Appendix D Requirement for Regulation 3 (4) of S.I. No. 719 of 2022

An application shall, to the extent that information is reasonably available to the applicant at the time of the application, include the following:

Table A2: Regulation 3 (4) of S.I. No. 719 of 2022

Requirement	Where / How Addressed
(a) name, address and contact details of the applicant;	Electricity Supply Board 27 Fitzwilliam Street Lower Dublin 2 D02 KT92 Contact: Patrick Nolan Email: Patrick.nolan@esb.ie
(b) a description of the designated development;	**Section 2.3** of the *Temporary Emergency Generation Power Plant, West Offaly Power Station, Environmental Report* (AECOM, 2023), outlines the description of the Designated Development.
(c) a description of the location of the designated development;	**Section 2.2** of the *Temporary Emergency Generation Power Plant, West Offaly Power Station, Environmental Report* (AECOM, 2023), provides the description of the location of the Designated Development.
(d) a copy of the newspaper notice referred to in Regulation 4;	A copy of the newspaper notice is included separately in the application documentation.
(e) a site location map sufficient to identify the land on which the designated development would be situated;	**Figure 1 Site Location Map** of the *Temporary Emergency Generation Power Plant, West Offaly Power Station, Environmental Report* (AECOM, 2023), is shown the site location map.
(f) a site or layout plan on which the site boundary of the designated development shall be clearly delineated;	**Figure 2 Site Layout Map** of the *Temporary Emergency Generation Power Plant, West Offaly Power Station, Environmental Report* (AECOM, 2023), is shown the site layout plan.
(g) any site layout plans, drawings or other information required to describe the relevant features of the designated development;	**Figure 1 Site Location Map** **Figure 2 Site Layout Map** **Figure 3 Dismantling and Demolition Plan** **Figure 4 GE Generator Equipment** **Figure 5 Parking, Offices and Laydown Areas** Submitted with the *Temporary Emergency Generation Power Plant, West Offaly Power Station, Environmental Report* (AECOM, 2023).
(h) an Appropriate Assessment screening report and, where the applicant considers that an Appropriate Assessment will be required, a Natura Impact Statement;	An Appropriate Assessment (AA) Screening & Natura Impact Statement (NIS) (APEM, 2023) is submitted with this application.
(i) an Environmental Report;	The *Temporary Emergency Generation Power Plant West Offaly Power Station Shannonbridge, Environmental Report* (AECOM, 2023), submitted with this application.
(j) details of the measures, if any, envisaged to avoid or prevent or reduce and, if possible, offset what might otherwise have been significant adverse effects on the environment or adverse effects on the integrity of a European Site of the designated development;	The AA Screening & NIS (APEM, 2023) and *Temporary Emergency Generation Power Plant Environmental Report* (AECOM, 2023), submitted with this application, provide the measures, to avoid or prevent or reduce any potential significant adverse effects on the environment or adverse effects on the integrity of a European Site of the designated development. A Framework Construction Environmental Management Plan (CEMP) is also included in Appendix B of the *Environmental Report*.
(k) any other information or document that the applicant considers would be of assistance to the Minister in making a decision in relation to the application.	The following are also submitted with this planning application: • Appendix B Framework CEMP (of the Environmental Report). • Appendix C Framework CTMP (of the Environmental Report). • AA Screening & NIS (APEM, 2023).

Appendix E GE Noise Concept Study

Revision History			
Rev.	**Description**	**Date**	**Approved By**

Similar To **NA**	Created By **SINGH, PRAKASH**		MLI **NA**
First Made For **IPS 1611362**	Approved By **HAYES, MARK**		IEC61355-1 No **NA**
GE Gas Power	Document Type **Specifications**		Sheet Size **A**
	Document Title Shannonbridge 8 X LMXpress Noise Concept Study		
Creation Date **2022-12-01**	Drawing Number **Preliminary – For Reference Only**	Revision **-**	Sheet **1 of 8**

1. Overview

For the Shannonbridge, Ireland project that is to include 8 X LMXpress Aeroderivative units, a noise model has been developed using software that is based on ISO 9613. The primary purpose of the model is to check predicted noise levels at Noise Sensitive Locations (NSL). Currently, the NSLs have not been officially confirmed by the customer and locations given by GE are for reference only for the preliminary acoustic study. Final/exact NSL locations may vary based on final agreement with local authorities for valid measurement locations.

