

Proposed Large Scale Residential
Development at Rathgowan, Mullingar,
Co. Westmeath
Applicant: Marina Quarter Ltd.

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Volume II

Main Statement

CHAPTER 12

Material Assets: Traffic & Transport



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12 Material Assets: Traffic & Transport

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12.1 Introduction

This chapter of the EIA was prepared to assess the potential significant effects of the proposed development at Rathgowan, Mullingar in County Westmeath on the existing local transport network and to review whether the proposed site access (and the existing junctions which fall within the scope of the study) will have adequate capacity to carry the development traffic and the future growth in existing road traffic to the design year and beyond and to also identify possible mitigation measures to reduce traffic impacts. An assessment of the accessibility of the site for cyclists, pedestrians and public transport users has also been made.

This section is written as a concise summary of the Traffic and Transport Statement, included as Appendix 12.1 of this EIA. Rather than repeat the detailed traffic assessments carried out within this Traffic and Transport Statement, it is referred to throughout this chapter, with the impact assessment findings discussed below.

12.2 Expertise & Qualifications

This chapter of the EIA has been prepared by Juliana Cardoso of TOBIN Consulting Engineers and reviewed by Gabriela Iha and Maria Rooney of TOBIN Consulting Engineers. TOBIN Consulting Engineers are in operation for over 70 years and have carried out numerous Traffic and Transportation Assessments (TTA's) for various residential, commercial, business, retail and leisure developments. TOBIN has also Traffic Chapters for a number of EIA's for various project types.

Juliana Cardoso (Graduate Engineer at Roads and Traffic) has a Bachelor of Engineering in Civil Engineering and Master of Science in Transportation Engineering.

Gabriela Iha (Design Engineer at Roads and Traffic) has a Bachelor of Engineering in Civil Engineering and Master of Science in Sustainable Transport and Mobility. She has over five year's work experience in the roads and transport engineering. Gabriela has undertaken numerous Traffic and Transportation Assessments (TTA) and EIA Traffic Chapters for various developments.

Maria Rooney (Senior Engineer at Roads and Traffic) is a Chartered Engineer and has a Bachelor of Engineering in Civil Engineering and Master of Engineering in Roads and Transport Engineering. She has over nine year's work experience in the roads and transport engineering.

12.3 Proposed Development

The proposed development will consist of 181 residential units and a full description of the development can be found in Chapter 2 of the EIA. The development will deliver a residential neighbourhood within proximity of Mullingar Town Centre. The site will have direct vehicle access to the R394.

Site access of the proposed development will be gained through an existing roundabout onto the R394. The proposed access roads width is 5.5m with 2m wide footpaths on both sides of the proposed

internal road. The internal roads and footpath layouts of the development has been designed in accordance with the Design Manual for Urban Roads and Streets (DMURS).

12.3.1 Parking Provisions

The car parking provisions at the site have been proposed as follows:

- 265 Car parking Spaces for Residential Units

The bicycle parking provisions at the site have been proposed as follows:

- 300 no. Bicycle Spaces for Residential Units (1 per room)

12.3.2 Road Safety Audit

A road safety audit has been carried out by CST Group Chartered Consulting Engineers independently from the design team on the proposed development. The Audit identified a number of items which were reviewed by the Design Team and the design amended where necessary. The recommended measures and proposals were agreed and signed off by the Designers, Client, and Auditors. The final site layout provides a roads network throughout the development which incorporates measures that ultimately provide a high level of safety for both the pedestrian and the driver without comprising the overall quality of the development. Swept path analysis has also been carried out to ensure vehicles can manoeuvre safely within the site.

Please refer to the CST Road Safety Audit included as part of this application for further details.

12.4 Methodology

The approach to the assessment of likely significant impacts on traffic and transportation in this chapter accords with policy and guidance at National, Regional and Local level. The methodology responds to best practices, current and emerging guidance, all of which advocate this method of analysis.

A Traffic and Transport Assessment (TTA) has been prepared in accordance with the TII PE-PDV-02045 publication 'Traffic and Transport Assessment Guidelines'. The scope and extent of the TTA was discussed and agreed with Westmeath County Council (as outlined further in Section 12.4.2) and also considered a no. of relevant points and recommendations issued by Transport Infrastructure Ireland (TII) in response to an EIAR scoping request.

Key parameters relating to the traffic modelling carried out included: junctions to be assessed, trip generation, modal shift targets, trip distribution and assessment years. The traffic and transport impact of the proposed development is discussed as part of the assessment. The traffic and transport significance levels and criteria definitions are outlined in Table 12.1.

