6.712	A
B-A	26	332	0.079	26	0.1	11.752	B
C-AB	69	629	0.110	69	0.1	6.416	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	568	0.119	67	0.1	7.184	A
B-A	31	298	0.105	31	0.1	13.477	B
C-AB	83	606	0.136	83	0.2	6.876	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	534	0.155	82	0.2	7.970	A
B-A	39	252	0.153	38	0.2	16.827	C
C-AB	101	574	0.177	101	0.2	7.615	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	83	534	0.155	83	0.2	7.979	A
B-A	39	252	0.153	39	0.2	16.868	C
C-AB	101	574	0.177	101	0.2	7.621	A
C-A	553			553			
A-B	76			76			
A-C	471			471			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	67	568	0.119	68	0.1	7.198	A
B-A	31	298	0.106	32	0.1	13.518	B
C-AB	83	606	0.136	83	0.2	6.885	A
C-A	451			451			
A-B	62			62			
A-C	385			385			

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	592	0.095	57	0.1	6.725	A
B-A	26	332	0.079	26	0.1	11.798	B
C-AB	69	629	0.110	69	0.1	6.429	A
C-A	378			378			
A-B	52			52			
A-C	322			322			

Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		7.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.52	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Horizon Traffic Flows + Development Traffic	PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	601	100.000
B - East Retail Park Site Access		✓	320	100.000
C - Docks Way (West)		✓	761	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
From		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	152	449
	B - East Retail Park Site Access	138	0	182
	C - Docks Way (West)	548	213	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
	A - Docks Way (East)	0	0	4
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.44	14.32	0.8	B
B-A	0.72	57.63	2.3	F
C-AB	0.42	11.00	0.7	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	554	0.247	136	0.3	8.583	A
B-A	104	305	0.340	102	0.5	17.545	C
C-AB	160	620	0.259	159	0.3	7.785	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	164	516	0.317	163	0.5	10.192	B
B-A	124	266	0.466	123	0.8	24.879	C
C-AB	192	595	0.322	191	0.5	8.899	A
C-A	492			492			
A-B	137			137			
A-C	404			404			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	200	455	0.440	199	0.8	13.996	B
B-A	152	212	0.715	147	2.1	51.395	F
C-AB	236	563	0.419	235	0.7	10.939	B
C-A	602			602			
A-B	167			167			
A-C	494			494			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	200	452	0.444	200	0.8	14.317	B
B-A	152	212	0.716	151	2.3	57.630	F
C-AB	236	563	0.419	236	0.7	11.002	B
C-A	602			602			
A-B	167			167			
A-C	494			494			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	164	512	0.320	165	0.5	10.414	B
B-A	124	266	0.467	129	0.9	27.388	D
C-AB	192	595	0.322	193	0.5	8.962	A
C-A	492			492			
A-B	137			137			
A-C	404			404			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	137	552	0.248	138	0.3	8.701	A
B-A	104	305	0.341	105	0.5	18.216	C
C-AB	160	620	0.259	161	0.4	7.849	A
C-A	413			413			
A-B	114			114			
A-C	338			338			

**Appendix N: PICADY Output Report (Mitigation Scenario) – Saturday
Results**

Junctions 10		
PICADY 10 - Priority Intersection Module		
Version: 10.0.4.1693		
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Filename: 23-0603-PICADY SATURDAY-DRAFT-SENS-MM.j10

Path: C:\Users\MattMauler\Cotswold Transport Planning Ltd\Project 2023 - 23-0603 - East Retail Park, Newport (Proposed Aldi) \06 Calculations\Junction Modelling\Regional\Sensitivity

Report generation date: 31/05/2024 10:04:17

«Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, Saturday Operational Peak

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results

Summary of junction performance

	Saturday Operational Peak		
	Queue (Veh)	Delay (s)	RFC
Proposed Junction Mitigation Configuration - 2025 Opening Year Traffic Flows			
Stream B-C	1.7	20.98	0.64
Stream B-A	2.3	49.98	0.70
Stream C-AB	0.8	11.89	0.46
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows			
Stream B-C	2.3	26.34	0.70
Stream B-A	3.4	71.54	0.79
Stream C-AB	1.0	12.76	0.49
Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic			
Stream B-C	6.7	66.64	0.89
Stream B-A	5.7	122.71	0.88
Stream C-AB	1.7	16.52	0.62

