Kilkenny County Council

IDA BELVIEW INFRASTRUCTURE DEVELOPMENT, CO. KILKENNY

Noise Impact Assessment

605614-NV-R (00)

APRIL 2026

RSK GENERAL NOTES

Project No.: 605614-NV-R (00)

Title: IDA Belview Infrastructure Development, Co. Kilkenny – Noise Impact Assessment

Client: Kilkenny County Council

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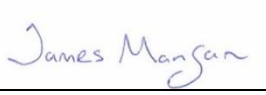
Author	Chris Conroy, MIOA Principal Acoustic Consultant	**Technical reviewer**	James Mangan, MIOA Operations Director
Signature		Signature	
Date:	17th April 2026	Date:	17th April 2026

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This work has been undertaken in accordance with the quality management system of RSK IRELAND Ltd.

EXECUTIVE SUMMARY

RSK Ireland Ltd (RSK) has been appointed by Tobin, on behalf of Kilkenny County Council, to carry out a baseline noise survey and noise impact assessment in relation to the proposed Belview Access Road in County Kilkenny. The assessment has been undertaken in accordance with TII road traffic noise guidelines.

A baseline noise survey has been carried out close to nearby noise sensitive receptors to establish baseline noise levels at the vicinity of the proposed development.

The TII guidelines states that the following three conditions must be satisfied in order for noise mitigation to be provided:

- The combined expected maximum traffic noise level, i.e. the relevant noise level, from the proposed road scheme together with other traffic in the vicinity is greater than the design goal of 60 dB L_{den};
- The relevant noise level is at least 1dB more than the expected traffic noise level without the proposed road scheme in place, and;
- The contribution to the increase in the relevant noise level from the proposed road scheme is at least 1dB.

The assessment has shown that one dwelling has met the three conditions for TII noise mitigation. Noise mitigation in the form of a 2-metre high, approximately 650 metres long, noise barrier has been specified in order to reduce road traffic noise levels to within the TII guidelines. Low noise surfacing (LNS) has been considered but is only effective in offering any substantial reduction in noise emission at speeds in excess of 75km/h. Therefore, on the basis of an 60 km/h speed limit for the new access road, LNS has been discounted.

The assessment has concluded that, taking into account the noise mitigation measures specified, the proposed development can be designed to achieve the relevant criteria.

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FIGURES

1 INTRODUCTION

1.1 The Proposed Development

RSK Ireland Ltd (RSK) have been instructed by Tobin, on behalf of Kilkenny County Council, to undertake a noise impact assessment in relation to a planning application for a proposed new access road at the IDA Belview site in County Kilkenny.

The proposed new access road is located slightly to the south of the existing local road that runs between the N29 and the R711. To the north of the new access road there are residential houses and farm fields that are currently accessed from the existing local road. To the south of the access road is the IDA Belview Science and Technology Park. The proposed new access road will provide future access to IDA lands, and safer access to the existing Science and Technology Park. The existing local road will become a cul-de-sac for access by local residents. The proposed access road alignment is shown in Figure 1.1.

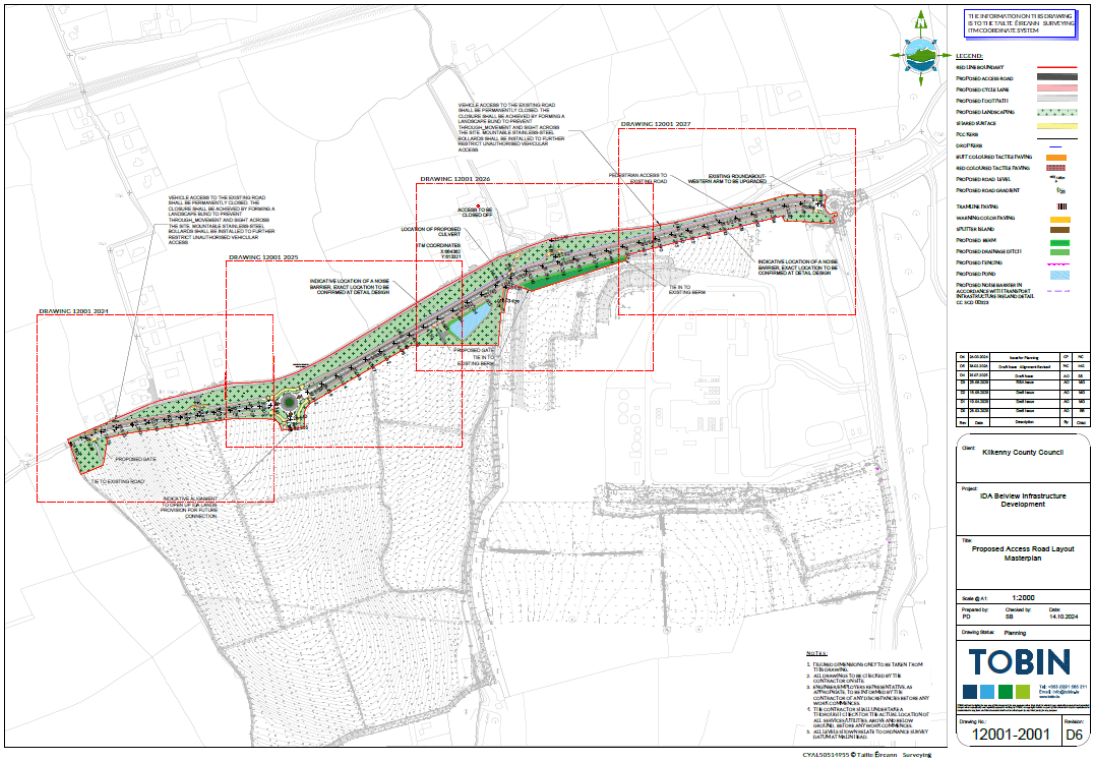

Figure 1.1: Proposed Access Road Alignment

2 ASSESSMENT CRITERIA

2.1 Kilkenny County Council Noise Action Plan 2024-2028

The Kilkenny County Council Noise Action Plan (NAP) 2024 – 2028 relates to the management of environmental noise in accordance with the *Environmental Noise Directive (END) (2002/49/EC)*. The purpose of the NAP is to manage and reduce, where necessary, environmental noise through the adoption of the action plans.

