10.0 NOISE AND VIBRATION

10.1 INTRODUCTION

The Proposed Development will comprise the establishment and operation of a Soil Recovery Facility at the Applicant's lands in Kilmartin, Coynes Cross, Co. Wicklow (the 'Site') to raise land within a natural valley to levels that tie in with the wider ground levels at the Site using imported inert soil and stone waste. It is proposed to progressively restore the filled valley to long-term grassland / hedgerow habitat, similar to that which existed prior to the development of the soil recovery facility. The long-term use of the land will be a return to agriculture.

Full details of the Proposed Development are provided in Chapter 3.0: Project Description, and a summary is provided in Section 10.6.

10.2 ABOUT THE AUTHOR

This assessment has been undertaken by Simon Waddell BSc (Hons.) MIOA. Simon has over twelve years' experience in environmental noise and completed the Institute of Acoustics' post-graduate diploma in Acoustics and Noise Control.

10.3 STUDY AREA AND NOISE SENSITIVE RECEPTORS

This assessment adopts an appropriate study area including the closest representative Noise Sensitive Receptors (NSRs) in each direction from the Proposed Development. The adopted NSRs are shown in Figure10-1 (Appendix 10A) and are listed below:

- NSR1 – approximately 100 m to the north;
- NSR2 – approximately 210 m to the north-east;
- NSR3 – approximately 325 m to the west; and,
- NSR4 – approximately 280 m to the north-west.

The study area therefore extends up to 325 m from the application boundary. No NSRs have been identified within the study area to the south or the east.

NSRs considered include residential properties only, as these are considered to have the high sensitivity to noise and vibration. Other types of receptor (e.g. cultural receptors) are considered to have a lower sensitivity to noise, as they are likely to be less frequently occupied. Evaluation of impacts at the closest residential receptors is therefore expected to provide a robust assessment and impact at other receptors will be lesser.

10.4 ASPECTS SCOPED OUT

The Proposed Development is not expected to generate significant levels of vibration in the immediate vicinity of the Proposed Development itself. Levels of vibration at off-site NSRs will be lower still and are expected to be substantially below the threshold of perception. Further consideration of vibration has therefore been scoped out of this assessment.

Trucks accessing the Site will follow a route from the M11 and will not pass any NSRs (refer to Figure 10-2, Appendix 10A). Noise from trucks using the access route will be indistinguishable in character from the existing road traffic noise arising from the M11 and traffic flows relating to the Proposed Development are expected to be negligible by comparison to baseline flows.

To confirm the above assumptions, a noise model has been produced considering the access route from the M11 to the Proposed Development being used the maximum number of trucks expected in a day, in accordance with the method provided in Calculation of Road Traffic Noise (see Section 9.2). The predicted level due to truck movements is more than 30 dB below the 60 dBL_{den} design standard provided in Guidelines for the Treatment of Noise and Vibration in National Road Schemes (refer to Section 9.2) and as such is negligible.

Noise from road traffic movements associated with the Proposed Development has therefore been scoped out of further assessment.

10.5 LEGISLATIVE AND POLICY CONTEXT

This assessment has been undertaken making reference to the following guidance.

10.5.1 WICKLOW COUNTY DEVELOPMENT PLAN 2022 – 2028

Chapter 15 of the County Development plan requires that noise emissions should be controlled and references EU Noise Directive 2002/49/EC.

10.5.2 GUIDANCE NOTE FOR NOISE: LICENCE APPLICATIONS, SURVEY AND ASSESSMENT IN RELATION TO SCHEDULED ACTIVITIES (NG4)

NG4 notes its intended purpose as:

"..to assist licensed sites with the assessment of their potential and actual noise impact on the local environment. It provides the relevant knowledge and guidance to licensees together with their consultants, regulators and interested third parties."

The guidance provides the following:

- A background to the basic theory of environmental noise;
- A discussion of the principle of Best Available Techniques (BAT);
- Outline guidance on noise reduction measures that may be considered in certain instances, and;
- Discussion of licensed sites in the context of the Environmental Noise Regulations.

NG4 provides typical noise limit values for rating levels for noise from licenced sites as follows:

- Daytime (07:00 – 19:00) – 55 $dBL_{Ar,T}$;
- Evening (19:00 – 23:00) – 50 $dBL_{Ar,T}$; and
- Night-time (23:00 – 07:00) – 45 $dBL_{Aeq,T}$;

The guidance notes that the rating level can be derived by addition of a +5 dB penalty to the daytime and evening L_{Aeq} levels for tonal and/or impulsive characteristics. No tonal or impulsive characteristics should be clearly audible during the night-time period at any noise sensitive location.

