

8.0 TRAFFIC AND TRANSPORT

8.1 INTRODUCTION

The Transportation Assessment (TA) section of the EIAR has been prepared by NRB Consulting Engineers Ltd and addresses the road traffic capacity and Transport considerations relating to the proposal to construct an Abattoir extension adjacent Boherdurrow Crossroads south of Banagher Co Offaly. The TA Report, which is included herewith as Attachment 8.1 addresses the impact of the proposed development which is accessed from the Local Road L3010, and the implications for the adjacent road network for the weekday AM and weekday PM Peak Hours (including an assessment of AADT for the circumstances Pre and Post Development).

8.2 LEGISLATIVE FRAMEWORK AND PLANNING POLICY

Recommendations contained within this Transportation Assessment are based on the following sources of information and industry-standard practices:

- Transport Infrastructure Ireland (TII) Traffic & Transport Assessment Guidelines;
- TII PE-PAG-02017 Project Appraisal Guidelines for National Roads Unit 5.3;
- Comprehensive new interval Classified Traffic Surveys undertaken in November 2018 during normal school term.

The Report has been prepared fully in accordance with the requirements of TII's Traffic & Transport Assessment Guidelines. These are the professional Guidelines used to assess the impact of developments on public roads

8.3 METHODOLOGY

A detailed classified traffic survey was undertaken of the key junctions and links in proximity to the site in November 2018 during normal school term. This included a comprehensive classified interval survey for each of the 2 modelled periods and an ATC Survey to supplement the turning movement surveys. This data was then used to establish current peak hour traffic conditions and to establish the current usage of the roadways. Details of the surveys undertaken are included within the appended TA, with the Peak Hour Network flows (expressed as PCUs) identified. The traffic survey data was used as the basis for the study.

With the addition of worst case traffic associated with the proposed development, detailed modelling and analysis of the proposed priority controlled access junction, the existing Boherdurrow Crossroads and the adjacent off-set spur T Junction of the L3010/L7016 was undertaken. Capacity Modelling using TII-approved software was undertaken for a year of opening 2021 and design year 2036 in accordance with industry Guidelines. It should be noted that in light of the very positive capacity results, any requirement to select a later opening or design year is considered very unlikely to affect the conclusions of the study.

8.4 CONSULTATION

The TA was undertaken in accordance with Industry Standard Professional Guidelines, and it was therefore not considered necessary at this stage to consult with Roads Officials in Offaly County Council. It is understood by NRB Consulting Engineers Ltd. that the design team has engaged with Offaly County Council in advance of this submission.

8.5 DESCRIPTION OF EXISTING ENVIRONMENT

The proposed development extension is located on a rural site adjacent Boherdurrow Crossroads to the south of Banagher in Offaly. (Refer to site location as **Figure 1.1** within the appended TA Report). The site is bounded to the west by the Local Road L3010, a local road connecting to the Regional Road R438 at Boherdurrow Crossroads. The site is currently use for agricultural support and abattoir purposes and is bound to the north, south and east by agricultural lands.

The L3010 Local Road serving the site, is a narrow rural road which is subject to an 80kph speed limit. There is also an existing 3T weight limit on the L3010 serving the site. This is illustrated in **Figure 2.1** within the appended TA.

A 3T ban (RUS 015) (for traffic management purposes) does not prevent trucks travelling on a road to reach a business, or vehicles which have business on such a road. Trucks would not be prevented from travelling on it by a 3T ban as per S.I. No. 332/2012 - Road Traffic (Traffic and Parking) (Amendment) (No. 2) Regulations 2012, which states;

“17. (1) Where traffic sign number RUS 015 (maximum design gross vehicle weight — traffic management) is provided at the entrance to a road, the driver of a vehicle, the design gross vehicle weight of which exceeds the weight specified on the sign, shall not proceed beyond the sign.

(2) Sub-article (1) does not apply where it is necessary for a vehicle to enter a road solely for the purpose of gaining access to or egress from premises accessible only from that road.”

In the case of the subject site, it is proposed to supplement the 3T Weight Restriction Advisory Signs to include a sign for **"EXCEPT FOR LOCAL ACCESS"** so that vehicles accessing this site are aware that this access to the premises is allowable. This is shown on the drawings at **Appendix A** of the appended TA.