Section 2.3 of the NAP refers to the *Transport Infrastructure Ireland (TII) Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (2004) where it states the following:

> *'Considering the absence of standardised methods for the assessment of road traffic noise the then National Roads Authority (NRA) published the 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes.' These guidelines establish noise design objectives for both the construction and operational phases of new road schemes. Following a review of similar guidelines in the UK and adapting methodologies in line with the requirements of the END, the NRA proposed an operational design goal of L_{den} ≤ 60 dB free field value. This means that any Environmental Impact Assessment Report for a new road scheme must consider this target concerning any nearby sensitive residential properties likely to be impacted.*
>
> *The guidelines advocate a structured approach to mitigate road traffic noise as much as practicable, acknowledging that it may not always be feasible to achieve the design goal completely. Measures such as alignment adjustments, barrier construction e.g., earth mounds, and the use of low noise road surfaces are recommended to mitigate adverse effects during road construction. Responsibility for noise mitigation policies concerning new sensitive properties near road scheme lies with the relevant Planning Authority.'*

As required by the END, the NAP presents results from threshold levels of 55 dB L_{den} and 50 dB L_{night} in relation to noise exposure within the county. For harmful effects the NAP presents results in relation to World Health Organisation (*WHO) Environmental Noise Guidelines* (2018) threshold levels for road traffic noise of 53 dB L_{den} and 45 dB $L_{night.}$

The NAP has undertaken a staged process for identifying locations where road traffic noise levels exceed certain thresholds, which are termed 'Important Areas', 'Most Important Areas' and 'Priority Important Areas'.

Stage 1 of the NAP also sets out a process in relation to identifying 'Candidate Quiet Areas' which are areas to be protected where environmental noise levels are good and undisturbed by traffic noise and other environmental noise sources. Stage 2 of the NAP process is an assessment of cost-effective mitigation measures and an investigation into candidate quiet areas. The NAP process is set out in Figure 2.1:

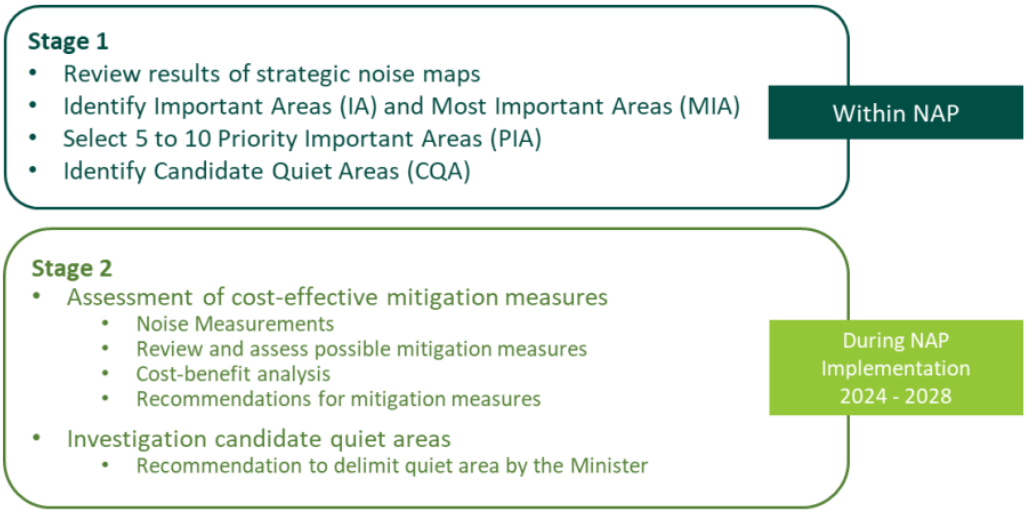

Figure 2.1: Overview of Kilkenny County Council NAP Process 2024-2028

2.2 Criteria for Road Projects

There are no statutory guidelines or standards in Ireland applicable for noise impact assessments on access road schemes. As stated in the Kilkenny County Council NAP the most appropriate guidance is the TII guidance relating to noise impacts on new national roads in Ireland:

- Guidelines for the Treatment of Noise and Vibration in National Road Schemes (2004); and
- Good Practice Guide for the Treatment of Noise during the Planning on National Road Schemes (2014).

Both TII documents note the use of a traffic noise design goal of 60 dB L_{den} (free field residential façade criterion i.e. without the influence of building reflections) for new national roads. The following three conditions must be satisfied under the TII guidelines in order for noise mitigation to be provided:

- The combined expected maximum traffic noise level, i.e. the relevant noise level, from the proposed road scheme together with other traffic in the vicinity is greater than the design goal of 60 dB L_{den};
- The relevant noise level is at least 1dB more than the expected traffic noise level without the proposed road scheme in place, and;
- The contribution to the increase in the relevant noise level from the proposed road scheme is at least 1dB.

It should be noted that the design goal is applicable to new national road schemes only. In the case of this scheme the proposed road and its associated new junction and upgrade works do not fall under the requirements for noise design goals set within the TII's guidance document. It is therefore acknowledged that it may not always be sustainable to achieve the 60 dB L_{den} design goal.

The 2014 TII Good Practice Guide also recognises that "*in some cases the attainment of the design goal may not be possible by sustainable means*". The guidance also notes

that the benefit gained by the insertion of a noise barrier is limited and notes that for caution should be exercised specifying substantial screening where small benefits (<3dB) are only achieved, given a change of 3dB(A) is the smallest change that would give a reliable difference in public response.

2.3 Evaluation of Impacts

In the absence of any Irish guidance relating to the impact of the potential change in noise levels, reference has been to the UK's *Design Manual for Roads and Bridges (DMRB) LA 111 Noise and Vibration* (Revision 2, 2020). This document presents guidance as to the likely impact associated with any particular change in traffic noise level, see Table 2.1 for details.

Table 2.1: Magnitude of Impact Road Traffic Noise

Magnitude of Impact	Short Term Noise Change (dB)	Long Term Noise Change (dB)
Major	Greater than or equal to 5.0	Greater than or equal to 10.0
Moderate	3.0 to 4.9	5.0 to 9.9
Minor	1.0 to 2.9	3.0 to 4.9
Negligible	Less than 1.0	Less than 3.0

3 BASELINE NOISE SURVEY

3.1 Introduction

A baseline environmental noise survey has been conducted in accordance with relevant standards including:

- ISO 1996-2:2017 *Acoustics -- Description, measurement and assessment of environmental noise -- Part 2: Determination of sound pressure levels*;
- *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (TII, 2004);
- *Good Practice Guidance for the Treatment of Noise during the planning of National Road Schemes* (TII, 2014); and
- *Calculation of Road Traffic Noise* (CRTN - ISBN 0 11 550847 3, Department of Transport, 1988).