NG4 provides guidance on how to set appropriate noise criteria for licenced sites.

Step 1 requires assessors to identify whether the Site is located in/near an area which could be considered a 'Quiet Area'. Criteria are provided for the identification of Quiet Areas:

- At least 3 km from urban areas with a population >1,000 people;
- At least 10 km from any urban areas with a population >5,000 people;
- At least 15 km from any urban areas with a population >10,000 people;
- At least 3 km from any local industry;
- At least 10 km from any major industry centre;

- At least 5 km from any National Primary Route, and;
- At least 7.5 km from any Motorway or Dual Carriageway.

Step 2 requires a baseline survey to characterise the noise environment.

Step 3 screens for areas of low background noise, defined as follows:

Average daytime background noise level ≤40 dBL_{A90};

Average evening background noise level ≤35 dBL_{A90}; and

Average night-time background noise level ≤30 dBL_{A90}.

Depending on the outcome of the baseline survey and screening process, the noise criteria provided in Table 10-1 are recommended.

Table 10-1 - Recommended Noise Limit Criteria

Scenario	Daytime noise criterion, $dBL_{Ar,T}$	Evening noise criterion, $dBL_{Ar,T}$	Night-time noise criterion, $dBL_{Aeq,T}$
Quiet area	Noise from the licenced site to the be at least 10 dB below the average background noise level for the relevant period measured during the baseline noise survey.		
Areas of low background noise	45	40	35
All other areas	55	50	45

10.5.3 BRITISH STANDARD BS 5228-1:2009+A1:2014 CODE OF PRACTICE FOR NOISE AND VIBRATION CONTROL ON CONSTRUCTION AND OPEN SITES, PARTS 1 AND 2

BS5228 (BSI, 2014) provides a procedure for the estimation of construction noise and vibration levels and for the assessment of the significance of the predicted effects at the nearest sensitive receptors.

Part 1 of the Standard provides several methods for the evaluation of the significance of construction noise effects. The ABC method considers significance by comparison to the measured baseline $L_{Aeq,T}$ noise level, rounded to the nearest 5 dB. Three categories of threshold values are provided; A, B and C, in increasing 5 dB bands, for the periods “daytime and Saturdays”, “evenings and weekends” and “night-time”. Where the measured baseline exceeds the highest category (C), a 3 dB increase over baseline is considered significant. The evaluation periods are defined as follows:

- Daytime: 07:00 – 19:00 on weekdays and 07:00 – 13:00 on Saturdays;
- Evenings and weekends: 19:00 – 23:00 weekdays, 13:00 – 23:00 Saturdays and 07:00 – 23:00 Sundays; and
- Night-time: 23:00 – 07:00 (all days).

Annexes B, C and D of the Standard include measured typical noise levels for a range of construction plant and activities.

Part 2 of the Standard provides threshold levels at which vibration may be perceptible to people, through to becoming intolerable and frequency-weighted thresholds at which vibration may cause cosmetic damage to structures.

10.5.4 GUIDELINES FOR THE TREATMENT OF NOISE AND VIBRATION IN NATIONAL ROAD SCHEMES (NATIONAL ROADS AUTHORITY, 2014)

The purpose of the guidelines is to provide guidance on the treatment of noise and vibration during the planning and design of national road schemes. The guidelines are not mandatory but are recommended to achieve appropriate consistency with respect to the treatment of noise and vibration during the Constraints, Route Corridor Selection, Environmental Impact Assessment and construction phases of road scheme planning and development undertaken in accordance with Authority's National Roads Project Management Guidelines (NRPMG).

The guidelines set out a day evening night (den) 60 dBL_{den} design goal for new national road schemes.

Where calculation of road traffic noise is required, the guidelines specify the method provided in Calculation of Road Traffic Noise (CRTN), with supporting conversion to the L_{den} metric provided using supporting UK Transport Research Laboratory (TRL) guidance.

10.5.5 CALCULATION OF ROAD TRAFFIC NOISE (CRTN)

CRTN provides a method for calculating noise from road traffic which considers traffic flow, speed, road width and surface conditions. The resultant levels are expressed as $L_{A10,18hr}$ values, but can be converted to L_{den} values by application of factors provided by TRL.

10.5.6 PRE-CONSULTATION

A non-statutory pre-consultation process was carried out with prescribed bodies and other parties over 25 May– 26 June 2023 to seek their comments and observations about the Proposed Development. This process is fully documented in the Pre-Consultation Report accompanying the Strategic Infrastructure Development (SID) application submission.