Table 12.1 Significance Criteria for Impacts on Traffic or Transportation

Significance Level	Criteria
Profound	Profound impacts occurs where there is permanent disruption to transport network
Significant	Significant impact occurs where there is severe disruption to traffic and/or transport
Moderate	Moderate impact occurs where there is medium term disruption to the network or significant increase of traffic flow
Slight	Slight impact occurs where there is noticeable description or an increase in waiting times
Imperceptible	Imperceptible impact occurs where there is temporary distribution or no quantifiable increase in traffic

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12.4.1 Relevant Legislation & Guidance

In preparing this chapter, TOBIN Consulting Engineers has referred to:

- Environmental Protection Agency (EPA) Guidelines on the information to be contained in the EIAR (2022),
- The Westmeath County Development Plan 2021 – 2027,
- TII PE-PDV-02045 Traffic and Transport Assessment Guidelines (May 2014); and
- TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3: Travel Demand Projections (October 2021).

12.4.2 Consultation

Tobin Consulting Engineers contacted Westmeath County Council Roads Department in relation to the Previous proposed development (Phase 1 and 2) in June 2020. Westmeath County Council requested that analysis be carried out at the following junctions:

- Junction 1: R394/Midland Hospital (Irishtown Roundabout); and
- Junction 2: R394/Proposed Access Roundabout

In addition, a further discussion with Westmeath County Council took place in April 2023 in relation to Active travel scheme on Ashe Road. The active travel scheme comprises provision of the shared, and combined cycle facilities proposed throughout the development was developed through a collaborative approach with Westmeath County Council. Throughout this consultation the needs of all road users were considered to ensure a safe, enjoyable environment for cyclists, pedestrians, and motorists.



Figure 12.1 Junction Locations

The outcomes of this exercise were incorporated into the Traffic and Transport Assessment and design drawings. A further pre-planning meeting between the design team and Westmeath County Council to discuss the updated development was taken in place on 21st March 2023. The resulting comments were taken on board and amendments to the design were incorporated where possible.

12.5 Difficulties Encountered

A traffic count was carried out by IDASO on Thursday the 26th of September 2019 between the hours 07:00 and 19:00 for the previous Phase 1 and 2 application. It is noted no traffic counts were possible due to COVID-19 Government restrictions. However previous count data was obtained to determine the magnitude of the existing traffic flows the count information was obtained for the following junction:

- R394/Midland Hospital (Irishtown Roundabout)

This survey distinguished between light good vehicles and heavy good vehicles. The traffic count data is included in Appendix C of the TTA report. The results of this survey indicated that the peak traffic

levels through these junctions occurred between the hours of AM Peak (08:15 and 09:15) and PM peak (17:00 and 18:00).

Link-based growth rates (high sensitivity growth rates) were applied to the 2019 traffic flows to determine background traffic flows for the future assessment years. Furthermore, this EIA chapter has been carried out following completion of EIA for Phase 3. Phase 3 was also taken into consideration for the traffic analysis.

There were no other difficulties encountered preparing this chapter.

12.6 Baseline Environment

12.6.1 Location and Network Summary

12.6.1.1 Land Use

The proposed development is located on a green field site on the suburban area of Mullingar town. The proposed development is to be accessed via an access from the roundabout on the R394. The proposed site access is situated within an 50km/h default urban speed zone.

12.6.1.2 Existing Road Network

The layout of the local road network is presented in Figure 12.2. The proposed development is bounded to the east by the R394 regional road.