3.2 Measurement Locations

The measurement locations were chosen to represent the noise environment across the site. The noise survey comprised one unattended monitoring station and three attended monitoring locations as shown in Figure 3.1. Locations A1 to A3 are the attended noise monitoring locations and U1 is the unattended monitoring location.

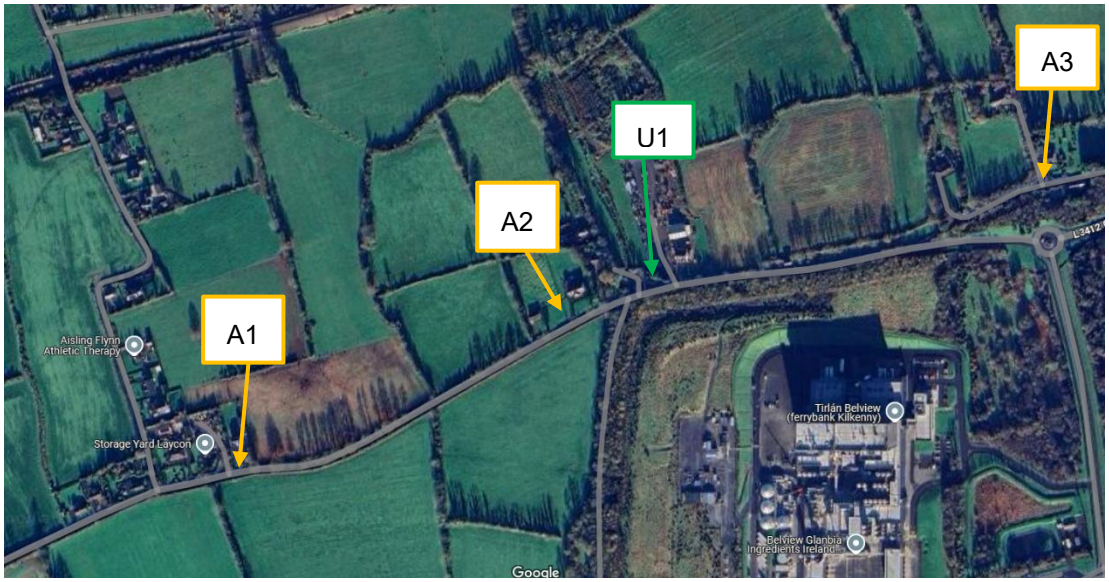

Figure 3.1 Baseline Noise Monitoring Locations

Figure 3.2: Noise set-up at AN1

Location AN1

AN1 was located to the west of the proposed road upgrade site with the microphone positioned between a residential dwelling and the existing road. This noise survey position comprised of attended monitoring.

Figure 3.3: Noise set-up at AN2

Location AN2

AN2 was positioned to the north of the proposed road upgrade with the microphone positioned between a residential dwelling and the existing road. This noise survey position comprised of attended monitoring.

Figure 3.4: Noise set-up at AN3

Location AN3

AN3 was positioned on the eastern extent of the site. AN3 was setup in a field within the site boundary to establish daytime representative noise levels at receptors located nearby. This noise survey position comprised of attended monitoring.

Figure 3.5: Noise set-up at U1

Location U1

U1 was positioned on the central section of the site. U1 was setup in a residential garden beside the existing road. The microphone was located adjacent to the site boundary and approximately 1.5m above ground level. This noise survey position comprised of attended monitoring for a 24-hour period.

3.3 Survey Period

Noise measurements were conducted between 25th and 27th March 2025. The weather during the survey period was dry and temperatures were in the range 7 to 13°C. Wind speeds were low and in a south-easterly direction. Therefore, the weather conditions were considered suitable for undertaking noise measurements.

3.4 Instrumentation

Measurements were undertaken using a Fusion Sound Meter and a Rion Sound Level Meter and Environmental Monitoring Kit (serial number 15334, 15336 and RION NC-75). The instrumentation was check calibrated before and after undertaking the measurements using a Bruel & Kjaer Type 4231 Sound Level Calibrator. No calibration drift was detected. Calibration certificates are available on request.

3.5 Measurement Parameters

The noise survey results are presented in decibels (dB), using the following parameters:

$L_{Aeq,T}$ The equivalent continuous sound level and is used to describe a fluctuating sound as a single value over the sample period (T).

$L_{AFmax,T}$ The maximum A-weighted sound pressure level occurring within a specified time period (T). Measured using the "Fast" time weighting.

$L_{AF10,T}$ Refers to the A-weighted noise levels in the top 10 percentile of the sampling interval; it is the level which is exceeded for 10% of the measurement period (T). It is used to determine the intermittent high noise level features of locally generated noise and usually gives an indicator of the level of road traffic.

$L_{AF90,T}$ Refers to the A-weighted noise levels in the lower 90 percentile of the sampling interval (T). It is the level which is exceeded for 90% of the measurement period. It will therefore exclude the intermittent features of traffic and is used to describe a background level without contribution from intermittent sources.

The noise survey results are also presented in decibels (dB), using the L_{den} and L_{night} parameters.

The L_{den} parameter is a long-term average calculated from day, evening and night-time values, with corrections applied to the evening (+5dB) and night-time (+10dB) data. The following method (as outlined in the TII guidelines) was used to derive the L_{den} values from the $L_{Aeq(1hr)}$ unattended data measured at location U1.

$$L_{den} = 10\text{x}\log_{10}(1/24)\,(12\text{x}10^{Lday/10} + 4\text{x}10^{(5+Levening)/10} + 8\text{x}10^{(10+Lnight)/10})\ \text{dB}$$

Where:

L_{day} = 07:00 to 19:00 hours

$L_{evening}$ = 19:00 to 23:00 hours

L_{night} = 23:00 to 07:00 hours.

For attended measurements at locations A1 to A3, L_{den} values were derived using the formula outlined in TII guidelines:

- $L_{10(18hr)}$ calculated from the arithmetic average of the three $L_{A10,15min}$ attended measurement samples – 1 dB; and
- L_{den} is then calculated from the formula: $L_{den} = 0.86 \times L_{A10(18hr)} + 9.86$ dB.

All sound levels in this report are expressed in terms of decibels (dB) relative to $2x10^{-5}$ Pa.