All comments and observations received through the pre-consultation process have been taken into consideration during the preparation of this EIAR chapter and are addressed in the following sections, where relevant.

10.6 PROJECT DESCRIPTION

A full project description is provided in Chapter 3.0 (Project Description). A project description summary is provided below:

The Proposed Development is the establishment and operation of a soil recovery facility within a 17.08 hectare site at Kilmartin, Co. Wicklow (approximately 4 km north-east of Ashford). The soil recovery facility will import up to 2,160,000 tonnes of inert waste, primarily clean soils and stones from construction and development sites. Clean soil and stone will be used to progressively infill a steep-sided natural valley within the Site and raise ground levels to approximately 57mOD, tying in with the surrounding landscape. The infill area covers approximately 14 hectares.

The soil recovery facility will accept up to 100 loads per day on average (maximum 150 in exceptional circumstances) with a projected operational lifespan of up to 10 years depending on market conditions within the construction sector, followed by one year for final restoration and aftercare of the lands.

The Proposed Development will require the following structures be installed and maintained for the operational life of the Soil Recovery Facility: office and welfare facilities, six parking bays for

private vehicles, weighbridge and associated weighbridge cabin, one wheel wash and one spray-system wheel wash, two waste inspection bays and one bunded waste quarantine area, hardstanding area (for vehicle movement and storage), surface water drainage infrastructure from hard standing and discharge to ground (including two interceptors and two soakaways), an internal access road, internal haul roads (constructed from recycled aggregates where available), security features including security gates and fencing, and power supply. These structures will be removed from the Site at the end of life point of the soil recovery facility.

Approval will be sought for a connection to the ESB Network for the site office and welfare facilities. Diesel generators will be used to power mobile lighting, if required. Temporary lighting, if required, will be cowled to prevent light spillage.

The temporary relocation of ESB poles within the fill area will be required. This will be subject to prior agreement with ESB.

Wastewater from office and welfare facilities will be managed by a third-party provider, with no connection to foul water mains.

All truck deliveries will access the Site via the N11/M11 and Coynes Cross Road, with internal queuing space provided within the Site and no parking on public roads.

The existing land entrance located on R772 will be upgraded and will be retained following the completion of the Proposed Development.

A groundwater abstraction borehole will be installed to supply water for wheel washes, dust suppression, and welfare facilities, and will be retained for monitoring after restoration.

Restoration will return the Site to grassland and hedgerow habitat, similar to its pre-development state. Approximately 140 m of fence and hedgerow opposite the entrance will be temporarily removed to improve sightlines during the life of the soil recovery facility and this will be subsequently reinstated. Native species will be used in hedgerow planting. The restored land will revert to agricultural management.

Permission is sought from An Coimisiún Pleanála for a period of up to 10 years, with an additional year for restoration. The Proposed Development will require a waste licence[1] from the Environmental Protection Agency (EPA) and aligns with national and regional policy objectives to provide adequate licensed soil recovery capacity for the Dublin and Wicklow regions.

10.7 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

10.7.1 OVERALL APPROACH

This assessment considers potential noise impacts associated with the Proposed Development in accordance with the methods set out in NG4.

The baseline noise environment is characterised using survey data reported in the 2008 Environmental Statement for the previously consented project. While we note that the data is now 20 years old, the dominant noise source remains the M11. Using historical data may be

[1] The proposed development will be carried out in accordance with a waste licence from the EPA or in accordance with by-product regulations, Article 27 of the European Communities (Waste Directive) Regulations 2011 (see Section 3.5 in Chapter 3.0: Project Description of this EIAR for further detail).

considered a robust approach, as the road will likely be busier (and therefore noisier) such that higher noise limits could arise if the baseline survey were updated.

Operational noise associated with the Proposed Development has been predicted using the method provided in BS5228 Part 1.

A restoration and aftercare phase for the Proposed Development has been considered along with the phasing of activities which is described in Chapter 3.0: Project Description.

For the purpose of clarity, this assessment uses the term 'works phase' to describe the period of time comprising the following construction activities:

- Enabling works to provide facilities required for the operation of the soil recovery facility (I.e., entrance upgrades, establishment of office and welfare facilities, etc); and
- The operation of the soil recovery facility (i.e. acceptance of clean soil and stone to Site and its subsequent emplacement within the fill area).

A restoration phase, broadly following the work phase (with some temporal overlap), will comprise the shaping on the final landform in the fill level, restoration of stored topsoil, seeding (where necessary), and planting with subsequent aftercare and maintenance.