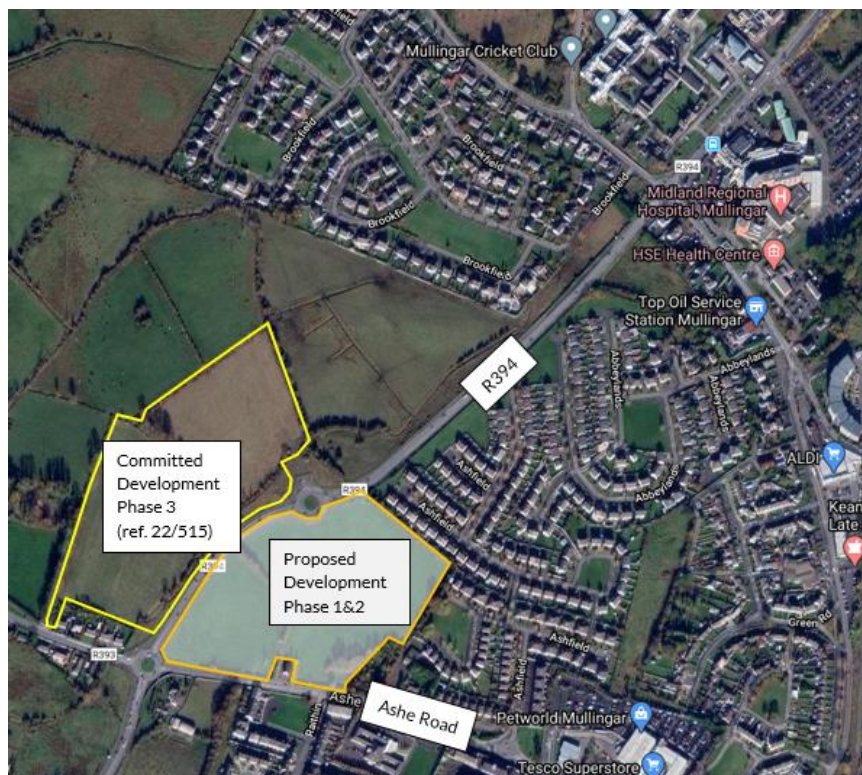


Figure 12.2 Site Location and Surrounding Road Network

A brief description of the local road network and associated junctions is provided as follows:

The R394 regional road is a single carriageway road, approx. 5.6m in width. The R394 connects to the Ashe Road at its south-western end and the N4 national road at its north-eastern end. Both junctions are roundabout junctions.

The walking network in Mullingar is comprised of existing footpaths adjoining public roads. The main approaches to the town have footpaths for pedestrian use only. There is no dedicated cycling network within the centre of the town and cyclists utilise the existing roadway.

There is a pedestrian footway provided along both sides of R394 which connects to the proposed development with pedestrian infrastructure to Mullingar town centre.

There are currently a local bus service operating in proximity to the development located east of the pedestrian access on Ashe Road. The routes include the 448 into Mullingar town. The site is also located within 16 mins walking distance to the train station which provides regular train times for the Dublin to Sligo route.

The proposed development has been set-back to allow for a future two-way cycle lane along the R394 in accordance with the National Cycle Manual. Therefore, two combined cycle lane and pedestrian accesses have been provided along the R394 carriageway.

The provision of the shared, and combined cycle facilities proposed throughout the development was developed through a collaborative approach with Westmeath County Council. Throughout this consultation the needs of all road users were considered to ensure a safe, enjoyable environment for cyclists, pedestrians, and motorists.

12.7 Traffic Growth

The opening year of 2025 was utilised for the purpose of the traffic assessment. In addition to the opening years and in accordance with TII guidelines, the capacity assessment was also based on traffic conditions forecast for the design years 2030 (+5 years) and 2040 (+ 15 years).

The link-based annual growth rates were updated in 2021 by the TII, growth forecasts shown for the county in Table 12.2. The derived growth factors were applied to 2019 traffic flows to determine background traffic flows for the assessment years. The assessment is split into light vehicles and heavy vehicles.

Table 12.2 Growth Factors for light vehicles (LV) and heavy vehicles (HV)

	2025	2030	2040
LV	1.122	1.235	1.392
HV	1.231	1.463	1.816

12.8 The 'Do nothing' Scenario

It shall be noted that the Do-Nothing scenario is equivalent to the baseline environment. The assessment of the existing environment/Do Nothing Scenario, would be a scenario where there is no change to the environment. (i.e., if the development does not proceed).

Traffic count data have been utilised in accordance with the Transport Infrastructure Ireland's (TII) Project Appraisal Guidelines (PAG) - Unit 16 in order to estimate the Annual Average Daily Traffic (AADT) two-way traffic flow on the associated road network. This method is an industry standard as it takes account of seasonal variations that is typically experienced during national public holidays and tourist seasons. In turn, this allows for an informed and representative basis for comparison of project related impacts.

12.9 Potential Significant Effects

The following section outlines the Traffic and Transportation Assessment undertaken in accordance with the TII Traffic and Transportation Assessment Guidelines - May 2014 publication (PE-PDV-02045).

The predicted impact, the mitigation measure required, and the residual impacts are considered under the following headings:

- Do Nothing Scenario
- Construction Phase
- Operational Phase
- Cumulative Impacts

The proposed development will impact on the surrounding roads network during construction and operational stages. It is broadly accepted that operational stage traffic will exceed that of construction stage traffic and will be potentially less manageable in terms of avoiding peak hour traffic periods. Therefore, traffic models of the proposed development access junctions as well as the existing Junctions 1 and 2 have been developed with operational phase traffic presenting a worst-case scenario.