3.6 Measurement Results

3.6.1 AN1 (Attended)

Table 3.1 presents a summary of the measured noise levels at the baseline noise monitoring location AN1. During the survey period, the dominant noise sources were local and distant road traffic, and birdsong was also noted. The derived L_{den} noise level for the survey period was 54 dB L_{den}.

Table 3.1: Baseline Noise Measurement Results at AN1

Period	Date & Time	Measured Noise Levels (dB re 2 x 10^{-5} Pa)				Derived L_{den}
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}	
Daytime	27/03/25 11:44	50.1	67.9	49.9	39.0	54
	27/03/25 12:00	50.1	92.4	51.0	39.6	
	27/03/25 13:00	55.2	78.5	55.5	44.3	

3.6.2 AN2 (Attended)

Table 3.2 presents a summary of the measured noise levels at the baseline noise monitoring Location AN2. During the survey period, the dominant noise sources were local and distant road traffic while birdsong and a chainsaw were also noted. The derived L_{den} for the survey period was 58 dB L_{den}.

Table 3.2: Baseline Noise Measurement Results at AN2

Period	Date & Time	Measured Noise Levels (dB re 2 x 10^{-5} Pa)				Derived L_{den}
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}	
Daytime	27/03/25 11:30	59.5	77.9	59.7	41.8	58
	27/03/25 12:30	58.3	76.4	56.8	43.4	
	27/03/25 13:15	57.9	79.0	55.8	42.8	

3.6.3 AN3 (Attended)

Table 3.3 presents a summary of the measured noise levels at the baseline noise monitoring Location AN3. During the survey period, the dominant noise sources were local and distant road traffic, while birdsong was also noted. The derived L_{den} for the survey period was 57 dB L_{den}.

Table 3.3: Baseline Noise Measurement Results at AN3

Period	Date & Time	Measured Noise Levels (dB re 2 x 10^{-5} Pa)				Derived L_{den}
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}	
Daytime	27/03/25 11:40	50.5	62.9	52.9	43.7	57
	27/03/25 12:40	53.2	69.6	54.8	45.4	
	27/03/25 13:25	56.9	73.7	59.4	47.9	

3.6.4 U1 (Unattended)

Table 3.4 summarises the measured noise levels at Location U1 during daytime.

Table 3.4: Measured Daytime Noise Levels at Location U1

Period	Time	Measured Noise Levels (dB re. 2x10^{-5} Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
Daytime	10:00-11:00	57	78	59	38
	11:00-12:00	61	90	60	39
	12:00-13:00	61	83	63	39
	13:00-14:00	60	84	59	38
	14:00-15:00	61	82	60	39
	15:00-16:00	61	79	62	39
	16:00-17:00	62	85	62	40
	17:00-18:00	61	81	62	39
	18:00-19:00	60	82	60	42
	19:00-20:00	59	80	57	40
	20:00-21:00	57	79	50	36
	21:00-22:00	55	82	43	35
	22:00-23:00	49	78	38	35
	07:00-08:00	62	82	62	43
	08:00-09:00	64	84	65	44
	09:00:10:00	64	84	67	42

Table 3.5 summarises the measured noise levels at Location U1 during nighttime.

Table 3.5: : Measured Nighttime Noise Levels at Location U1

Period	Time	Measured Noise Levels (dB re. 2x10^{-5} Pa)			
		L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
Night	23:00-00:00	46	76	37	34
	00:00-01:00	44	76	37	35
	01:00-02:00	43	74	36	35
	02:00-03:00	50	79	36	34
	03:00-04:00	47	77	36	34
	04:00-05:00	51	78	46	35
	05:00-06:00	58	81	60	42
	06:00-07:00	61	82	64	44

Table 3.6 presents the L_{day}, $L_{evening}$, L_{night} and L_{den} noise levels at location U1

Table 3.6: L_{den} Noise Level at Location U1

Date	Measured Noise Levels (dB re. 2x10^{-5} Pa)			Measured L_{den}, dB
	L_{day}	$L_{evening}$	L_{night}	
26-27 March 2025	61	56	54	63

Figure 3.6 presents the time-history graph of the measured baseline noise levels at location U1 over the duration of the survey.