The purpose of this document is to summarize findings of the study based on the conceptual level design. Final values may vary based on the final detailed design. The information provided herein is for reference only for concept level evaluations and does not reflect contractual obligations in any form. For guarantee/contractual language, the relevant project documents shall be referenced.

2. References

The following references are applicable to the terms and assumptions used herein:

- NG4 – Guidance Note for Noise: License Applications, Surveys and Assessments in Relation to Scheduled Activities. EPA (Ireland)
- ISO 9613 – Acoustics – Attenuation of sound during propagation outdoors.
- TS00000567 – GE Acoustic Noise Test Procedure Aeroderivative Gas Turbine & Generator Package.

3. Assumptions

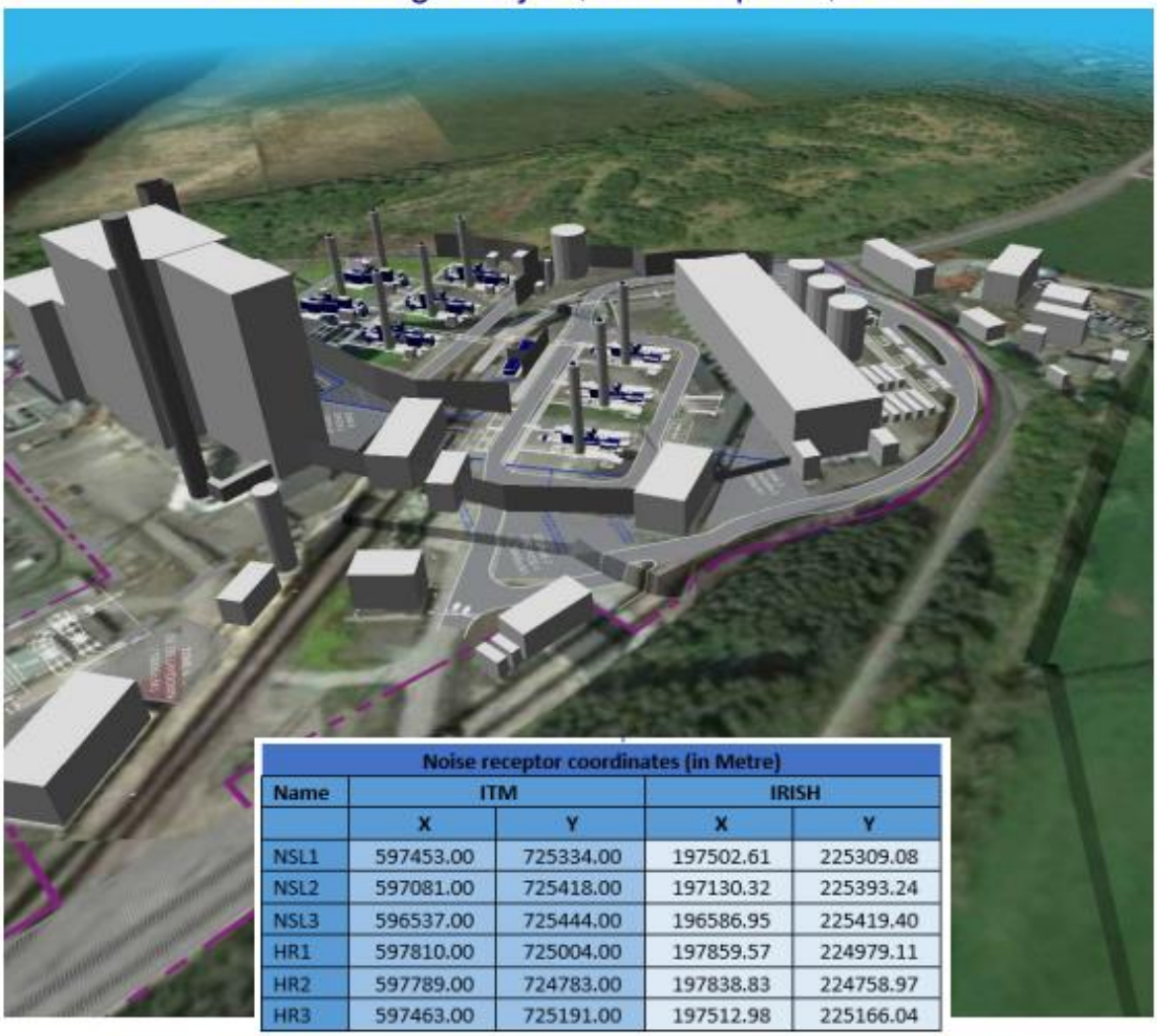
The following assumptions are utilized in the acoustic study:

- Maximum order of reflections = 1.
- Ground absorption = 0.65.
- Ambient conditions:
  - Temperature 7 ˚C.
  - Relative Humidity 80 %.
- Existing buildings near the plant are included based on current understanding of planning for which buildings will remain, post installation.
- Simulation is for 2 conditions only (base load and normal startup/shutdown cranking mode).
- Airflow velocity shall be no greater than 3 m/s.
- Background noise is not included in the simulation.
- 8 x LMXpress units, with 30 m height exhaust stacks.
- Receiver heights are at 1.5 m from the ground.
- Sound Pressure Levels given are in dBA (re: 20 micropascals).
- Typical far-field model uncertainty can be +/- 3 dBA.

4. **Results** – The following pages summarize the preliminary study findings.

GE - NON PUBLIC -

Shannonbridge Project, 8 x LMXpress, Ireland



Noise receptor coordinates (in Metre)				
Name	ITM		IRISH	
	X	Y	X	Y
NSL1	597453.00	725334.00	197502.61	225309.08
NSL2	597081.00	725418.00	197130.32	225393.24
NSL3	596537.00	725444.00	196586.95	225419.40
HR1	597810.00	725004.00	197859.57	224979.11
HR2	597789.00	724783.00	197838.83	224758.97
HR3	597463.00	725191.00	197512.98	225166.04

Predicted noise at official noise receptors

Receptor	Normal Operation dBA	Transient Operation dBA	Noise limit dBA
NSL1	38.6	32.7	45
NSL2	42.7	36.1	45
NSL3	42.5	37.8	45
HR1	42.1	38.9	45
HR2	42.5	38.8	45
HR3	40	33.3	45

