ATTACHMENT I6 – ASSESSMENT OF NOISE IMPACT

Noise monitoring in and around the licensed / application site and the wider Huntstown Quarry complex indicates that noise levels in the surrounding area are elevated and that average ambient noise levels typically range between 60dBA L_{Aeq} and 75dBA L_{Aeq}, depending on location and proximity to the N2 Dual Carriageway or M50 motorway or the frequency of overhead aircraft movements along the flight path leading in and out of Dublin Airport. The recorded noise levels are consistent with daytime levels in busy urban areas close to heavily trafficked roads.

Noise prediction assessments indicate that there will be minimal, if any, increase in noise levels arising at nearby residences under a worst case scenario when 2 No. additional bulldozers and additional HGV trucks are generating noise 100% of the time at the boundary of the licensed recovery facility / application site (rather than intermittently and some distance inside it, as will most likely be the case in reality). In the medium to long-term, on completion of the quarry backfilling and restoration works, there will be no noise emissions from the licensed facility / application site.

The resultant predicted (maximum) future noise levels at nearby sensitive receptors are comparable to, and only slightly elevated above, existing ambient levels, making it highly unlikely that any adverse noise impacts will be noticed or experienced by nearby residents. It is therefore considered that mitigation measures to reduce the noise impacts of plant associated with the planned recovery facility are not strictly necessary.

Notwithstanding this, a number of measures will continue to be implemented at the proposed recovery facility to further mitigate any potential noise impacts. These include retention of existing perimeter screening berms, maintenance of plant, fitting of plant silencers, maintenance of road surfaces, control of traffic speed and unloading activities within the facility.

Further information on baseline noise levels and an assessment of predicted ambient noise levels arising from HGV movements and operation of earthmoving plant over the operational life of the waste recovery facility are presented in Chapter 9 of the Environmental Impact Statement which accompanies this waste licence review application.

ATTACHMENT I6 : NOISE IMPACT ASSESSMENT
(Refer to Drawing I6-1)

Table (i) Soil placement

Receptor	Average L_{Aeq} at 10m dB(A)					Reflection dB(A)	Screening dB(A)	Activity Distance (m)	Noise Attenuation with Distance dB(A)	Activity L_{Aeq} dB(A)					Specific Noise Levels dB(A)	Impulsive / tonal noise	Operational Noise Level **dB(A)**
	Bulldozer	Bulldozer	Excavator	HGV	HGV					Bulldozer	Bulldozer	Excavator	HGV	HGV			
R1	73	73	80	80	80	+3	−20	1300	42	14	14	21	21	21	26	+5	31
R2	73	73	80	80	80	+3	−20	1400	43	13	13	20	20	20	25	+5	30
R3	73	73	80	80	80	+3	−20	1400	43	13	13	20	20	20	25	+5	30
R4	73	73	80	80	80	+3	−20	1250	42	14	14	21	21	21	26	+5	31
R5	73	73	80	80	80	+3	−20	1250	42	14	14	21	21	21	26	+5	31
R6	73	73	80	80	80	+3	−20	1250	42	14	14	21	21	21	26	+5	31
R7	73	73	80	80	80	+3	−20	1050	40	16	16	23	23	23	28	+5	33
R9	73	73	80	80	80	+3	−20	960	39	17	17	24	24	24	29	+5	34
R10	73	73	80	80	80	+3	−20	960	39	17	17	24	24	24	29	+5	34
R11	73	73	80	80	80	+3	−20	960	39	17	17	24	24	24	29	+5	34
R21	73	73	80	80	80	+3	−20	880	39	17	17	24	24	24	29	+5	34
R22	73	73	80	80	80	+3	−20	825	38	18	18	25	25	25	30	+5	35

Receptor	Average L_{Aeq} at 10m dB(A)					Reflection dB(A)	Screening dB(A)	Activity Distance (m)	Noise Attenuation with Distance dB(A)	Activity L_{Aeq} dB(A)					Specific Noise Levels dB(A)	Impulsive / tonal noise	Operational Noise Level **dB(A)**
	Bulldozer	Bulldozer	Excavator	HGV	HGV					Bulldozer	Bulldozer	Excavator	HGV	HGV			
R23	73	73	80	80	80	+3	−20	700	37	19	19	26	26	26	31	+5	36
R24	73	73	80	80	80	+3	−20	740	37	19	19	26	26	26	31	+5	36
R25	73	73	80	80	80	+3	−20	490	34	22	22	29	29	29	34	+5	39
R30	73	73	80	80	80	+3	−20	307	28	28	28	35	35	35	40	+5	45
R35	73	73	80	80	80	+3	−20	185	25	31	31	38	38	38	43	+5	48
R46	73	73	80	80	80	+3	−20	835	38	18	18	25	25	25	30	+5	35