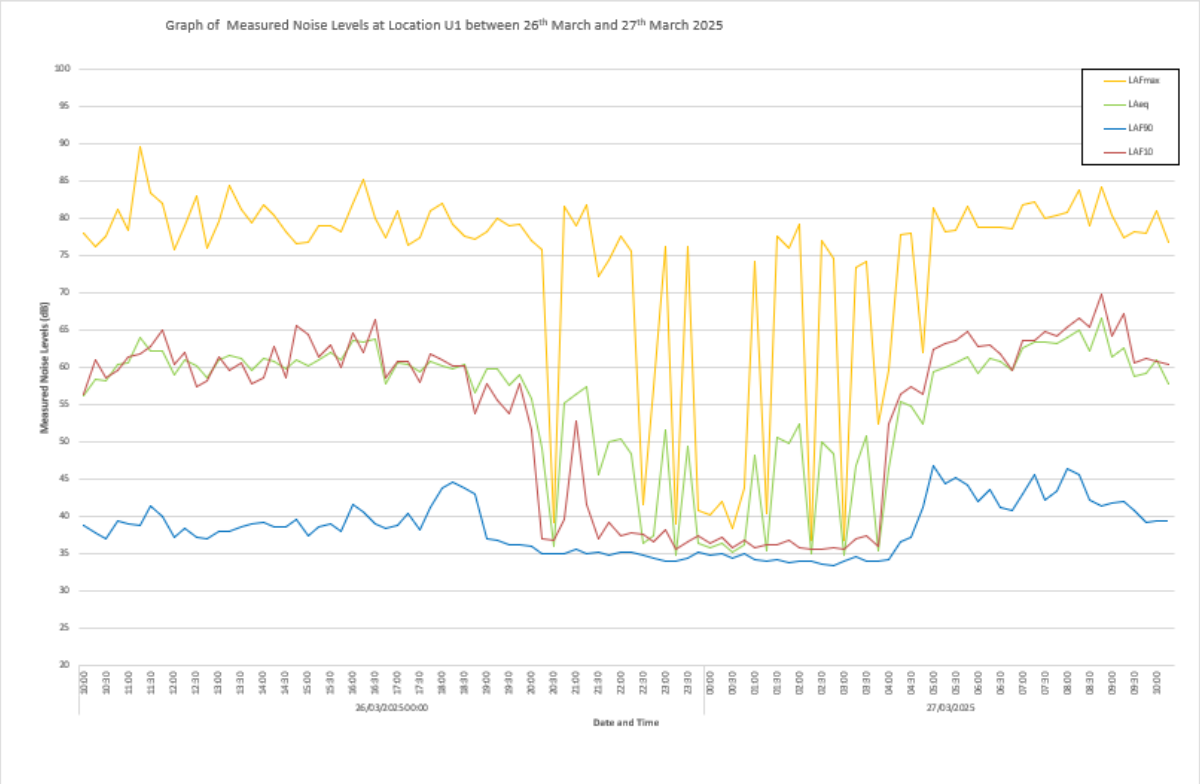

Figure 3.6: Profile of Baseline Noise measurements

4 ASSESSMENT OF IMPACTS

4.1 Introduction

A noise prediction model has been prepared to predict noise levels generated by the proposed Belview Access Road that will be constructed to accommodate the proposed industrial development at Belview, Kilkenny.

4.2 Modelling Parameters

The noise model was developed using the proprietary noise calculation package SoundPLAN, which is an acoustic modelling package for computing noise levels in the vicinity of different types of noise sources. For road traffic noise, the model calculates noise levels in accordance with the UK's *Calculation of Road Traffic Noise (CRTN)* (1988), and the TII *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (2004).

The model takes account of various factors affecting the propagation of sound in accordance with the standards, including:

- The total traffic flow along the road, including Heavy Commercial Vehicles (HCV) % and average speed;
- The proposed road surface finish;
- The distance between the source and the receiver;
- The presence of obstacles such as screens or barriers in the propagation path;
- The presence of reflecting surfaces;
- The type of ground cover between the source and receiver;
- Attenuation due to atmospheric absorption; and
- Meteorological effects such as wind gradient, temperature gradient and humidity.

The noise model has been prepared based on the parameters shown in Table 4.1.

Table 4.1: Noise Model Parameters

Element	Setting
Algorithms	Calculation of Road Traffic Noise (CRTN) TII publication 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes'
Ground Absorption	The ground absorption across the study area has been set to represent local conditions i.e. primarily absorptive ground, G=0.8.
Receptor IDs	Names of the properties within the study area have not been established and therefore roadside receptors have been allocated a unique reference from SoundPlan. The receptor ID references and locations are shown in Figure 4.1.
Receptor Height	The height of existing buildings in the vicinity of the scheme have been derived from online mapping data. Ground floor level has been set at 1.5m above external ground level. First floor level has been set at 4m above external ground level (for two-storey dwellings only).
Terrain	The surrounding terrain has been derived from Ordnance Survey mapping data and publicly available LIDAR data. The horizontal and vertical alignment of the proposed access road has been taken from drawing Ref. '12001 - 3D'.
Road speed	50 kph, based on 60 kph limit for all links.
Traffic flows	The following traffic flow data has been incorporated within the noise model: Existing road links in the do-nothing, opening year scenario (2025): • AADT 1,279 vehicles, 5% HDV Existing road links in the do-nothing, future year scenario (2040): • AADT 1,378 vehicles, 5% HDV Proposed road links in the do-something, future year scenario (2040): • AADT 5,061 vehicles, 5% HDV In the do-something scenario, it is assumed that traffic flows west of the proposed roundabout will correspond with the do-nothing 2040 data i.e. 1,378 vehicles. The distribution of traffic flows throughout the 24-hour period has been based on the diurnal profiles for Non-HDV and HDV traffic set out in the TII publication 'Guidelines for the Treatment of Noise and Vibration in National Road Schemes'.
Road surface correction	Existing and proposed road surfaces: Impervious bituminous surface <75 kph = -1 dB(A).
Site Layout	Drawing Ref. '12001 - 3D'.

4.3 Traffic Flow Data

Traffic flow data has been provided for the following scenarios:

- Do-Nothing scenario for the year 2025 (i.e. the estimated current traffic flows along the existing road).
- Do-Nothing for the year 2040 (i.e. no development of Belview Access Road but with the projected future additional traffic flows along the existing road).
- Do-Something for the year 2040 (i.e. with development of Belview Access Road. For this scenario the existing road will become local access only).

Table 4.2 presents the Annual Average Daily Traffic (AADT) flows, along with the percentage of HCVs and average traffic speeds for the Do-Nothing and Do-Something scenarios along the roads under consideration.

Table 4.2: Traffic Data

Road	Scenario	AADT	HCV %	Speed Limit (km/h)
Old Road	Base (2025)	1,279	5	60
Old Road	Do-Nothing (2040)	1,378	5	60
New Link Road	Do-Something (2040)	5,061	5	60
Old Road	Do-Something (2040) local access only	60	5	60

4.4 Noise Sensitive Receptors

Noise levels have been modelled at a total of 10 noise sensitive receptors in close proximity to the proposed access road. These locations are shown in Table 4.3 and Figure 4.1.Noise predictions have been calculated at ground floor and first-floor locations at two-storey dwellings and ground floor only at single storey dwellings.

Table 4.3: Noise Model Receptor Locations

Noise Model Reference	Baseline Noise Survey Reference	Notes
8677	U1	2-storey residential dwelling
8678	A3	2-storey residential dwelling
8679	A3	2-storey residential dwelling
8680	U1	2-storey residential dwelling
8681	U1	Single storey residential dwelling
8682	A2	Single storey residential dwelling
8683	A2	2-storey residential dwelling
8684	A2	Single storey residential dwelling
8685	A1	2-storey residential dwelling
8716	A3	2-storey residential dwelling