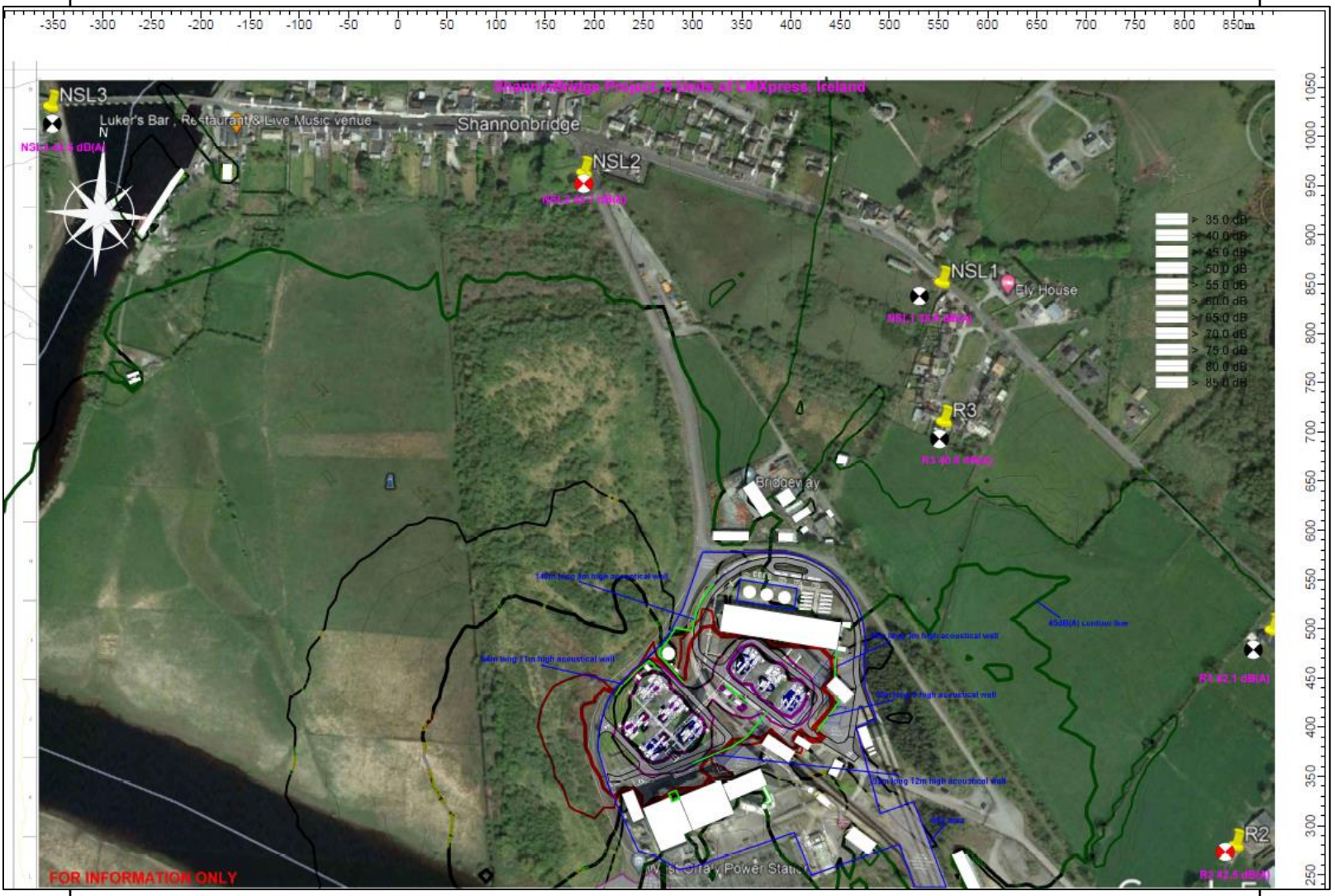
Note: Predicted values are nominal and not for guarantee. Expected values based on typical far-field model uncertainty can be + 3 dBA.

Predicted noise at Ecological noise receptors

Receptor	SPL, dBA	Receptor	SPL, dBA
R1	37.7	R6	27.8
R2	42.5	R7	28.5
R3	31.7	R8	26.4
R4	40.1	R9	26.3
R5	27.7	R10	22.6

FOR INFORMATION ONLY

- Base Load Operation, showing noise contour lines and approximate NSL locations, overlaying map/bitmap:



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- Base Load Operation: Showing noise grid results:

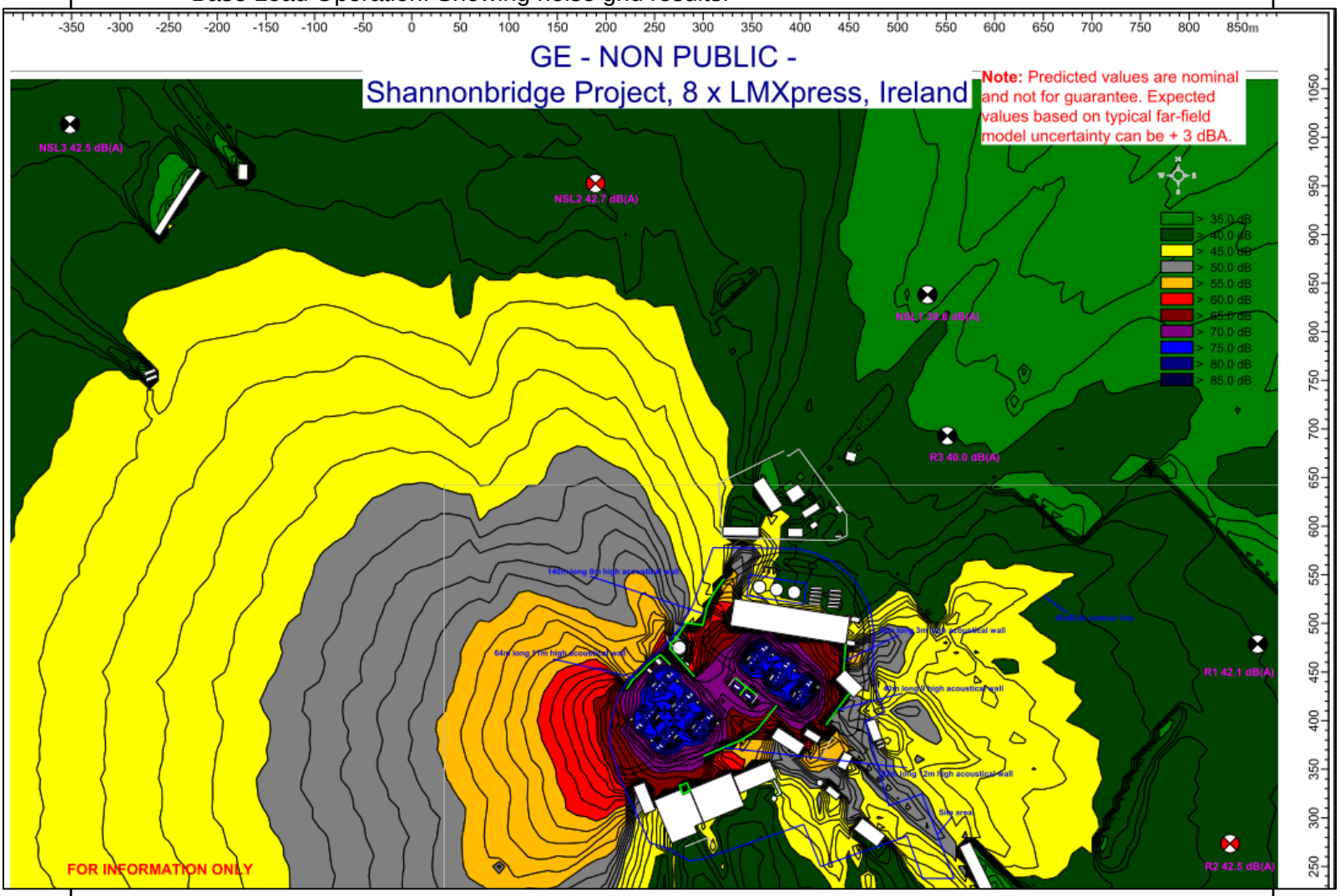

Table 1: Indicative Octave Band Sound Pressure Levels – Base Load

	Level Spectrum dB(A), nominal values only and not for guarantee									sum
NSL	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dBA
1	26	34	35	28	24	25	22	2	-41	39
2	27	37	40	32	29	31	27	5	-49	43
3	25	36	39	33	31	33	28	-3	-80	43

Table 2: Indicative top Noise Contributors – Base Load

NSL	#1 source contributor	#2 source contributor	#3 source contributor
1	Generator ventilation	Stack mouth(s)	GLO cooler
2	Generator ventilation	Turbine enclosure roof	Fan duct
3	Generator ventilation	Fan duct	Turbine vent fan

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- Normal Startup/Shutdown Cranking Operation: showing noise grid results.

