Distanced Based Assessment (Noisiest Plant)

Please pick from drop-down list in orange cells

Noise area category		R4
RBL or L_{A90} Background level (dB(A))	Day	55
	Evening	50
	Night	45
$L_{Aeq(15minute)}$ Noise Mangement Level (dB(A))	Day	65
	Day (OOHW)	60
	Evening	55
	Night	50
Noisiest plant		5T Excavator With Hammer
Is there line of sight to receiver?		Yes

Steps for Assessment:

1. Schedule noisy works to occur in standard hours where possible or before 11pm and implement Standard Measures.
2. Select the representative noise area category. The worksheet titled 'Representative Noise Environ.' provides a number of e xamples to help select the noise area category.
3. Select the noisiest plant. If not found in drop-down list, refer to 'Source List' and select a representative plant with equivalent sound power level.
4. Is there line of sight to receiver? Select the appropriate scenario from the drop down list .

Identify and implement standard mitigation measures where feasible and reasonable. Include any shielding implemented as part of the standard mitigation measures by changing the selection in the 'Is there line of sightoiaw to receiver' drop-down list. Solid barriers can be in the form of road cutting, timber lapped and cappe d fence, shipping container, site office, etc. Substantial solid barriers are barriers greater than 5 metres in height or multiple rows of houses or a sound barrier specifically designed to mitigate con struction noise. Please note that vegetation and trees are not considered to be a form of solid barrier and any gaps would compromise the acoustic integrity of the solid barrier.

5. Determine if there are any receivers (both residential and non-residential receivers) within the affected distance for each relevant time period . Consider background LA90 noise measurements to check assumption in Step #2 if:

(a) there are many affected receivers and the impact duration at any one receiver is more than 3 weeks; or

(b) there are a few affected receivers and the impact duration at any one receiver is more than 6 weeks.

Note that consideration need to be given to the construction staging plan when determining impact duration.

7. Identify if there are any receivers within the additional mitigation measures distances and identify feasible and reasonab le measures at each receiver.
8. Where night works are involved, identify sleep disturbance affected distance.
9. Document the outcomes of these steps.

(Note that suitable noise management levels for other noise-sensitive businesses not identified in the Construction Noise Estima tor should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise speciliast for more information)

Abbreviation	Measure
N	Notification
SN	Specific notifications
PC	Phone calls
IB	Individual briefings
RO	Respite offer
R1	Respite period 1
R2	Respite period 2
DR	Duration respite
AA	Alternative accommodation
V	Verification

Note that spot check verification of noise levels and individual briefings are not required for projects with less than 3 weeks impact duration

Residential receiver

			$L_{Aeq(15minute)}$ noise level above background (L_{A90})											$L_{Aeq(15minute)}$ 75 dB(A) or greater (Highly affected)			Sleep disutrbance L_{Amax} 65 dB(A)
			5 to 10 dB(A)			10 to 20 dB(A)			20 to 30 dB(A)			> 30 dB(A)					
			Noticeable			Clearly audible			Moderately intrusive			Highly intrusive					
		Affected distance (m)	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))	Measures	Within distance (m)	Mitigation level (dB(A))	Affected distance (m)
Undeveloped green fields, rural areas with isolated dwellings	Day	120							N, PC, RO	45	75	N, PC, RO	45	75	N, PC, RO	45	75	
	Day (OOHW)	175				N, R1, DR	120	65	N, R1, DR	45	75	N, R1, DR, PC, SN	20	85	N, PC, RO	45	75	
	Evening	250				N, R1, DR	175	60	N, R1, DR	75	70	N, R1, DR, PC, SN	25	80	N, PC, RO	45	75	
	Night	365	N	365	50	N, R2, DR	250	55	N, PC, SN, R2, DR	120	65	AA, N, PC, SN, R2, DR	45	75	N, PC, RO	45	75	250
	Highly Affected	45													N, PC, RO	45	75	
Developed settlements (urban and suburban)	Day	135							N, PC, RO	50	75	N, PC, RO	50	75	N, PC, RO	50	75	
	Day (OOHW)	200				N, R1, DR	135	65	N, R1, DR	50	75	N, R1, DR, PC, SN	20	85	N, PC, RO	50	75	
	Evening	305				N, R1, DR	200	60	N, R1, DR	85	70	N, R1, DR, PC, SN	30	80	N, PC, RO	50	75	
	Night	460	N	460	50	N, R2, DR	305	55	N, PC, SN, R2, DR	135	65	AA, N, PC, SN, R2, DR	50	75	N, PC, RO	50	75	305
	Highly Affected	50													N, PC, RO	50	75	
Propagation across a valley / over water	Day	160							N, PC, RO	60	75	N, PC, RO	60	75	N, PC, RO	60	75	
	Day (OOHW)	255				N, R1, DR	160	65	N, R1, DR	60	75	N, R1, DR, PC, SN	20	85	N, PC, RO	60	75	
	Evening	405				N, R1, DR	255	60	N, R1, DR	95	70	N, R1, DR, PC, SN	35	80	N, PC, RO	60	75	
	Night	630	N	630	50	N, R2, DR	405	55	N, PC, SN, R2, DR	160	65	AA, N, PC, SN, R2, DR	60	75	N, PC, RO	60	75	405
	Highly Affected	60													N, PC, RO	60	75	