10.7.2 BASELINE NOISE SURVEY

This assessment relies on the reported baseline data from the 2008 EIA prepared by White Young Green Environmental (Ireland) Ltd and undertaken in support of a similar proposed development (i.e. land raising).

A baseline noise survey was completed in December 2005 at locations representative of the Site itself and of the closest noise sensitive receptors (NSRs). The reported monitoring was in accordance with appropriate standards.

Measurements were taken at locations to the north, south, east and west of the Site and at the closest NSR approximately 250 m to the north. The measurement locations are shown in Figure 10-1 (Appendix 10A).

Measurements were undertaken during the daytime period only. The measurement duration was 30 minutes per location.

10.7.3 PREDICTION OF OPERATIONAL NOISE

Operational noise has been predicted in accordance with the method provided in BS5228.

The following modelling assumptions have been adopted in this assessment:

- Up to 15 trucks per hour will access the Site;
- A 28 tonne bulldozer will operate continuously throughout the 10-hour working day;
- A 28 tonne excavator will operate continuously throughout the 10-hour working day;
- A jet spray wheel wash will operate for 15% of the working day (approximately 1 minute per truck)[2];
- The BS5228 propagation method has been applied;

[2] The other wheel wash provided is a wheel-bath style wheel wash and has therefore been scoped out of this assessment.

- Local topography has been included in the model;
- A typical air temperature of 10°C;
- Typical relative humidity of 70%; and
- The Site's surroundings comprise soft, acoustically absorptive ground where ground absorption, G=1.0.

We note that typically 100 deliveries will occur per full day and that up to 150 deliveries will occur during exceptional circumstances. This assessment is therefore conservative as it assumes that 150 deliveries per day, comprising 15 vehicles entering and leaving the Site per hour.

The bulldozer and excavator are unlikely to operate continuously; however, in a conservative approach this assessment considers 100% utilisation of these items. The wheel wash has been assumed to operate for 1 minute per delivery, or 150 minutes per working day. These items of plant have been modelled as point sources. The excavator and bulldozer have been assumed to have an effective height of 2 m above local ground level, and the wheel wash 0.5 m above local ground level. The excavator and bulldozer have been modelled at their closest assumed approach to neighbouring NSRs for each modelled stage of the Proposed Development.

Deliveries to site by truck have been modelled as a linear noise source 1.5 m above local ground level, with trucks assumed to move at a speed of 10 km/h across the Site.

We note that processing and handling of materials will typically occur after deliveries have unloaded. The noise models assume that all proposed activities will occur simultaneously, representative of worst-case operations, however, in practice this is unlikely to occur and noise levels will be lower than predicted.

We note that shorter hours of operation will occur on Saturdays. The prediction of operational noise levels considers a 'worst-case' hourly noise level for any operational day, therefore predicted operational noise levels consider the noise level in a single representative hour of any operational day.

Representative source noise terms have been adopted from BS5228; the adopted levels are shown in Table 10-2.

Table 10-2 - Applied Representative Source Noise Terms

Item	BS5228 reference	A-weighted sound power level, dB
Truck deliveries to site	Annex C8 Item 20 – tipper lorry	107.5
Bulldozer	Annex C2 Item 11 – 28t dozer	107.0
Excavator	Annex C2 Item 17 – 28t tracked excavator	103.9
Wheel wash	Annex C11 Item 2 – diesel water pump	99.0

Note – BS5228 does not provide a source level for a wheel wash, so a diesel-powered water pump has been assumed to be representative.

Modelling predictions consider how noise from the Proposed Development will change over time. The Proposed Development has been divided into four example stages to consider how operational noise will change according to areas of active infilling and the degree of screening provided by the

local topography. These stages are described in Table 10-3. The stages do not necessarily correspond to the actual phased development of the Proposed Development.

Table 10-3 - Modelled Stages of Proposed Development

Stage	Description
Stage 1 Start of project; no infilling completed. Northern area.	Trucks circulating and tipping material in the northern area of the Site. Excavator and dozer operating in the northern area of the Site. Topography excludes any infill; maximum screening provided to noise sources.
Stage 2 Early infilling operations. Southern area.	Trucks circulating from the northern to the southern area of the Site, tipping material in the south. Excavator and dozer operating in the southern area of the Site. Topography excludes any infill; maximum screening provided to noise sources.
Stage 3 Later infilling operations. Northern area.	Trucks circulating and tipping material in the northern area of the Site. Excavator and dozer operating in the northern area of the Site. Topography includes infilling to final levels; minimum screening provided to noise sources.
Stage 4 Later infilling operations. Southern area.	Trucks circulating from the northern to the southern area of the site, tipping material in the south. Excavator and dozer operating in the southern area of the Site. Topography includes infilling to final levels; minimum screening provided to noise sources.