12.9.1 Assessment Year

TII Traffic and Transportation Assessment Guidelines sets out the required assessment years and time periods to be assessed. In accordance with this guideline document, the following sections detail those proposed in this assessment.

12.9.2 Construction Phase

Construction traffic travelling to the proposed development site will use the N4 and R394. A Traffic Management Plan (which will be completed by the Contractor appointed to the project) for the construction stage will identify haulage routes and restrictions as appropriate in discussion with the Local Authority. A draft Construction Traffic Management Plan is included with the planning application which outlines the preliminary management plan and what will be expected of the Main Contractor's Management Plan at construction stage.

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It is estimated a total of 20 HGV per day at busiest period on site, namely the groundworks element of the works during approximate 35 weeks. During non-peak times it is estimated 10 HGV deliveries per day. For a development of this size, it is estimated that 35 - 50 site operatives will be employed during construction works and near completion it is expected that personnel number on site increase to 75 - 150 per day.

The increase in traffic volumes, as a result of construction vehicles visiting the site, is not considered to be excessive and will be spread out over construction period over the three phases of the development. The development has also been designed to minimize cut and fill throughout the site, in keeping the proposed finish floor levels of the units and the proposed road levels as close to the existing ground levels as possible. As a result, the trip generation associated with the exporting and importing of cut and fill material to site is minimised. For further detail on the cut and fill, please refer to Chapter 5 Soils and Geology of this EIAR.

Due to the designated access point off the R394, allowing delivery vehicles to pull off the road into the site, there will be no significant disruption on the traffic flows on the R394 as a result of the construction of the development. It is recommended that all delivery drivers and haulage companies serving the proposed development are provided with instructions/directions on accessing the site from the R394 and the surrounding local road network. Overall, there will be a short-term imperceptible negative impact to local traffic during the construction phase.

12.9.3 Operational Phase

For this application, the Operational Phases as per TII Traffic and Transportation Assessment Guidelines (PE-PAV-02045) are:

Operational Phase

- 2025 - Envisaged Year of Opening,
- 2030 - Year of Opening plus 5 years,
- 2040 - Year of Opening plus 15 years.

The Operational Phase of the development has the largest impact. Tobin Consulting Engineers have procured Trip Rate Information Computer System (TRICS) data for similar sized residential developments in order to inform the trip rate associated with such a development. The estimated total number of vehicular trips generated by the proposed development is shown in the following tables which detail the generated traffic for the AM and PM peak hours.

Table 12.3 and Table 12.4 demonstrate the expected AM and PM traffic generation for committed development and a total of 168 trip movements in the AM peak and a total of 176 trip movements in the PM peak are expected.

A total of 51 AM peak trips and 39 PM peak trips are allocated to the creche element of the committed development. Once the development is fully operational, it is expected that this is an over exaggeration of creche related trips. It is estimated that creche trips will predominately be self-contained within the development, with most of the creche users walking from within the

development site. The creche trip rate shown in the table below has been implemented in the design for a more conservative traffic analysis.

It was envisaged the proposed development trip distribution matches the existing traffic distribution observed during the traffic surveys conducted at each of the junctions.

Trip Rates for the various uses within the development have been determined for weekdays, Monday to Friday, to coincide with the maximum levels of existing traffic on the adjacent road network. The volume of traffic expected to be generated by the committed development for the AM and PM peak hours are shown below in.

Table 12.3 Expected Trip Generation for Committed Development (Phase 3) for AM Peak Hour

Expected Trip Generation for Committed Development (AM Peak Hour)			
Development Type	No of House/Area	Arrivals	Departures
Houses	213 dwellings	29	89
Creche	429 sqm	28	23
Total		57	111

Table 12.4 Expected Trip Generation for Committed Development (Phase 3) for PM Peak Hour

Expected Trip Generation for Committed Development (PM Peak Hour)			
Development Type	No of House/Area	Arrivals	Departures
Houses	213 dwellings	87	50
Creche	429 sqm	17	22
Total		104	72

Table 12.5 and Table 12.6 demonstrate the expected AM and PM traffic generation figures from the various uses of the scheme. A total of 100 trip movements in the AM peak are expected and a total of 116 trip movements in the PM peak are expected to result from the proposed development.

Table 12.5 Expected Trip Generation for Proposed Development (Phase 1&2) for AM Peak Hour

Expected Trip Generation for Proposed Development (AM Peak Hour)			
Development Type	No of House/Area	Arrivals	Departures
Houses	181 dwellings	25	75
Total		25	75

Table 12.6 Expected Trip Generation for Proposed Development (Phase 1&2) for PM Peak Hour

Expected Trip Generation for Proposed Development (PM Peak Hour)			
Development Type	No of House/Area	Arrivals	Departures
Houses	181 dwellings	74	42
Total		74	42

The JUNCTION 10 (ARCADY) assessment of each junction is illustrated below. A complete set of outputs from JUNCTION 10 are included in the TTA Report.