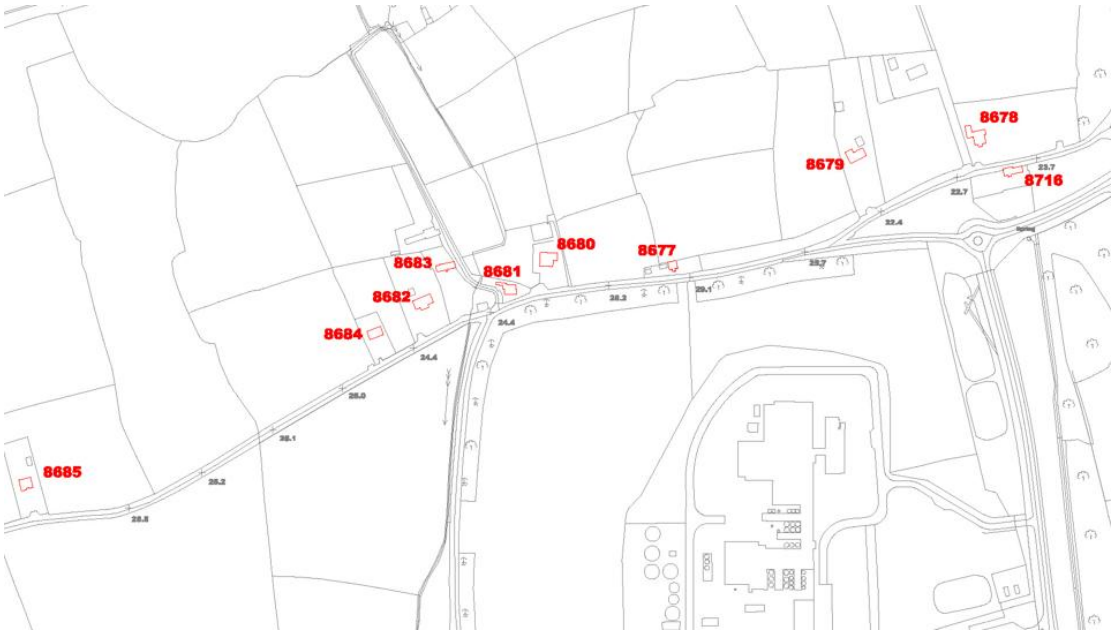

Figure 4.1: Receptor Location Plan

4.5 Predicted Noise Levels

The results of the calculations are presented in Table 4.4 for the 'Do-Nothing' scenario (design year 2040) and the 'Do-Something' scenario (Belview Access Road in place, design year scenario 2040).

Table 4.4: Noise Model Predictions and Assessment

Noise Model Ref	Calculated Noise Level dB L_{den}		TII Condition for Noise Mitigation Satisfied?			Mitigation Required?	Magnitude of Impact Long term
	Do-Nothing Design Year 2040	Do-Something Design Year 2040	(a)	(b)	(c)		
8677 F1	61	62	Yes	Yes	Yes	Yes	Negligible
8678 F1	49	55	No	Yes	Yes	No	Moderate Negative
8679 F1	49	54	No	Yes	Yes	No	Moderate Negative
8680 F1	57	57	No	No	No	No	Negligible
8681 GF	61	58	No	No	No	No	Minor Positive
8682 GF	56	57	No	Yes	Yes	No	Negligible
8683 F1	52	55	No	Yes	Yes	No	Minor Negative
8684 GF	56	56	No	No	No	No	Negligible
8685 F1	56	56	No	No	No	No	Negligible
8716 F1	53	59	No	Yes	Yes	No	Moderate Negative

Table 4.4 shows that, according to TII guidance, mitigation measures are required for the receptor ID 8677. For the other receptor IDs, the noise level for the Do-Something Design Year is less than the design goal of 60 dB $L_{den.}$ The predicted magnitude of impact (according to Table 2.1: Magnitude of Impact Road Traffic Noise) is as follows:

- 'Moderate negative' at three receptors (IDs 8678, 8679 and 8716);
- 'Minor negative' at one receptor (ID 8683);
- 'Negligible' at five receptors (IDs 8677, 8680, 8682, 8684 and 8685); and
- 'Minor positive' at one receptor (ID 8681).

Figure 4.2 presents the traffic noise prediction contours for the Do-Nothing 2025 scenario.

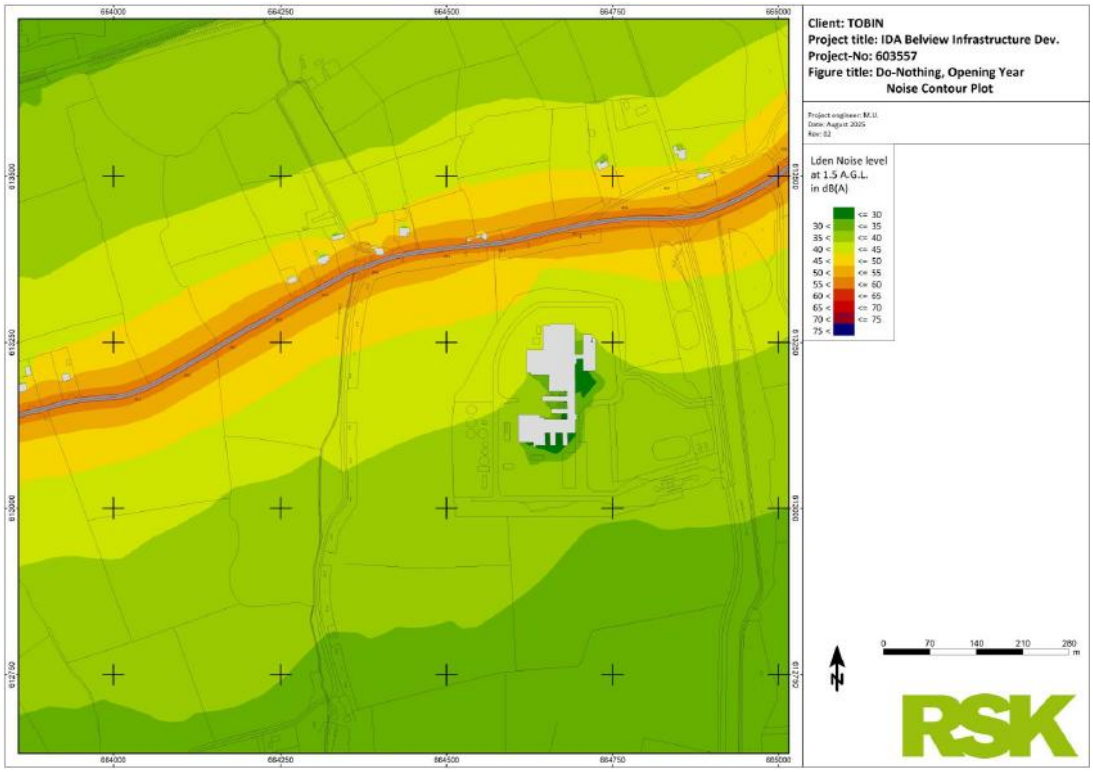

Figure 4.2: Do-Nothing (2025) - Noise Contour Plot

Figure 4.3 presents the traffic noise prediction contours for the Do-Nothing 2040 scenario.