The placement of noise sources within the noise model in the four stages modelled is shown in Figure 10-3, Figure 10-4, Figure 10-5 and Figure 10-6, respectively (see Appendix 10A).

This assessment considers that noise from the Proposed Development is unlikely to be tonal, and any impulsive character is unlikely to be clearly audible at NSRs. As such, no corrections have been applied to the predicted level to derive the rating level.

10.8 EXISTING ENVIRONMENT

The Site lies approximately 180 m from the M11 motorway and the dominant noise source, both at the Site and at the closest NSRs, is road traffic.

10.9 BASELINE CONDITIONS

The reported baseline noise levels are provided in Table 10-4 (overleaf).

Table 10-4 - Reported Baseline Noise Levels

Measurement location	Measurement start time	Measured level, dB			Dominant noise source
		Ambient, L_{Aeq}	Background, L_{A90}	Tenth percentile, L_{A10}	
N1 – south	09:00	57	55	58	Road traffic on M11
N2 – east	09:40	54	51	61	
N3 – north	10:20	46	43	49	
N4 – west	11:00	50	44	60	
N5 – north-west	11:45	56	50	64	Road traffic on M11 and old N11

10.10 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

Aspects of the project description relevant to noise are set out in Section 10.6

10.11 ADOPTED EVALUATION CRITERIA

A noise limit (criterion) has been set for the Proposed Development with reference to the NG4 method, referencing the reported baseline noise levels, as follows:

- The Proposed Development lies within 7.5 km of a motorway and therefore does not meet the criteria for being a Quiet Area.
- With reference to Table 10-1, the average daytime background noise level is above 40 dBL_{Aeq} at all monitoring locations, such that the Site and its surroundings do not meet the criteria for an area with low background noise.
- The resultant daytime period noise limit is therefore 55 $dBL_{Aeq,1hr}$.

The Proposed Development will operate during the daytime period only, and no night-time or evening operation is proposed, therefore no criteria have been proposed for these times.

10.12 DERIVATION OF EFFECT SIGNIFICANCE

A matrix for the derivation of effect significance, based on the EPA's 2022 EIAR Guidelines is provided in Table 10-5.

Table 10-5 - Significance Matrix

Receptor Sensitivity	Magnitude of Impact (Degree of Change)				
		Negligible	**Low**	**Medium**	**High**
	High	Slight	Slight / moderate	Moderate / large	Profound
	Medium	Imperceptible / slight	Slight / moderate	Moderate	Large / profound
	Low	Imperceptible	Slight	Slight	Slight / moderate
	Negligible	Imperceptible	Imperceptible / slight	Imperceptible / slight	Slight

Guidance to the use of the matrix notes that effects that are either 'large' or 'profound' alter environmental sensitivities and are therefore considered to be significant based on professional judgement. Effects that are 'moderate', 'slight' or 'imperceptible' are those which at their highest

effect are consistent with existing and emerging baseline trends and are considered to be not significant.

This assessment considers that predicted operational noise levels which comply with the adopted evaluation criterion will result in a 'low' impact magnitude.

At high sensitivity receptors (such as residential properties) the resultant effect significance will be 'slight/moderate'.

Where predicted noise levels exceed the adopted criterion the resultant magnitude of impact will be 'moderate/high'. At high sensitivity receptors the resultant effect significance will be 'moderate/major'.

This assessment considers that effects with a significance of 'slight/moderate' are not significant, and that effects with a significance of 'moderate' or greater are significant.

10.13 POTENTIAL EFFECTS

The predicted operational noise levels for each of the modelled stages of the Proposed Development are provided and evaluated against the adopted criterion in Table 10-6.

Table 10-6 - Predicted operational noise levels

Stage of Proposed Development	NSR	Predicted level, $dBL_{Aeq,1hr}$	Comparison (predicted level minus 55 $dBL_{Aeq,1hr}$ criterion), dB
Stage 1 No infilling completed Northern area active	NSR1	55	0
	NSR2	47	-8
	NSR3	33	-22
	NSR4	35	-20
Stage 2 No infilling completed Southern area active	NSR1	51	-4
	NSR2	44	-11
	NSR3	37	-18
	NSR4	36	-19
Stage 3 Infilling completed Northern area active	NSR1	53	-2
	NSR2	46	-9
	NSR3	37	-18
	NSR4	38	-17
Stage 4 Infilling completed Northern area active	NSR1	51	-4
	NSR2	44	-11
	NSR3	37	-18
	NSR4	36	-19

The predicted worst-case operational noise level meets the criterion at every NSR[3].