Table 12.7 Junction 1 Results: Site 1 - R394/Midland Hospital (Irishtown Roundabout) AM & PM Peak Hours

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
2019 Baseflows										
R394 (N)	0.6	3	0.38	A	F	1	3.48	0.5	A	F
Midland Hospital	62.5	380.17	1.21	F		324.9	2123.84	1.89	F	
R394 (S)	244.5	1595.69	1.55	F		48.7	315.43	1.14	F	
Unknown Local Road	7.7	70.65	0.92	F		1.6	20.72	0.62	C	
2025 No Development										
R394 (N)	0.8	3.31	0.44	A	F	1.3	4.06	0.56	A	F
Midland Hospital	144.5	958.95	1.46	F		495.4	3324.54	2.31	F	
R394 (S)	374.5	2395.18	1.74	F		100.6	657	1.27	F	
Unknown Local Road	18.5	142.1	1.02	F		2.1	25.01	0.69	D	
2025 With Phase 3										
R394 (N)	0.8	3.36	0.45	A	F	1.4	4.18	0.58	A	F
Midland Hospital	166.8	1098.27	1.52	F		521.2	3541.99	2.39	F	
R394 (S)	454.4	2859.96	1.84	F		158.4	1050.04	1.39	F	
Unknown Local Road	19.9	149.93	1.03	F		2.2	25.43	0.69	D	
2025 With Phase1&2&3										
R394 (N)	0.8	3.39	0.45	A	F	1.4	4.24	0.58	A	F
Midland Hospital	175.9	1157.36	1.54	F		532.2	3636.77	2.43	F	
R394 (S)	508.8	3180.47	1.92	F		207.4	1371.76	1.47	F	
Unknown Local Road	20.5	153.08	1.03	F		2.2	25.5	0.69	D	
2030 No Development										
R394 (N)	0.9	3.67	0.49	A	F	1.7	4.79	0.63	A	F
Midland Hospital	237.3	1620.31	1.69	F		658.6	4581.77	2.77	F	
R394 (S)	497.4	3131.57	1.91	F		162.2	1082.09	1.4	F	
Unknown Local Road	38.2	286.18	1.12	F		2.8	30.77	0.75	D	

	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
2030 With Phase 3										
R394 (N)	1	3.74	0.5	A	F	1.8	4.96	0.64	A	F
Midland Hospital	265	1814.01	1.76	F		684.5	4830.31	2.88	F	
R394 (S)	575.6	3579.96	2.01	F		232.8	1524.99	1.51	F	
Unknown Local Road	40.3	303.45	1.13	F		2.9	31.39	0.76	D	
2030 With Phase1&2&3										
R394 (N)	1	3.73	0.5	A	F	1.8	5.04	0.65	A	F
Midland Hospital	275.4	1883.48	1.78	F		695.7	4938.5	2.92	F	
R394 (S)	632.2	3911.84	2.09	F		287	1853.31	1.59	F	
Unknown Local Road	41.2	311.24	1.13	F		2.9	31.49	0.76	D	
2040 No Development										
R394 (N)	1.2	4.25	0.56	A	F	2.6	6.53	0.72	A	F
Midland Hospital	399.9	2781.2	2.07	F		888.9	6603.02	3.6	F	
R394 (S)	669.5	4193.57	2.15	F		273.6	1786.15	1.57	F	
Unknown Local Road	81	624.64	1.26	F		4.5	44.79	0.84	E	
2040 With Phase 3										
R394 (N)	1.3	4.29	0.56	A	F	2.7	6.85	0.74	A	F
Midland Hospital	427.6	2986.61	2.13	F		914.5	6898.29	3.75	F	
R394 (S)	750.2	4654.96	2.26	F		347.9	2219.75	1.67	F	
Unknown Local Road	84.6	647.87	1.27	F		4.6	45.2	0.84	E	
2040 With Phase1&2&3										
R394 (N)	1.3	4.34	0.56	A	F	2.8	7.02	0.74	A	F
Midland Hospital	441.1	3091.66	2.17	F		926.3	7039.42	3.82	F	
R394 (S)	801.3	4919.81	2.32	F		405	2562.3	1.75	F	
Unknown Local Road	85.7	654.64	1.27	F		4.7	45.95	0.84	E	

The above results indicate that the R394/Midland Hospital (Irishtown Roundabout) is currently over capacity, exceeding the maximum desirable of 0.85 RFC in the AM and PM peak. The maximum RFC reaching 3.6 in the PM peak without the development in 2040. The RFC increases by 0.22 in the PM peak with the full development (Phases 1&2&3) scenario to 3.82.