Table (ii) Final Restoration

Receptor	Average L_{Aeq} at 10m dB(A)		Reflection dB(A)	Screening dB(A)	Activity Distance (m)	Noise Attenuation with Distance dB(A)	Activity L_{Aeq} dB(A)		Specific Noise Level dB(A)	Impulsive/ tonal component	Operational Noise Level dB(A)
	Bulldozer	Excavator					Bulldozer	Excavator			
R1	73	80	+3	−20	1300	42	14	21	22	+5	27
R2	73	80	+3	−20	1400	43	13	20	21	+5	26
R3	73	80	+3	−20	1400	43	13	20	21	+5	26
R4	73	80	+3	−20	1250	42	14	21	22	+5	27
R5	73	80	+3	−20	1250	42	14	21	22	+5	27
R6	73	80	+3	−20	1250	42	14	21	22	+5	27
R7	73	80	+3	−20	1050	40	16	23	24	+5	29
R9	73	80	+3	−20	960	39	17	24	25	+5	30
R10	73	80	+3	−20	960	39	17	24	25	+5	30
R11	73	80	+3	−20	960	39	17	24	25	+5	30
R21	73	80	+3	−20	880	39	17	24	25	+5	30
R22	73	80	+3	−20	825	38	18	25	26	+5	31
R23	73	80	+3	−20	700	37	19	26	27	+5	32

Receptor	Average L_{Aeq} at 10m dB(A)		Reflection dB(A)	Screening dB(A)	Activity Distance (m)	Noise Attenuation with Distance dB(A)	Activity L_{Aeq} dB(A)		Specific Noise Level dB(A)	Impulsive/ tonal component	Operational Noise Level dB(A)
	Bulldozer	Excavator					Bulldozer	Excavator			
R24	73	80	+3	−20	740	37	19	26	27	+5	32
R25	73	80	+3	−20	490	34	22	29	30	+5	35
R30	73	80	+3	−20	307	28	28	35	36	+5	41
R35	73	80	+3	−20	185	25	31	38	39	+5	44
R46	73	80	+3	−20	835	38	18	25	30	+5	31

Table (iii) Cumulative Operational Noise Levels

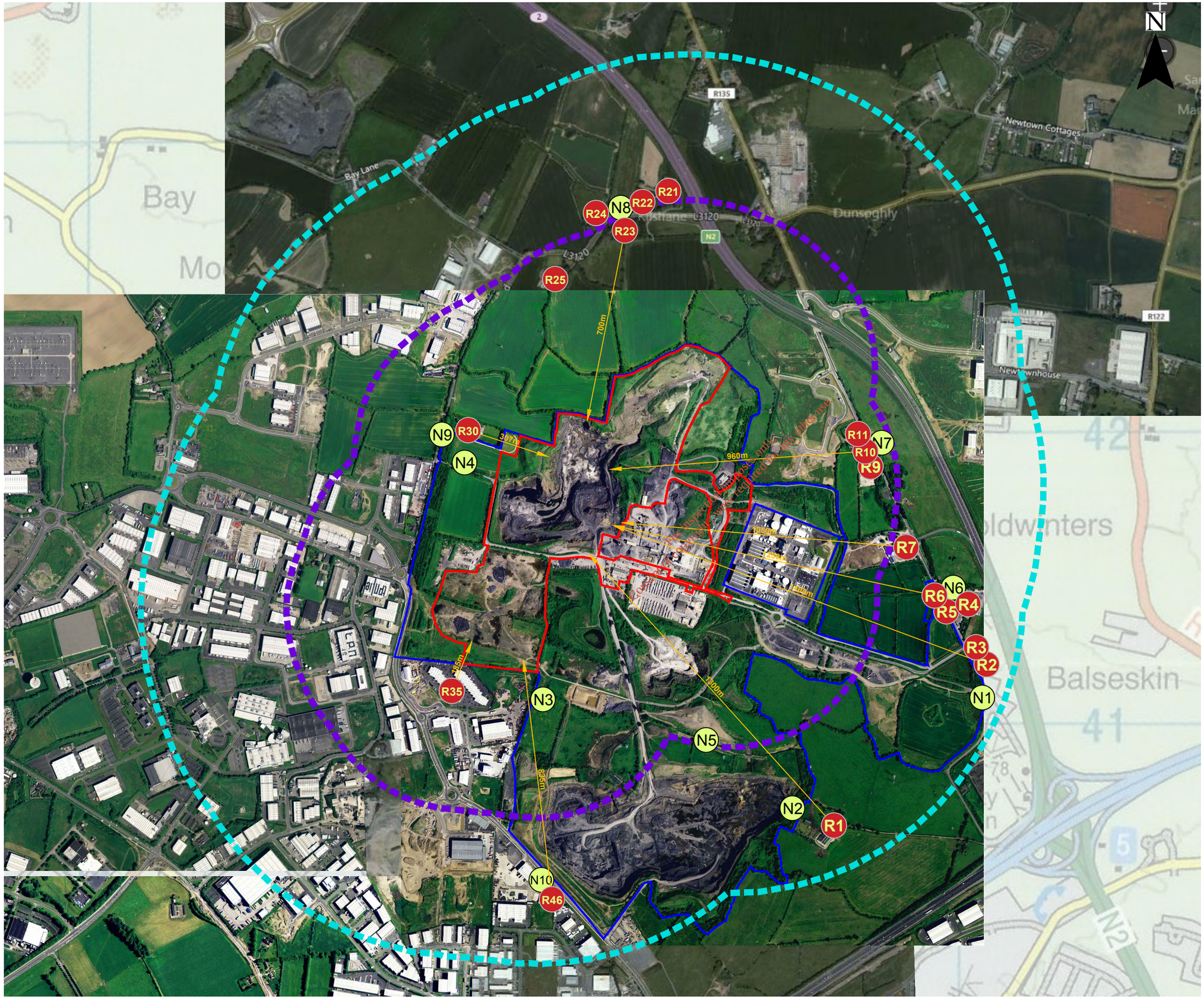
Location	Receptors	Period	Existing Baseline $L_{Aeq,T}$ dB(A)	Specific $L_{Ar,\ 1hr}$ dB(A)*	Cumulative $L_{Aeq,\ T}$ dB(A)*	Difference
N2	R1	Daytime	60.0	26	60.0	0
N1	R2	Daytime	59.5	25	59.5	0
N1	R3	Daytime	59.5	25	59.5	0
N6	R4	Daytime	73.0	26	73.0	0
N6	R5	Daytime	73.0	26	73.0	0
N6	R6	Daytime	73.0	26	73.0	0
N6	R7	Daytime	73.0	28	73.0	0
N7	R9	Daytime	76.1	29	76.1	0
N7	R10	Daytime	76.1	29	76.1	0
N7	R11	Daytime	76.1	29	76.1	0
N8	R21	Daytime	69.7	29	69.7	0
N8	R22	Daytime	69.7	30	69.7	0
N8	R23	Daytime	69.7	31	69.7	0
N8	R24	Daytime	69.7	31	69.7	0
N8	R25	Daytime	69.7	34	69.7	0
N9	R30	Daytime	84.3	40	84.3	0
N10	R35	Daytime	72.2	43	72.2	0
N10	R46	Daytime	72.2	30	72.2	0