Non-residential receiver
Undeveloped green fields, rural areas with isolated dwellings

				$L_{Aeq(15minute)}$ noise level above NML						LAeq(15minute) 75 dB(A) or greater (Highly affected)		
	Standard hours			<10 dB(A)			10 to 20 dB(A)					
	Period	NML	Affected distance (m)	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))
Classroom at schools and other educational institutions	Day	55	250				N	120	65	N, PC, RO	45	75
Hospital wards and operating theatres	Day	65	120							N, PC, RO	45	75
Place of worship	Day	55	250				N	120	65	N, PC, RO	45	75
Active recreation	Day	65	120							N, PC, RO	45	75
Passive recreation	Day	60	175				N	75	70	N, PC, RO	45	75
Industrial premise	Day	75	45							N, PC, RO	45	75
Offices, retail outlets	Day	70	75							N, PC, RO	45	75

				$L_{Aeq(15minute)}$ noise level above NML											
	OOHW			< 5 dB(A)			5 to 15 dB(A)			15 to 25 dB(A)			> 25 dB(A)		
	Period	NML	Affected distance (m)	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))
Hospital wards and operating theatres	Evening	65	120				N, R1, DR	75	70	N, R1, DR	25	80	N, R1, DR, PC, SN	8	90
	Night	65	120	N	120	65	N, R2, NR	75	70	N, PC, SN, R2, DR	25	80	AA, N, PC, SN, R2, DR	8	90
Place of worship	Evening	55	250				N, R1, DR	175	60	N, R1, DR	75	70	N, R1, DR, PC, SN	25	80
	Night	55	250	N	250	55	N, R2, NR	175	60	N, PC, SN, R2, DR	75	70	AA, N, PC, SN, R2, DR	25	80
Active recreation	Evening	65	120				N, R1, DR	75	70	N, R1, DR	25	80	N, R1, DR, PC, SN	8	90
Passive recreation	Evening	60	175				N, R1, DR	120	65	N, R1, DR	45	75	N, R1, DR, PC, SN	14	85
Industrial premise	Evening	75	45				N, R1, DR	25	80	N, R1, DR	8	90	N, R1, DR, PC, SN	3	100
	Night	75	45	N	45	75	N, R2, NR	25	80	N, PC, SN, R2, DR	8	90	AA, N, PC, SN, R2, DR	3	100
Offices, retail outlets	Evening	70	75				N, R1, DR	45	75	N, R1, DR	14	85	N, R1, DR, PC, SN	5	95
	Night	70	75	N	75	70	N, R2, NR	45	75	N, PC, SN, R2, DR	14	85	AA, N, PC, SN, R2, DR	5	95

Non-residential receiver
Developed settlements (urban and suburban)

				$L_{Aeq(15minute)}$ noise level above NML						LAeq(15minute) 75 dB(A) or greater (Highly affected)		
	Standard hours			<10 dB(A)			10 to 20 dB(A)					
	Period	NML	Affected distance (m)	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))
Classroom at schools and other educational institutions	Day	55	305				N	135	65	N, PC, RO	50	75
Hospital wards and operating theatres	Day	65	135							N, PC, RO	50	75
Place of worship	Day	55	305				N	135	65	N, PC, RO	50	75
Active recreation	Day	65	135							N, PC, RO	50	75
Passive recreation	Day	60	200				N	85	70	N, PC, RO	50	75
Industrial premise	Day	75	50							N, PC, RO	50	75
Offices, retail outlets	Day	70	85							N, PC, RO	50	75