Table 12.8 Junction 2 Results - R394/Proposed Access Roundabout AM & PM Peak Hours

	AM				Junction LOS	PM				Junction LOS
	Queue (Veh)	Delay (s)	RFC	LOS		Queue (Veh)	Delay (s)	RFC	LOS	
2019 Baseflows										
1 - R394 (N)	0.4	2.15	0.26	A	F	0.5	2.31	0.33	A	A
2 - Committed Development	0	0	0	A		0	0	0	A	
3 - R394 (S)	38.7	168.57	1.07	F		2.9	19.27	0.75	C	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2025 No Development										
1 - R394 (N)	0.4	2.25	0.29	A	F	0.6	2.45	0.37	A	B
2 - Committed Development	0	0	0	A		0	0	0	A	
3 - R394 (S)	89.7	446.51	1.21	F		5.1	31.31	0.85	D	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2025 With Phase 3										
1 - R394 (N)	0.4	2.31	0.31	A	F	0.6	2.55	0.39	A	C
2 - Committed Development	0.4	10.42	0.26	B		0.4	13.01	0.31	B	
3 - R394 (S)	138.7	685.75	1.3	F		8	47.6	0.91	E	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2025 With Phase1&2&3										
1 - R394 (N)	0.5	2.37	0.32	A	F	0.7	2.65	0.4	A	C
2 - Committed Development	0.4	11.05	0.27	B		0.5	14.36	0.33	B	
3 - R394 (S)	156.1	767.16	1.33	F		9.7	56.94	0.93	F	
4 - Proposed Development	0.2	10.24	0.19	B		0.2	9.52	0.18	A	
2030 No Development										
1 - R394 (N)	0.5	2.39	0.33	A	F	0.7	2.61	0.4	A	D
2 - Committed Development	0	0	0	A		0	0	0	A	
3 - R394 (S)	165.1	782.61	1.33	F		10.1	57.08	0.94	F	
4 - Proposed Development	0	0	0	A		0	0	0	A	

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	AM					PM				
	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS	Queue (Veh)	Delay (s)	RFC	LOS	Junction LOS
2030 With Phase 3										
1 - R394 (N)	0.5	2.45	0.34	A	F	0.7	2.72	0.42	A	E
2 - Committed Development	0.4	11.52	0.28	B		0.5	14.96	0.34	B	
3 - R394 (S)	222.4	1118	1.43	F		18.8	96.98	1	F	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2030 With Phase1&2&3										
1 - R394 (N)	0.5	2.52	0.35	A	F	0.8	2.83	0.44	A	E
2 - Committed Development	0.4	12.29	0.29	B		0.6	16.78	0.36	C	
3 - R394 (S)	241.5	1228.32	1.47	F		23.8	117.6	1.02	F	
4 - Proposed Development	0.2	10.26	0.19	B		0.2	9.95	0.19	A	
2040 No Development										
1 - R394 (N)	0.6	2.55	0.37	A	F	0.9	2.91	0.46	A	F
2 - Committed Development	0	0	0	A		0	0	0	A	
3 - R394 (S)	291.8	1431.57	1.51	F		34	151.53	1.06	F	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2040 With Phase 3										
1 - R394 (N)	0.6	2.63	0.39	A	F	0.9	3.04	0.48	A	F
2 - Committed Development	0.4	13.3	0.31	B		0.6	19.36	0.4	C	
3 - R394 (S)	365.4	1813.73	1.61	F		55.1	253.36	1.13	F	
4 - Proposed Development	0	0	0	A		0	0	0	A	
2040 With Phase1&2&3										
1 - R394 (N)	0.7	2.7	0.4	A	F	1	3.18	0.49	A	F
2 - Committed Development	0.5	14.35	0.33	B		0.7	22.51	0.43	C	
3 - R394 (S)	389.4	1934.99	1.65	F		63.7	305.88	1.15	F	
4 - Proposed Development	0.2	10.27	0.19	B		0.2	10.11	0.19	B	

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The results in Table 12.8 indicate that the R394/Proposed Access Roundabout is currently over capacity, exceeding the maximum desirable of 0.85 RFC in the AM peak only. The maximum RFC reaching 1.51 in the AM peak without the development in 2040. The RFC increases by 0.14 in the AM peak with the full development (Phases 1&2&3) scenario to 1.65 which results in further 22 seconds in delay.