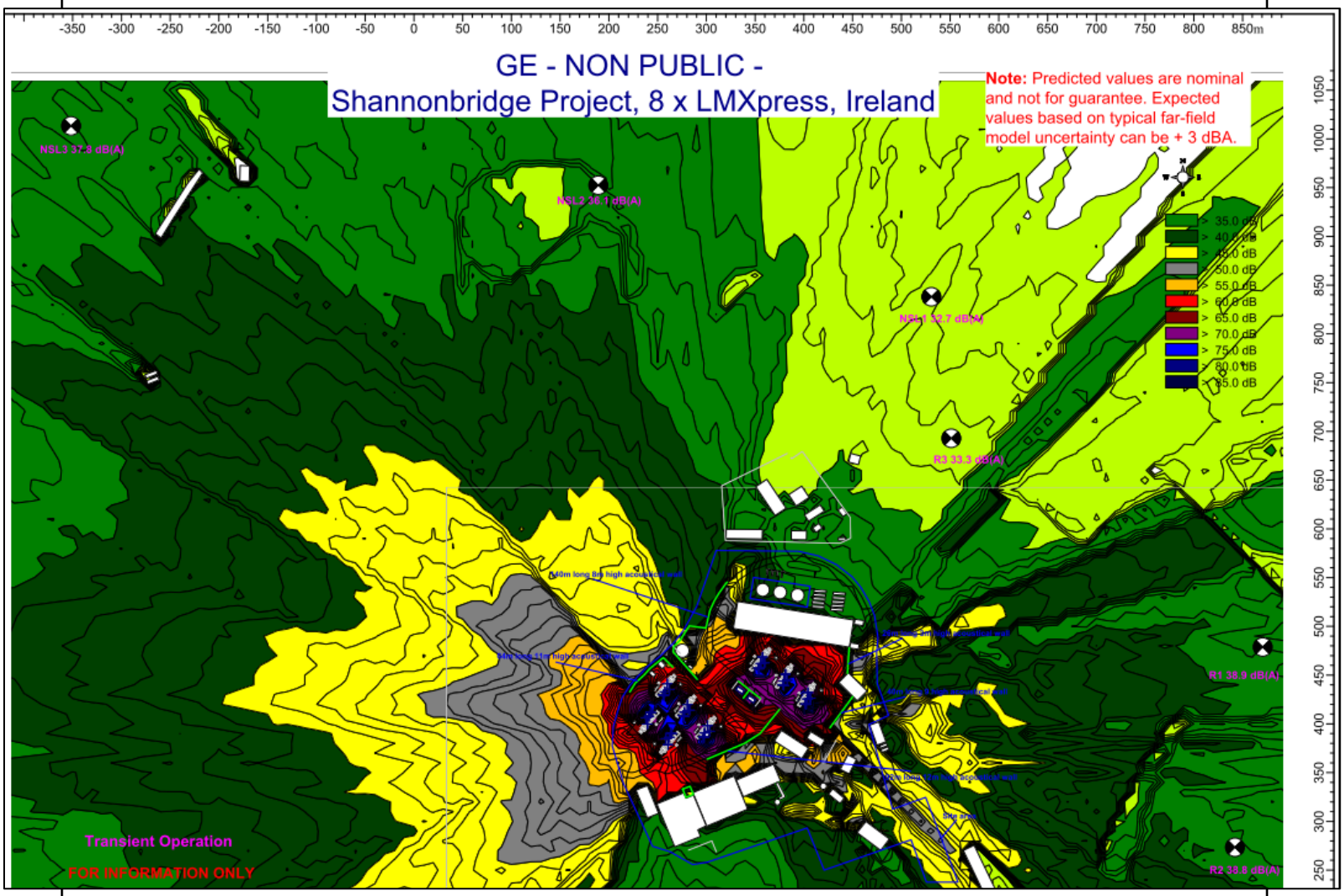