With reference to measured baseline noise levels (refer to Table 10-4) the predicted ambient levels at NSRs are predominantly below the baseline background levels. As such, the Proposed

[3] Note the assessment considers the application boundary as shown in figures provided in Appendix 10A. However, the application boundary has subsequently been altered in the northwest of the Applicant's lands to provide additional space that may be required for an internal haul route. This change brings the indicative haul road approximately 25 m closer to receptor NSR4 and the result of this change is negligible and does not alter the findings of this assessment.

Development is likely to range from inaudible to 'just audible' at the majority of NSRs for the majority of the time it is operational.

With reference to Table 10-5 the magnitude of impact at all NSRs is therefore low, and the significance of effect is 'Slight/Moderate'. Noise impacts associated with the Proposed Development are therefore **Not Significant**.

10.13.1 "DO-NOTHING" SCENARIO

In the do-nothing scenario the noise environment in the vicinity of the Proposed Development would likely remain in its baseline state. The dominant noise source would remain road traffic.

10.14 MITIGATION AND MONITORING

10.14.1 MITIGATION

The predicted operational noise levels for the Proposed Development meet the criteria, therefore specific mitigation has not been considered.

Practical measures which would reduce the likelihood of unnecessary noise are provided as follows:

- Infilling from the north to the south, such that infilled areas provide screening of noise from the Site at NSRs to the north (most exposed NSRs);
- Maintenance of haul roads to minimise rattling from empty trucks as they leave the Site;
- Switch off all plant when not in use and discourage idling of trucks waiting to enter the Site;
- Minimise the drop height when moving materials;
- Consider the use of temporary baffle mounds around active working areas; and
- Operate an effective maintenance schedule for plant items.

10.14.2 MONITORING

This assessment considers that the following operational noise monitoring regime may be appropriate, noting that the final schedule would be expected to be agreed with the EPA under conditions associated with the waste licence:

- Noise monitoring to be completed by an appropriately qualified acoustician, with an appropriately calibrated Class I or Class II sound level meter;
- Monitoring to be undertaken for up to two hours per location at locations representative of the closest NSRs to the Proposed Development;
- Monitoring to be completed on a representative busy day, expected to be during the summer period; and
- Surveys to be undertaken annually for the first two operational years of the Proposed Development (noting that these may not be consecutive years) and thereafter only in the event of a noise complaint.

10.15 RESIDUAL EFFECTS

No specific mitigation is proposed; therefore residual effects remain the same as those previously considered and are therefore **Not Significant**.

10.16 CUMULATIVE EFFECTS

The cumulative effects associated with other permitted / under construction third-party developments have been considered in Chapter 15.0 of this EIAR . Cumulative effects are considered to be **Not Significant.**

10.17 DIFFICULTIES ENCOUNTERED

No particular difficulties were encountered over the course of this assessment. A robust approach has been followed and conservative assumptions adopted where specific data was not available.

10.18 REFERENCES

Guidance Note for Noise: Licence Applications, Survey and Assessment in Relation to Scheduled Activities (NG4). Environmental Protection Agency Office of Environmental Enforcement. 2016.

Wicklow County Development Plan 2022 – 2028. Wicklow County Council, 2022.

British Standard BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Parts 1 and 2. British Standards Institute. 2014.

Kilmartin Land Restoration Project EIA. White Young Green (Ireland) Ltd. 2008.

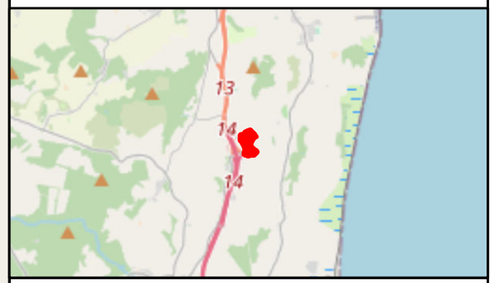
Guidelines for the Treatment of Noise and Vibration in National Road Schemes. National Roads Authority. 2004.

Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes. National Roads Authority. 2014.

Calculation of Road Traffic Noise (CRTN). UK Government. 1988.