*Specific Noise Level = Predicted Noise Level without the 5 dB penalty

Table (iv) Cumulative Final Restoration Noise Levels

Location	Receptors	Period	Existing Baseline $L_{Aeq,T}$ dB(A)	Specific $L_{Ar,\ 1hr}$ dB(A)*	Cumulative $L_{Aeq,\ T}$ dB(A)*	Difference
N2	R1	Daytime	60.0	22	60.0	0
N1	R2	Daytime	59.5	21	59.5	0
N1	R3	Daytime	59.5	21	59.5	0
N6	R4	Daytime	73.0	22	73.0	0
N6	R5	Daytime	73.0	22	73.0	0
N6	R6	Daytime	73.0	22	73.0	0
N6	R7	Daytime	73.0	24	73.0	0
N7	R9	Daytime	76.1	25	76.1	0
N7	R10	Daytime	76.1	25	76.1	0
N7	R11	Daytime	76.1	25	76.1	0
N8	R21	Daytime	69.7	25	69.7	0
N8	R22	Daytime	69.7	26	69.7	0
N8	R23	Daytime	69.7	27	69.7	0
N8	R24	Daytime	69.7	27	69.7	0
N8	R25	Daytime	69.7	30	69.7	0
N9	R30	Daytime	84.3	36	84.3	0
N10	R35	Daytime	72.2	39	72.2	0
N10	R46	Daytime	72.2	30	72.2	0

Specific Noise Level = Predicted Noise Level without the 5 dB penalty



NOTES

1. EXTRACT FROM 1:50,000 O.S DISCOVERY MAP **NO. 50**

2. ORDNANCE SURVEY IRELAND LICENCE NO. **SU 0000716 (C)** ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

- ROADSTONE LIMITED LAND INTEREST **(c. 200.3 ha)**
- APPLICATION AREA **(c. 48.65 ha)**
- N5 — NOISE MONITORING LOCATIONS
- R5 — NOISE RECEPTOR LOCATIONS
- 500m RADIUS
- 1000m RADIUS

SLR CONSULTING IRELAND
7 DUNDRUM BUSINESS PARK
WINDY ARBOUR
DUBLIN 14
T: +353-1-2964667
F: +353-1-2964676
www.slrconsulting.com

ROADSTONE LIMITED

WASTE LICENCE REVIEW APPLICATION

HUNTSTOWN WASTE RECOVERY FACILITY

NORTH ROAD, FINGLAS, DUBLIN 11

NOISE MONITORING LOCATIONS

DRAWING I6-1

Scale	Date
1:12,500 @ A3	SEPTEMBER 2016

0180.00152.0.FIG_I6-1.Noise Monitoring Locations.dwg