The L3010 currently carries a 24Hr Annual Average Daily Traffic (AADT) of 120 Passenger Car Units (PCUs, or car equivalents) at the site access point. This is therefore currently a very lightly trafficked road. The L3010 meets the R438 Regional Road approximately 200m northwards from the site by way of a priority controlled crossroads junction.

The R438 Regional Road is relatively flat in nature, is generally orientated in a N-S direction, and facilitates rural traffic to join the N62 approximately 7km Northeast of the site at Cloghan and approximately 9km southeast of the site at Birr.

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

BANAGHER CHILLING LIMITED, BANAGHER, CO. OFFALY

The R438 currently carries a 24Hr Annual Average Daily Traffic (AADT) of approximately 1449 PCUs just north of Boherdurrow Crossroads. To set this flow in context, a road of this nature has a traffic carrying capacity of approximately 1,000 PCUs per-direction per-hour. Given the hourly 2-way link capacity is approximately 2,000 PCUs and the fact that the existing 24 Hr AADT is 1,449 PCUs, this is therefore clearly a very lightly trafficked Regional Road. It is recognised that the capacity of roads of this nature are ordinarily determined by the capacity of terminal junctions. However, strictly in terms of link capacity the road is clearly very lightly trafficked.

The fourth arm of the crossroads is another local road, the L7016. The L7016 currently carries a 24Hr Annual Average Daily Traffic (AADT) of approximately 403 PCUs immediately NW of Boherdurrow Crossroads. This is also a very lightly trafficked road.

8.6 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development consists of a significant extension to the existing abattoir. An assessment of the Traffic Generated has been undertaken based on anticipated staffing and production levels.

The proposed development consists of the following elements:

- The construction of an abattoir extension for the continued processing of Meat and Meat Products;
- Approximately 110 Full Time equivalent employees (between Operatives, Administration and Cleaning Staff on shifts);
- A safe design-led layout of the internal roads and infrastructure;
- The means of vehicular access to the site will be via a new high quality Priority T Junction onto the local road;
- Adequate off-street parking spaces for staff commensurate with the development;
- Adequate internal safe footpath linkages;
- Landscaping, signage and surface treatment.

The development has been designed to be accessible via 16.5m HGVs and ~10m HGVs plus a towed trailer, however these are expected to constitute a small proportion of the entire vehicular traffic associated with the development.

The small scale of the entire facility is confirmed through the robust assessment of Traffic Generated, which is addressed further within Section 3 of the appended TA Report.

ENVIRONMENTAL IMPACT ASSESSMENT REPORT
BANAGHER CHILLING LIMITED, BANAGHER, CO. OFFALY

8.7 POTENTIAL IMPACTS OF THE PROPOSED DEVELOPMENT

8.7.1 CONSTRUCTION PHASE

It is considered that the traffic generated during the construction phase will be lower in nature and volume than the traffic generated during the operational stages, particularly given the nature of the operation and the levels of staffing deployed. In this regard, given that a full assessment of operational stage has been undertaken it is considered to represent a robust analysis.

8.7.2 OPERATIONAL PHASE

A detailed breakdown and robust estimation of total traffic generated by the subject site during the weekday periods, with the resulting worst case Traffic Generated, as illustrated in Table 8.1 below, is provided within *Appendix C* of the TA Report.

Table 8.1: Worst Case Traffic Generated by Proposed Development (Production and Staffing Combined)

PROPOSED DEVELOPMENT - TRAFFIC GENERATION CALCULATIONS.				
PLANT PRODUCTION AND ACTIVITIES - DAILY MOVEMENTS				
DESCRIPTION	NUMBER	VEHICLE TYPE (AXLES)	PCU FACTOR	ONE-WAY EQUIV PCU/DAY
Cattle Deliveries Per Day*	2	3	2.5	5
	2	3	2.5	5
	5	2	2	10
	15	2	2	30
Meat Products Out*	5	5	3	15
Waste Out*	3	2	2.5	7.5
Sludge Removal*	1	2	2.5	2.5
Chemical Deliveries/Fuel - per Mth	3	3	2.5	Negligible
Visitors to Site (Non Employees)	10	2	1	6
Production Staff 7am to 5pm	80	2	1	44
Administration Staff 9am-5pm	20	2	1	11
Cleaning Staff (5pm Start)	10	2	1	6
Total Equivalent One-Way PCUs Generated per Day				142
Total Equivalent 2-WAY Annual Average Daily Traffic Generated by Facility (PCUs)				283