Appendix 10A

FIGURES



wsp

Client:
HERBERT STREET FINANCIAL

Project:
SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title
SITE LOCATION PLAN,
BASELINE NOISE SURVEY
MEASUREMENT AND NSRs LOCATIONS

Drawing No:	FIGURE 10.1	Drawn:	JSdS
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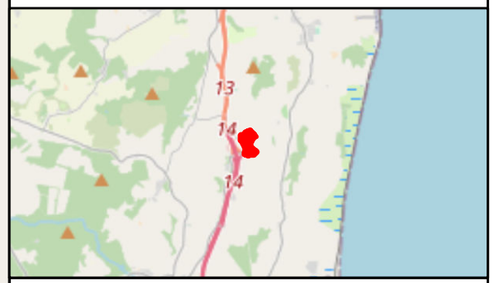

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Client:
HERBERT STREET FINANCIAL

Project:
SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title
SITE ACCESS

Drawing No: FIGURE 10.2
Date: 12/10/2023
Scale: 4,000 @ A3
Drawn: JSdS
Checked: SW
Approved: RL

User Name: desouzaj Date Saved: 12/10/2023 16:02:25

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N

Site Boundary

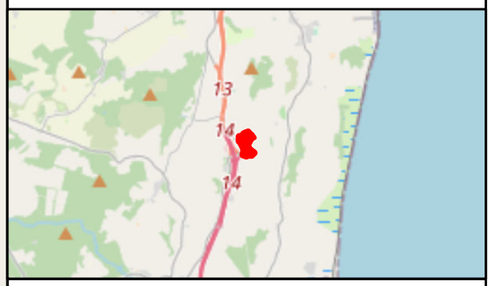
Digger

Dozer

WheelWash

Trucks circulating around northern area

Indication for valley area topography



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Client:

HERBERT STREET FINANCIAL

Project:

SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title

NORTHERN AREA OF SITE
OPERATIONAL OPTION 1

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Approved: RL

0 100 200 Metres

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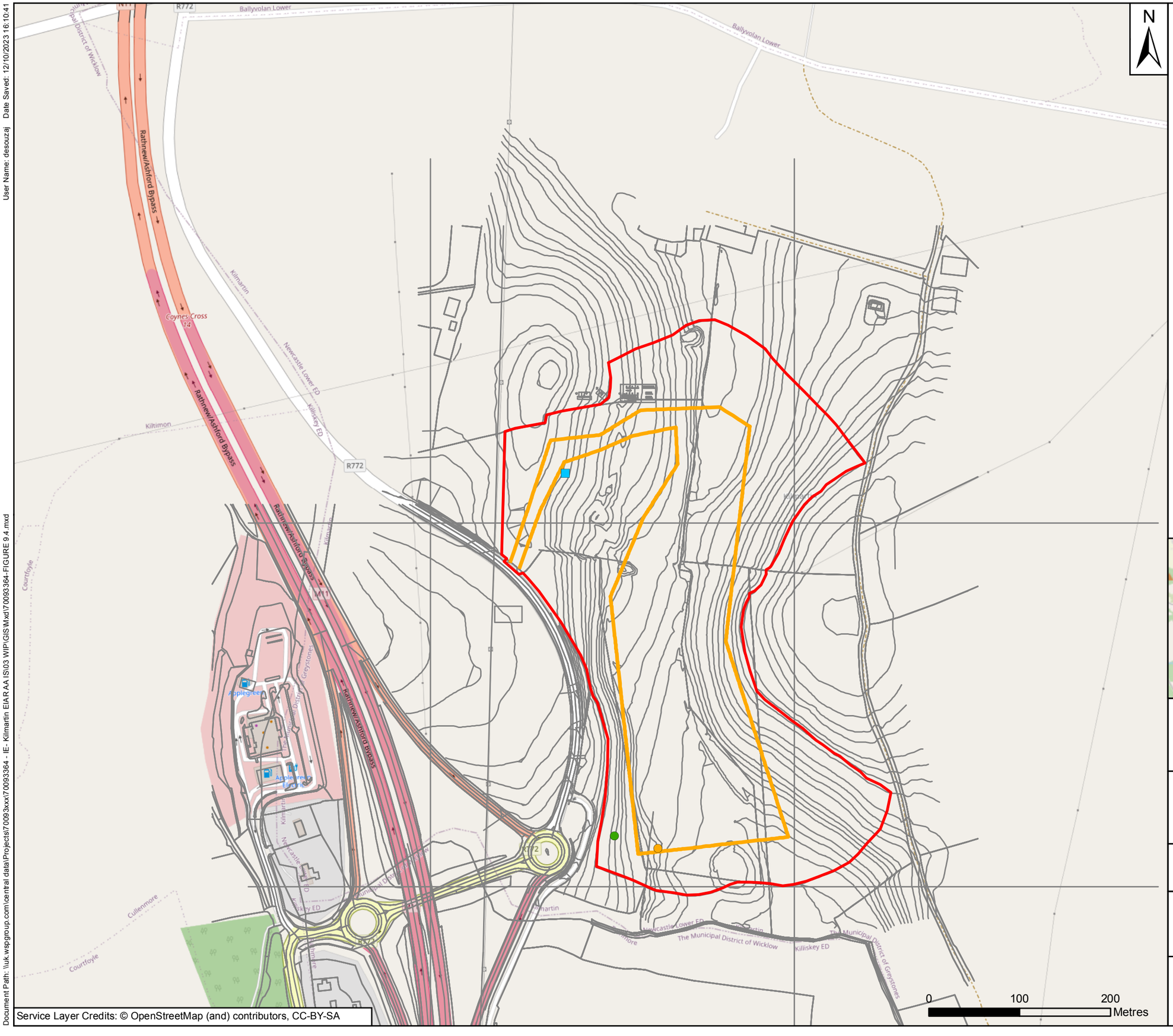