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

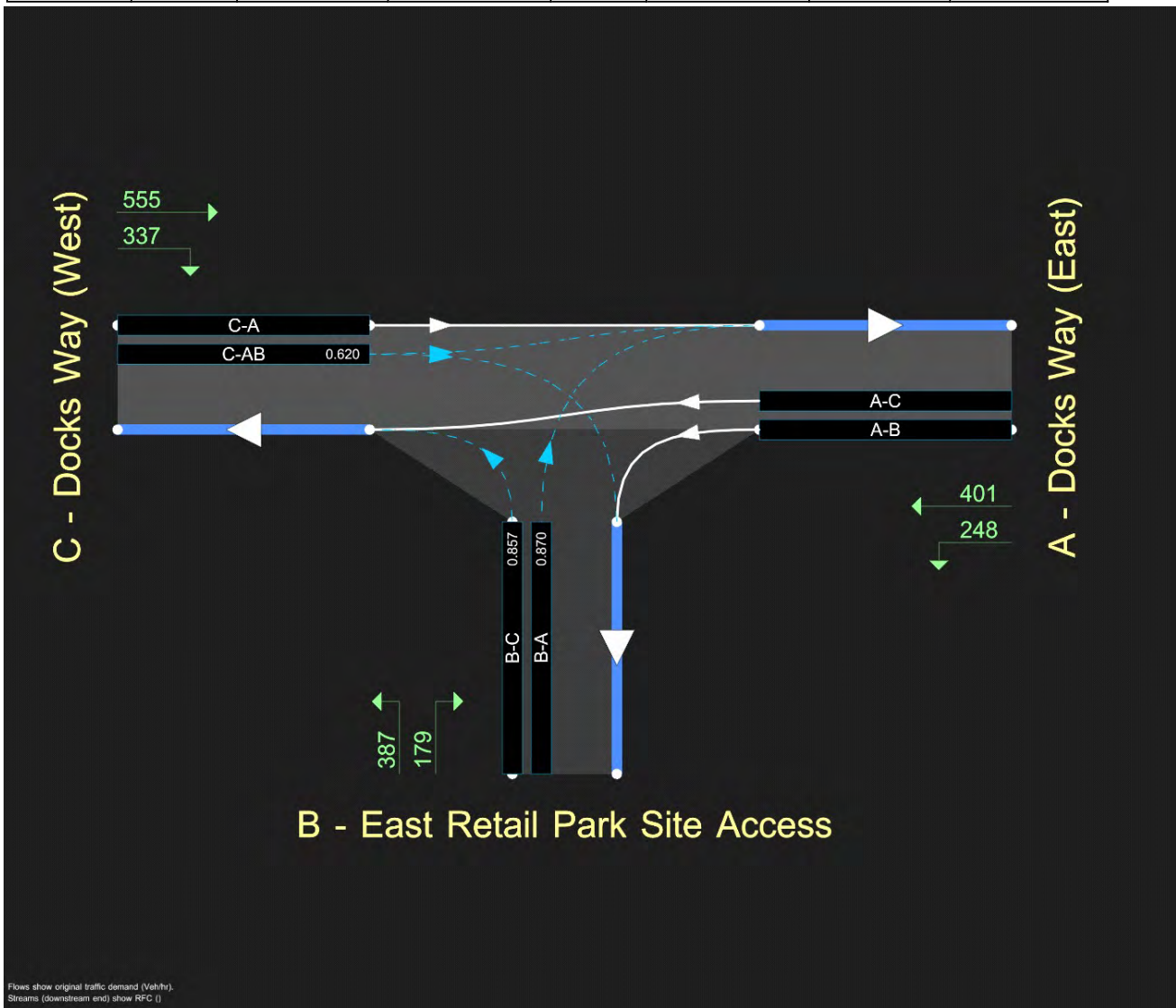
File summary

File Description

Title	Junction Capacity Assessment
Location	East Retail Park, Docks Way, Newport
Site number	Junction 1
Date	31/05/2024
Version	ISSUE
Status	Planning
Identifier	
Client	Newport Lux S.A.R.L
Jobnumber	23-0603
Enumerator	MM
Description	Junction capacity assessment of East Retail Park Access / Docks Way Junction

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Proposed Junction Mitigation Configuration	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2030 Horizon Traffic Flows + Development Traffic	Saturday Operational Peak	FLAT	12:15	13:15	60	15

Proposed Junction Mitigation Configuration - 2030 Horizon Traffic Flows + Development Traffic, Saturday Operational Peak

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Retail Park Site Access / Docks Way Junction	T-Junction	Two-way	Two-way	Two-way		25.32	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	25.32	D

Arms

Arms

Arm	Name	Description	Arm type
A	Docks Way (East)		Major
B	East Retail Park Site Access		Minor
C	Docks Way (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Docks Way (West)	6.90		✓	2.20	250.0	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - East Retail Park Site Access	Two lanes	3.76	2.68	47	58

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	505	0.088	0.223	0.140	0.319
B-C	711	0.105	0.265	-	-
C-B	719	0.268	0.268	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Docks Way (East)		✓	649	100.000
B - East Retail Park Site Access		✓	566	100.000
C - Docks Way (West)		✓	892	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	248	401
	B - East Retail Park Site Access	179	0	387
	C - Docks Way (West)	555	337	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Docks Way (East)	B - East Retail Park Site Access	C - Docks Way (West)
From	A - Docks Way (East)	0	0	2
	B - East Retail Park Site Access	0	0	0
	C - Docks Way (West)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.89	66.64	6.7	F
B-A	0.88	122.71	5.7	F
C-AB	0.62	16.52	1.7	C
C-A				
A-B				
A-C				

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	451	0.857	369	4.5	38.067	E
B-A	179	206	0.870	164	3.9	70.582	F
C-AB	357	575	0.620	350	1.6	15.625	C
C-A	535			535			
A-B	248			248			
A-C	401			401			

12:30 - 12:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	439	0.881	382	5.7	56.626	F
B-A	179	204	0.879	175	4.8	106.307	F
C-AB	357	575	0.620	356	1.7	16.484	C
C-A	535			535			
A-B	248			248			
A-C	401			401			

12:45 - 13:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	436	0.887	384	6.3	62.957	F
B-A	179	204	0.879	177	5.4	116.840	F
C-AB	357	575	0.620	357	1.7	16.510	C
C-A	535			535			
A-B	248			248			
A-C	401			401			

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	387	435	0.890	385	6.7	66.638	F
B-A	179	204	0.879	178	5.7	122.708	F
C-AB	357	575	0.620	357	1.7	16.517	C
C-A	535			535			
A-B	248			248			
A-C	401			401			

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