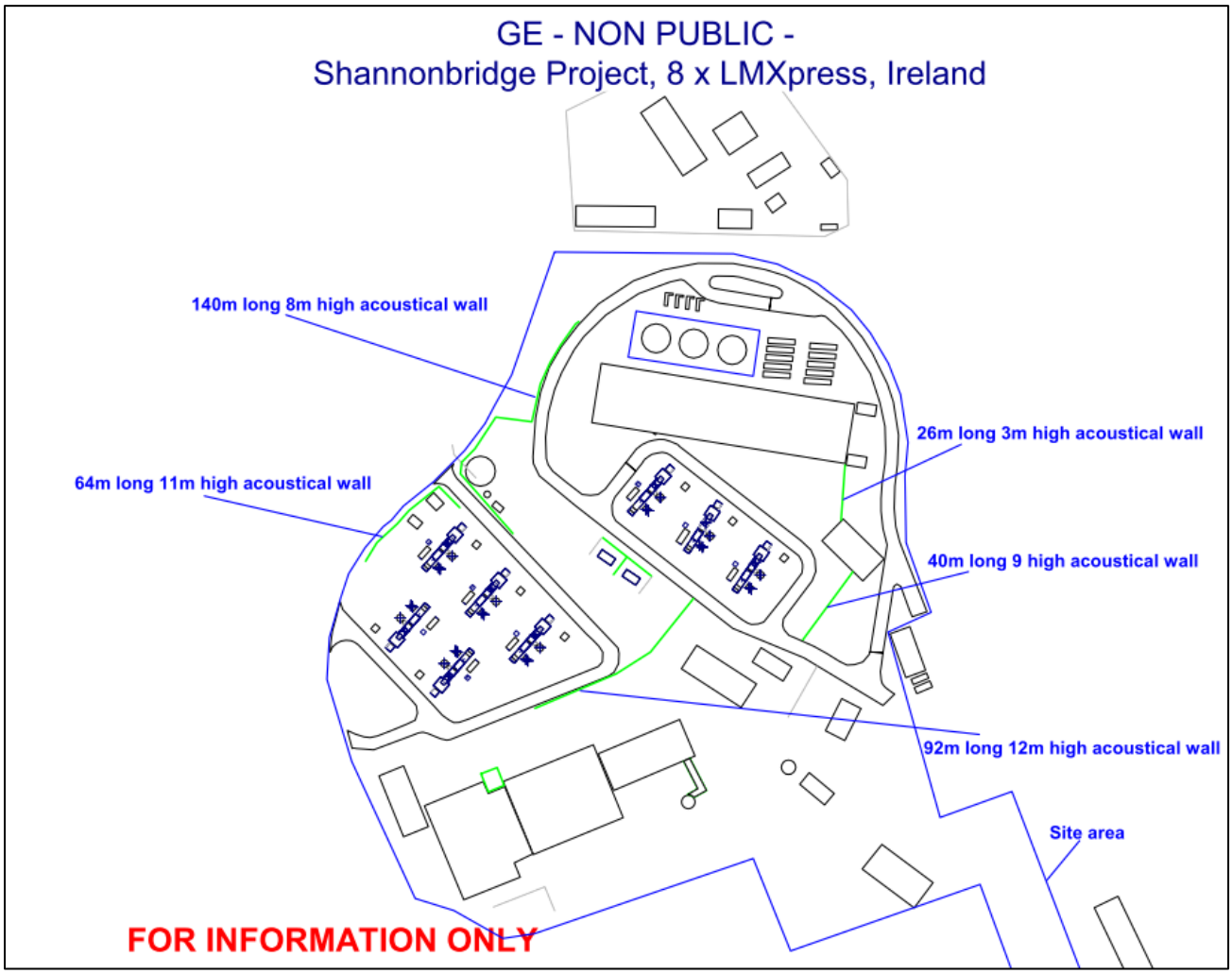