The existing roundabouts junction are currently over capacity as demonstrated in the preceding tables. The increase in traffic from the proposed development will have a slight effect on the road network during operations. Table 12.9 summaries the impact of the proposed development on the surrounding transport network and users.

Table 12.9 Summary of Impact Assessment

Mode	Cause	Impact
Construction Stage		
Traffic	Increased construction traffic flows onto existing roads network	Short-Term Slight Negative
Walking	Increased construction traffic flows resulting in an increased risk to existing pedestrian movements	Short-Term Not Significant Negative
Cycling	Construction Traffic Flows resulting in an increased risk on the existing cycle network	Short-Term Not Significant Negative
Operational Stage		
Traffic	Development-Generated Traffic added onto surrounding Road Network	Long-Term Slight Negative
Walking	An increase in pedestrian traffic to local schools, shop amenity and sports facilities, and to Mullingar town centre	Long-Term Not Significant Positive
Cycling	An increase in cycle activity utilising existing network	Long-Term Not Significant Positive

12.9.4 Cumulative Effects

Traffic and Transport Assessment (TTA) shall consider all committed developments within the vicinity of the site. This includes sites which have previously been granted planning permission, but which are yet to become operational.

Committed developments granted in the immediate vicinity of the proposed development include PL Ref 19-6121. PL Ref 19-6121 is for the construction of 18 apartments units in 2 blocks (Block A&B). Block A consists of 1 no. 1bedroom unit, 3no.3bedroom duplex apartments in 2 and 3 high building with private balconies and patios. Block B consists of 3 no.1-bedroom units and 6no. 2 bedrooms duplex apartments units in 3 storey high building with private balconies and patios. The proposed development will also consist of new site entrance, shared access road, footpaths, car parking spaces, boundary wall and fence, covered cycle track, recycling bin storage area, public and private open spaces, particle removal and trimming of existing hedgerows to accommodate proposed site entrance, landscaping and all associated site works and services at Ashe Road, Mullingar, Co. Westmeath.

The traffic volumes associated with the above development was reviewed to determine where the distribution of the traffic will overlap with the proposed project. The traffic volumes associated with the committed development was deemed negligible at the junctions assessed. As such, it has been assumed that any increase in traffic will be accounted for in the high sensitivity growth rates.

It is also noted the proposed development (Phases 1&2) assessed in this TTA will form part of a larger three-phase development. Phase 3 of the development (ref 22515) consists of 213 dwellings and a creche and was granted permitted with conditions by Westmeath County Council. This TTA has considered these applications as background traffic as both were granted.

12.10 Mitigation

12.10.1 Construction Phase Mitigation

The Construction Environmental Management Plan (CEMP) includes proposed mitigation measures to minimise the impact of constructed related traffic on the modelled roads network. The construction stage of the proposed development will be complete in three phases as described in CEMP and the project is scheduled to begin construction in 2024 with an estimated duration of 83 weeks. It is envisaged that working hours will be 08:00 am to 19:00 pm Monday to Friday (08:00 am to 14:00 pm for Saturday) for construction personnel through each phase of the development. Generally, construction workers will travel to site before the measured peak hour of 08:00 to 09:00, to be on site for a 08:00 start-time. It is envisaged that a very limited number of construction employees are likely to travel to the site during peak hours.

It is anticipated that heavy goods vehicles, HGV's, will be restricted to movements on the local road network during the off-peak periods. It is estimated that truck movements and general deliveries would arrive/leave at a steady rate during working hours. It is envisaged that during the busiest period onsite, namely the groundworks element of the works, an estimated 8 no. HGV's will deliver to the site daily for the duration of this work element. HGV deliveries are envisaged at other periods during the construction phase, but these are expected to be at a lower frequency. An estimated total of 610 HGV trips are envisaged throughout the course of the construction phase of the works.

A number of mitigation measures are proposed during the construction phase to minimise the impact, the measures are as follows:

- A detailed haulage plan will be put in place to ensure minimal impact on the surrounding road network. Spoil removal from site will be kept to a minimum with a detailed site survey completed to ascertain where spoil can be distributed on the site.
- All deliveries and removals will be subject to stringent site rules governing the loading / off-loading times, location of loading / off loading, covering of loads and cleaning of vehicles exiting the site, etc.
- Delivery loads to and from the site and management of large deliveries on site to occur outside of peak periods.
- No vehicle will be allowed to stop or park on the access road to the proposed development site.