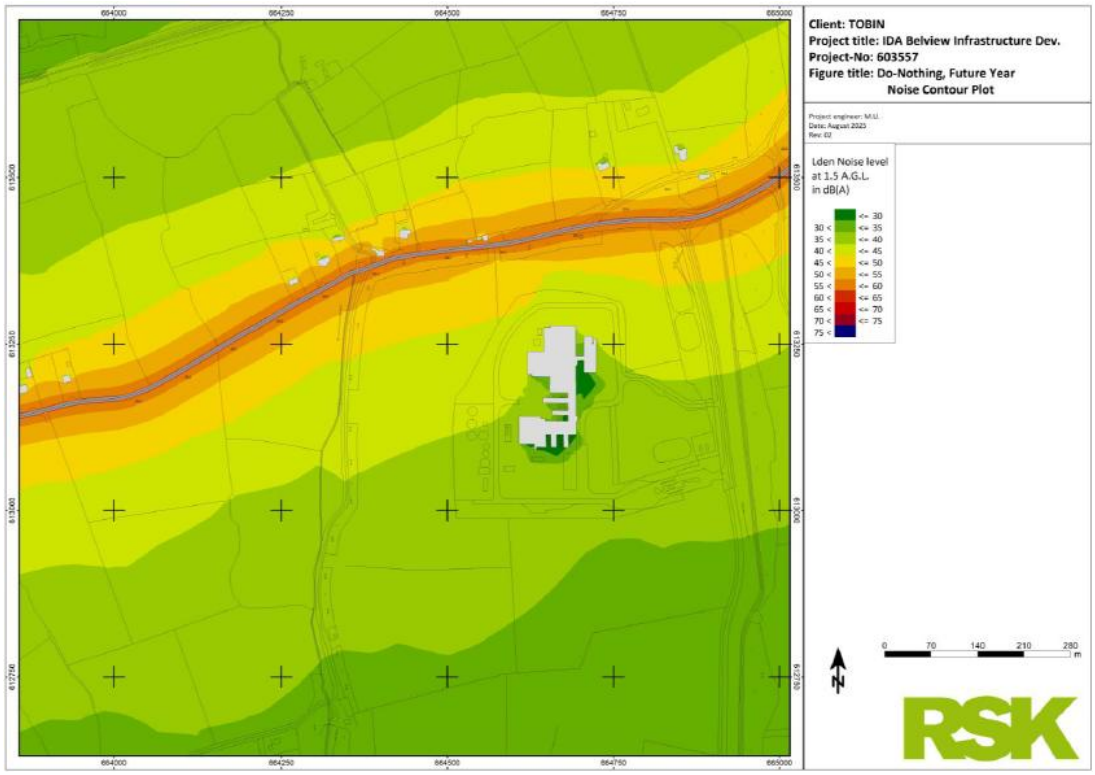

Figure 4.3: Do-Nothing (2040) - Noise Contour Plot

Figure 4.4 presents the traffic noise prediction contours for the Do-Something Design Year (2040) scenario without mitigation.

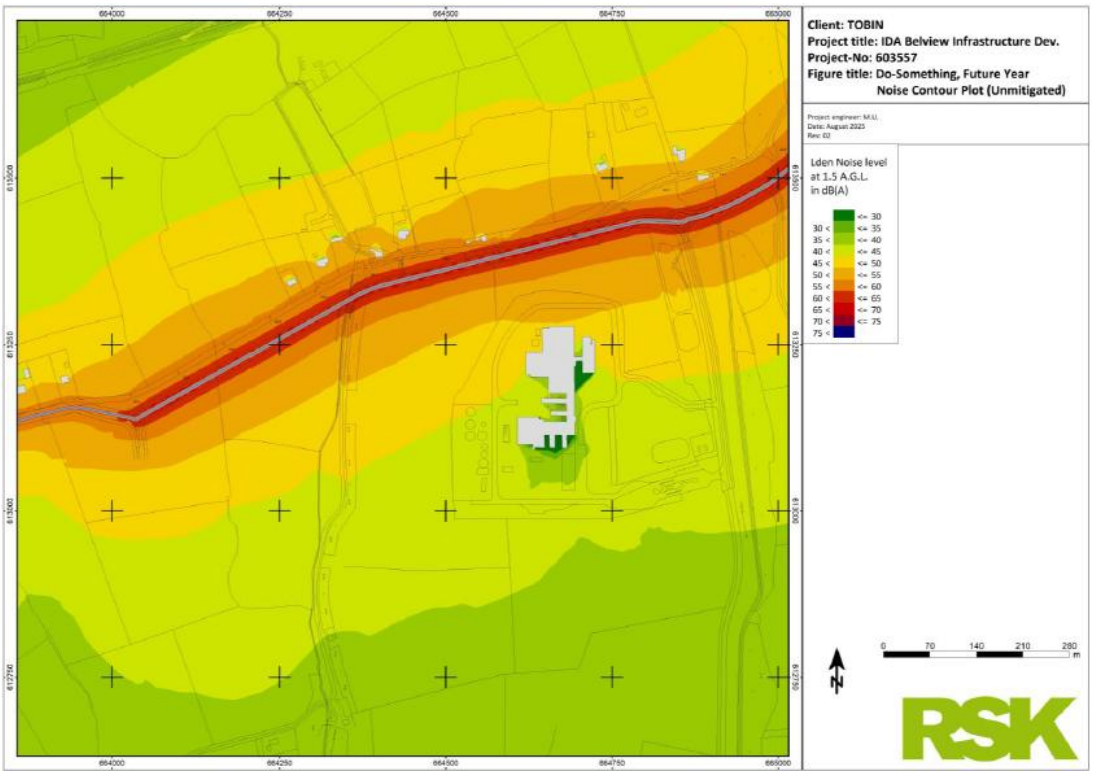

Figure 4.4: Do-Something, Design Year (2040) - Noise Contour Plot (Unmitigated)

4.6 Mitigation Measures

Mitigation measures considered have included low noise road surfacing and noise barriers. Low noise surfacing (LNS) is effective at traffic speeds in excess of 75km/h. On the basis of a 60 km/h speed limit for the new road, LNS has been discounted. Noise mitigation in the form of a reflective noise barrier at a height of 2 metres, and 650 metres long (as indicated in Figure 4.5), has been incorporated to mitigate and minimise potential noise impacts. The mitigation measures have only been introduced within the scheme redline boundary.