Table 3: Indicative Octave Band Sound Pressure Levels – Startup/Shutdown Cranking

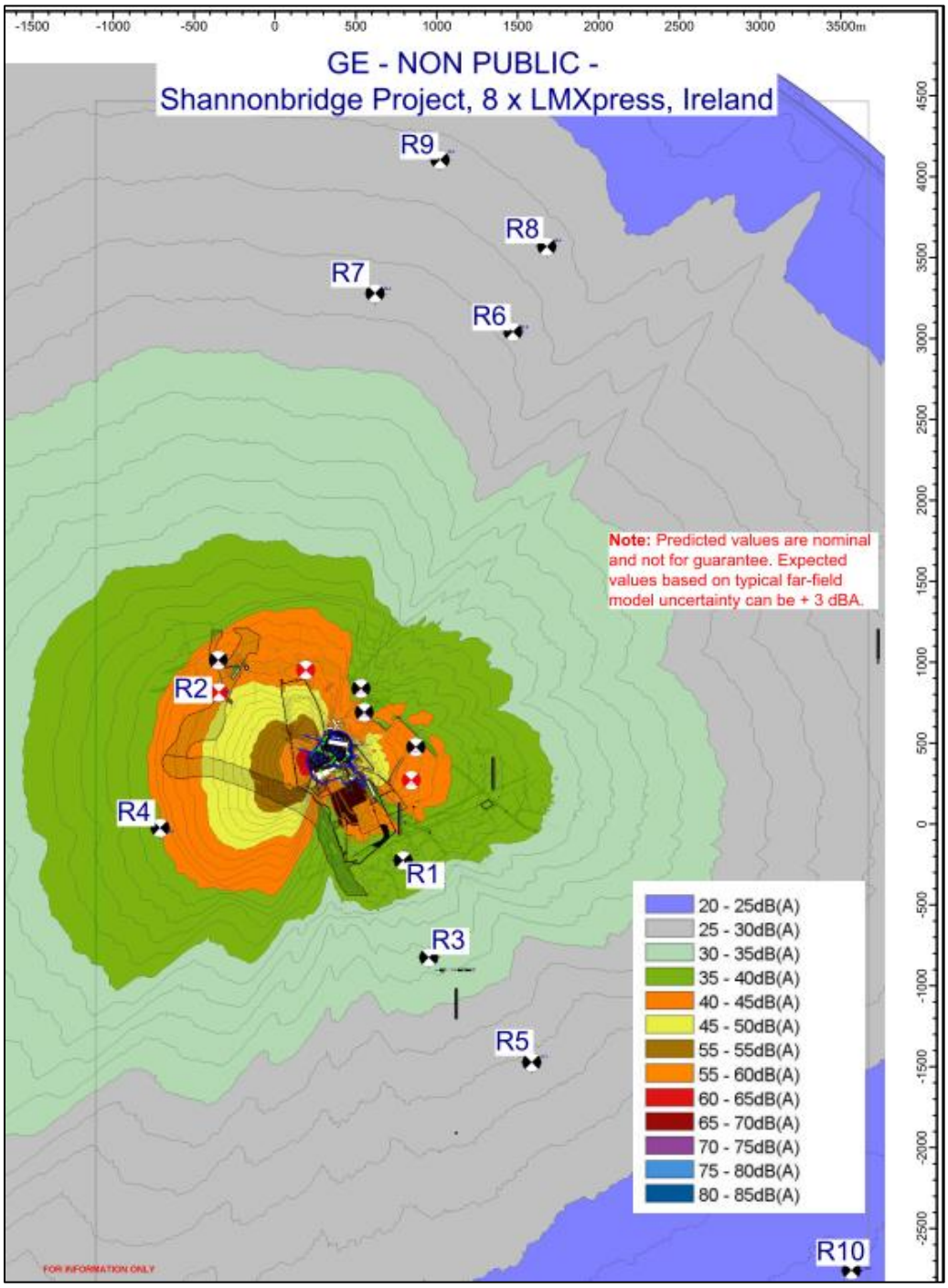
	Level Spectrum dB(A), nominal values only and not for guarantee									sum
NSL	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dBA
1	22	26	17	16	31	19	10	-5	-54	33
2	22	27	23	22	35	24	15	-5	-62	36
3	19	24	22	22	37	27	17	-8	-81	38

Note: the primary noise source during startup/shutdown cranking is related to the hydraulic system that turns the unit at cranking speed. Duration is typically 2-3 minutes during startup and approximately 15 minutes during shutdown.

- Preliminary Acoustic Barrier Layout, suggested to meet 45 dBA at NSLs only (subject to change for final detailed design):



- Base Load Operation: Showing grid results are additional receptor locations.



GE Gas Power	Document Type **Specifications**		Sheet Size **A**
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