- Ample parking will be provided within the site to cater for the staff and visitors during the construction phases of the proposed development.
- Construction traffic will be managed and scheduled to ensure no queuing occurs on either the internal road system or the main approach roads. The provision of an on-site vehicle staging area will facilitate waiting vehicles.
- Routine sweeping/cleaning of the road and footpaths in front of the site; and
- No uncontrolled runoff to the public road from dewatering/pumping carried out during construction activity.

There will be on-going monitoring of the impact of construction traffic on the wider roads network to ensure prompt action is taken in the event of an issue arising.

12.10.2 Operational Phase Mitigation

Mitigation measures proposed during the operational stage are as follows:

- Provision of “YIELD” road markings at the roundabout access in accordance the Traffic Signs Manual (TII, 2019).
- Suitable Lighting of all junctions with lighting columns being positioned at the back of the footways.
- The connection of the proposed development footpaths to the existing footpath network on the R394. This will allow connectivity to the existing infrastructure.
- The provision of bicycle stands and dedicated cycle routes through the development to encourage cycling.
- Charging points for electric vehicles are being provided.
- A Mobility Management Plan has been included as part of the Traffic and Transport Assessment, submitted as part of this application. This outlines the mobility strategy for the proposed development and includes measures for guiding the delivery and management of coordinated mobility management initiatives by the scheme promotor.

12.10.3 Cumulative Mitigation

None of the construction phase effects are cumulative. This chapter is only in relation to proposed development. Cumulative operational effects are limited to those associated with operational generated traffic.

12.11 Residual Impact Assessment

As population grows throughout Ireland and in particular, in popular commuting hub areas like Mullingar, a continued increase in traffic volumes is not sustainable. The governments modal shift targets are outlined in the Smarter Travel: A Sustainable Transport Future. The key targets of Smarter Travel are to reduce work-related commuting by car to 45%, and increase other modes such as walking, cycling, public transport, and carpooling to 55%. As a result, an ever-increasing approach by designers and planners to providing sustainable commuting alternatives is required. The use of public transport and promotion of walking and cycling will ultimately increase the overall quality of life for people living in these fast paced, busy towns and villages located within commuter belts.

The proposed development has integrated a number of measures in line with the relevant standards and guidelines, such as DMURS 2019 and the National Cycle Manual, which promotes the use of sustainable travel to and from the site. The Road Safety Audit carried out for the site allowed the design team to address any concerns initially flagged in the Road Safety Audit. A continued and collaborative approach with the road safety auditors meant that a desirable and safe site layout could be achieved without negatively impacting the overall quality of the development.

The use of the private car will still be maintained as a primary mode of transport for a number of residents in the development. Trip generations to and from the proposed development are 168 in the morning peak and 176 in the evening peak as noted above. The internal roads on the development to be constructed have been suitably designed in accordance with the DMURS manual.

Progressive and regular liaising with Westmeath County Council Roads Department in relation to the internal roads and the permitted link roads layouts contributed to the final road design for the development.

As noted previously, mitigation measures are to be implemented to promote and encourage more sustainable transport modes. The proximity of the Bus Stops will encourage pedestrians to utilise the higher frequency Public Transport options. Dedicated cycle routes and secure bicycle parking spaces are also provided throughout the development.

The mitigation measures outlined in Section 12.10 would minimise any residual impacts. As construction traffic would be temporary in nature, traffic volumes would return to their pre-construction condition, except for the expected increase in traffic associated with normal traffic growths and the changes in traffic pattern that naturally occur on road networks. The preparation of the Traffic Management Plan would minimise traffic impacts during the Construction Phase.

The residual impacts will relate to the operational phase traffic associated with the proposed development which will be low having an imperceptible effect on the existing road network.

12.12 Risk of Major Accidents or Disasters

Road Collision Data is not currently available on the Road Safety Authority Database, and therefore the audit team has no access to the historical collision information for this site and / or adjacent roads.

12.13 Significant Interactions

Traffic and Transportation interacts with other environmental attributes as follows:

- Air Quality and Climate: Particulates and gaseous emissions from traffic (both on and off-site) and residual dust dispersal associated with traffic movements have been addressed in the Air Quality and Climate chapter (Chapter 7),
- Noise: The impacts from traffic and transport in terms of noise generation is addressed in the Noise & Vibration chapter (Chapter 9).

12.14 Indirect Impacts

There were no indirect impacts resulting from the traffic generated for the proposed development.

12.15 References & Sources

- European Commission (2017). Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report.
- National Roads Authority (2014). TII Library. Retrieved from TII Library Website: <http://www.tii.ie/tii-library/land-use-planning/Transport-Assessment-GuidelinesMay2014.pdf>
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- Westmeath County Development Plan 2021 – 2027.

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