Table 4.5 present the predictions and assessment in relation to a proposed 2 metre high noise barrier.

Table 4.5: Noise Model Predictions and Assessment with 2m Barrier

Noise Model Ref	Calculated Noise Level dB L_{den}		TII Condition for Noise Mitigation Satisfied?			Mitigation Required?	Magnitude of Impact Long term
	Do-Minimum Design Year	Do-Something Design Year with 2m barrier	(a)	(b)	(c)		
8677 F1	61	58	No	No	No	No	Minor Positive
8678 F1	49	54	No	Yes	Yes	No	Moderate Negative
8679 F1	49	51	No	Yes	Yes	No	Negligible
8680 F1	57	54	No	No	No	No	Minor Positive
8681 GF	61	54	No	No	No	No	Moderate Positive
8682 GF	56	52	No	No	No	No	Minor Positive
8683 F1	52	51	No	No	No	No	Negligible
8684 GF	56	53	No	No	No	No	Minor Positive
8685 F1	56	56	No	No	No	No	Negligible
8716 F1	53	59	No	Yes	Yes	No	Moderate Negative

The above table shows that, as a result of the 2 metre high barrier, no receptors require noise mitigation, as per the TII guidance. In addition, the 2m barrier provides a noise reduction benefit, particularly to receptor IDs 8677, 8680, 8681, 8682 and 8684 as shown in the 'Magnitude of Impact Long term' column.

The predicted magnitude of impact with a 2m noise barrier is as follows:

- 'Moderate negative' at two receptors (IDs 8678 and 8716);
- 'Negligible' at three receptors (IDs 8679, 8683 and 8685);
- 'Minor positive' at four receptors (ID 8677, 8680, 8682 and 8684); and
- 'Moderate positive' at one receptor (ID 8681).

It should be noted that noise impacts at two receptors to the east of the proposed development (IDs 8678 and 8716) remain 'moderate negative' with the inclusion of a 2m barrier. This is because these receptors experience a significant increase in traffic noise as a result of the proposed development, and do not benefit from any meaningful noise reduction from the proposed noise barrier.

Figure 4.5 shows the noise contour with the 2m noise barrier in place.

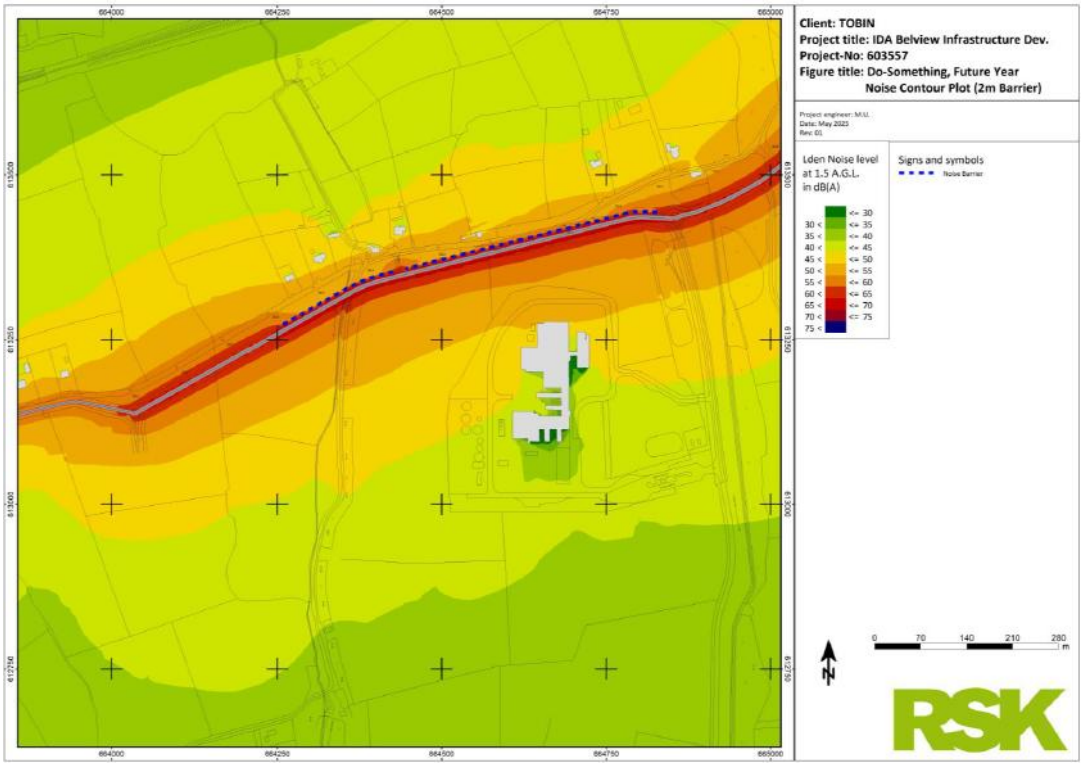

Figure 4.5: Do-Something, Design Year (2040) - Noise Contour Plot (Mitigated: 2m noise barrier)

5 CONCLUSIONS

RSK have been instructed by Tobin, on behalf of Kilkenny County Council, to undertake a noise impact assessment in relation to a planning application for a proposed new access road at the IDA Belview site in County Kilkenny.

A baseline noise survey has been conducted in line with relevant standards. The main noise source in the area was local and distant road traffic, while birdsong was also noted in the area.

A noise impact assessment has been undertaken in accordance with TII road traffic noise guidance where the following three conditions must be met in order for mitigation to be provided:

- The combined expected maximum traffic noise level, i.e. the relevant noise level, from the proposed road scheme together with other traffic in the vicinity is greater than the design goal of 60 dB L_{den};
- The relevant noise level is at least 1dB more than the expected traffic noise level without the proposed road scheme in place, and;
- The contribution to the increase in the relevant noise level from the proposed road scheme is at least 1dB.

The assessment has shown that one dwelling met the three conditions for noise mitigation. A 2 metre high, 650 metre-long, noise barrier has been modelled which has shown that the noise barrier is effective in reducing noise levels to the extent that the receptor no longer requires mitigation. The noise barrier is also effective in reducing noise levels at other receptors close to the proposed development.

The assessment has concluded that, taking into account the mitigation measures, the proposed development can be designed to achieve the relevant criteria.