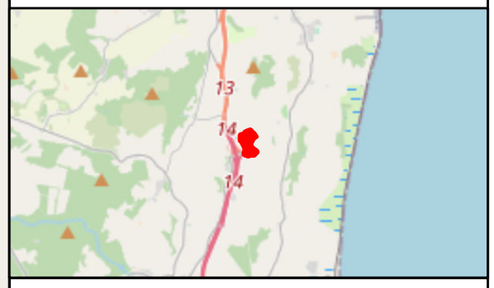

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wsp

Client:

HERBERT STREET FINANCIAL

Project:

SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title

SOUTHERN AREA OF SITE
OPERATIONAL OPTION 1

Drawing No:	FIGURE 10.4	Drawn:	JSdS
Date:	12/10/2023	Checked:	SW
Scale:	4,000 @ A3	Approved:	RL

User Name: desouzaj Date Saved: 12/10/2023 16:08:24

Document Path: \\uk.wspgroup.com\central data\Projects\70093xxx\70093364 - IE- Kilmartin EIAR AA IS\03 WIP\GIS\Mxd\70093364-FIGURE 9.5.mxd

N

Site Boundary

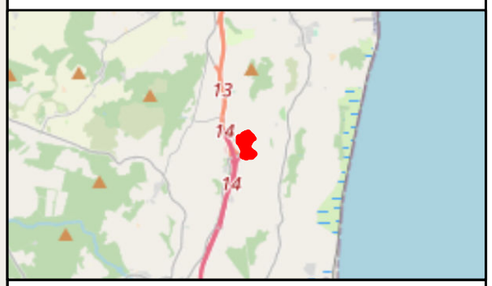
Digger

Dozer

WheelWash

Trucks circulating around northern area

Indication for valley area topography



wsp

Client:

HERBERT STREET FINANCIAL

Project:

SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title

NORTHERN AREA OF SITE
OPERATIONAL OPTION 2

Drawing No: FIGURE 10.5
Date: 12/10/2023
Scale: 4,000 @ A3
Drawn: JSdS
Checked: SW
Approved: RL

0 100 200 Metres

User Name: desouzaj Date Saved: 12/10/2023 16:09:33

Document Path: \\uk.wspgroup.com\central data\Projects\70093xxx\70093364 - IE- Kilmartin EIAR AA IS\03 WIP\GIS\Mxd\70093364-FIGURE 9.6.mxd

N

Site Boundary

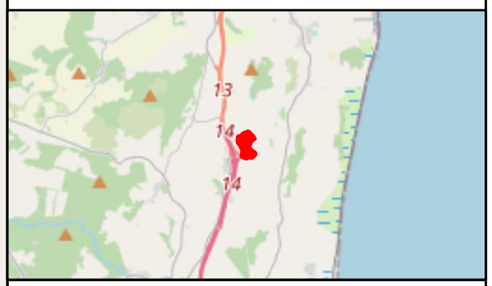
Digger

Dozer

WheelWash

Trucks circulating around southern area

Indication for valley area topography



wsp

Client:

HERBERT STREET FINANCIAL

Project:

SOIL RECOVERY FACILITY
KILMARTIN, ASHFORD

Title

SOUTHERN AREA OF SITE
OPERATIONAL OPTION 2

Drawing No: FIGURE 10.6
Date: 12/10/2023
Scale: 4,000 @ A3
Drawn: JSdS
Checked: SW
Approved: RL

0 100 200 Metres