For the purposes of assessment, for Staffing Arrivals and Departures, it has been conservatively assumed that the Car Occupancy will be 1.8 people per car. It has also robustly been assumed that the production related vehicles are distributed over an 8 Hour Working Day, and this underscores the robustness of the assessment. The resulting breakdown of the impact of the development on the key-critical weekday AM and PM Commuter Peak Hours are as set out below as Table 8.2;

ENVIRONMENTAL IMPACT ASSESSMENT REPORT
BANAGHER CHILLING LIMITED, BANAGHER, CO. OFFALY

Table 8.2: Worst Case Traffic Generated by Proposed Fully Operational Facility

WORST CASE PEAK HOUR ARRIVALS AND DEPARTURES (PCUs OR CAR EQUIVALENTS)			
Hour	Arrivals	Departures	2-Way
Weekday AM Peak Hour (8-9am)	21	10	31
Weekday PM Peak Hour (5-6pm)	15	66	81

The total traffic generated by the development comprises an AADT of 283 PCUs within a 24 Hr Period. Whilst it is appreciated that the local roads are lightly trafficked, nonetheless this is a very small amount of traffic by any measure.

8.8 CUMULATIVE IMPACT

A Traffic Survey was undertaken of the existing road and affected junctions in order to establish background traffic conditions. Details of the surveys are also included within the attached TA as Attachment 8.1 and are reproduced as Traffic Flow Diagrams in Appendix C.

In Traffic Engineering all vehicles are expressed in terms of “Passenger Car Units” (PCUs), sometimes referred to as “Car Equivalents”. This is the methodology that has been employed here, with specific industry standard conversion factors to convert HGVs, Skip Lorries, Cars/Trailers and Bin Lorries to PCUs. The conversion factors used are in accordance with industry-standard recommendations.

The anticipated worst case development traffic as set out in Table 8.1 and Table 8.2 above was then assigned to the road network and the impact was assessed by way of approved road capacity modelling techniques.

8.9 “DO-NOTHING” IMPACT

This would mean that the established existing Traffic Conditions would remain, and there would therefore be no measurable impact of Do-Nothing.

8.10 MITIGATION MEASURES

It is proposed to create a dedicated improved vehicular access and internal layout of the proposed development that meets the highest standards in terms of Geometry and Design adherence to the TII Design Manual for Roads and Bridges (DMRB). It is proposed to amend the local 3T weight limit signage as set out in Section 8.5 above. In addition it is proposed to widen the local road to the junction with Boherdurrow Crossroads to provide a 6m wide pavement with verges, thereby providing for the significantly safer passage of the increased volume of traffic and the higher proportion of associated larger vehicles.

ENVIRONMENTAL IMPACT ASSESSMENT REPORT
BANAGHER CHILLING LIMITED, BANAGHER, CO. OFFALY

8.10.1 CONSTRUCTION PHASE

It is considered that the proposed amended signage and local road widening should be implemented at an early stage so that construction operations benefit from their effects.

8.10.2 OPERATIONAL PHASE

The resulting local road improvements will be in place, taken in charge, and therefore under the control of Offaly County Council and the operational phase of the proposed development will continue to benefit from these.

8.11 RESIDUAL IMPACTS

There are not considered to be any residual impacts associated with the proposed development in terms of Traffic & Transport, as the impact of the daily worst case traffic at full operation has been assessed for opening and design years (15 years following opening) in accordance with the Transportation Assessment Guidelines.

8.12 DIFFICULTIES IN COMPILING INFORMATION

No notable difficulties were encountered in compiling this information

8.13 REFERENCES

Any reference documentation is referred to directly within the EIAR or within the appended TA Report (Attachment 8.1).