				$L_{Aeq(15minute)}$ noise level above NML											
	OOHW			< 5 dB(A)			5 to 15 dB(A)			15 to 25 dB(A)			> 25 dB(A)		
	Period	NML	Affected distance (m)	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))
Hospital wards and operating theatres	Evening	65	135				N, R1, DR	85	70	N, R1, DR	28	80	N, R1, DR, PC, SN	9	90
	Night	65	135	N	135	65	N, R2, NR	85	70	N, PC, SN, R2, DR	28	80	AA, N, PC, SN, R2, DR	9	90
Place of worship	Evening	55	305				N, R1, DR	200	60	N, R1, DR	85	70	N, R1, DR, PC, SN	28	80
	Night	55	305	N	305	55	N, R2, NR	200	60	N, PC, SN, R2, DR	85	70	AA, N, PC, SN, R2, DR	28	80
Active recreation	Evening	65	135				N, R1, DR	85	70	N, R1, DR	28	80	N, R1, DR, PC, SN	9	90
Passive recreation	Evening	60	200				N, R1, DR	135	65	N, R1, DR	50	75	N, R1, DR, PC, SN	16	85
Industrial premise	Evening	75	50				N, R1, DR	28	80	N, R1, DR	9	90	N, R1, DR, PC, SN	3	100
	Night	75	50	N	50	75	N, R2, NR	28	80	N, PC, SN, R2, DR	9	90	AA, N, PC, SN, R2, DR	3	100
Offices, retail outlets	Evening	70	85				N, R1, DR	50	75	N, R1, DR	16	85	N, R1, DR, PC, SN	5	95
	Night	70	85	N	85	70	N, R2, NR	50	75	N, PC, SN, R2, DR	16	85	AA, N, PC, SN, R2, DR	5	95

Non-residential receiver
Propagation across a valley / over water

				$L_{Aeq(15minute)}$ noise level above NML						LAeq(15minute) 75 dB(A) or greater (Highly affected)		
	Standard hours			<10 dB(A)			10 to 20 dB(A)					
	Period	NML	Affected distance (m)	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))	Measure	Within distance (m)	Mitigation level (dB(A))
Classroom at schools and other educational institutions	Day	55	405				N	160	65	N, PC, RO	60	75

Hospital wards and operating theatres	**Day**	65	160						N, PC, RO	60	75
Place of worship	**Day**	55	405				N	160	65	N, PC, RO	60	75
Active recreation	**Day**	65	160							N, PC, RO	60	75
Passive recreation	**Day**	60	255				N	95	70	N, PC, RO	60	75
Industrial premise	**Day**	75	60							N, PC, RO	60	75
Offices, retail outlets	**Day**	70	95							N, PC, RO	60	75

				$L_{Aeq(15minute)}$ noise level above NML											
		OOHW		< 5 dB(A)			5 to 15 dB(A)			15 to 25 dB(A)			> 25 dB(A)		
	Period	**NML**	**Affected distance (m)**	**Measure**	**Within distance (m)**	**Mitigation level (dB(A))**	**Measure**	**Within distance (m)**	**Mitigation level (dB(A))**	**Measure**	**Within distance (m)**	**Mitigation level (dB(A))**	**Measure**	**Within distance (m)**	**Mitigation level (dB(A))**
Hospital wards and operating theatres	**Evening**	65	160				N, R1, DR	95	70	N, R1, DR	35	80	N, R1, DR, PC, SN	9	90
	Night	65	160	N	160	65	N, R2, NR	95	70	N, PC, SN, R2, DR	35	80	AA, N, PC, SN, R2, DR	9	90
Place of worship	**Evening**	55	405				N, R1, DR	255	60	N, R1, DR	95	70	N, R1, DR, PC, SN	35	80
	Night	55	405	N	405	55	N, R2, NR	255	60	N, PC, SN, R2, DR	95	70	AA, N, PC, SN, R2, DR	35	80
Active recreation	**Evening**	65	160				N, R1, DR	95	70	N, R1, DR	35	80	N, R1, DR, PC, SN	9	90
Passive recreation	**Evening**	60	255				N, R1, DR	160	65	N, R1, DR	60	75	N, R1, DR, PC, SN	20	85
Industrial premise	**Evening**	75	60				N, R1, DR	35	80	N, R1, DR	9	90	N, R1, DR, PC, SN	3	100
	Night	75	60	N	60	75	N, R2, NR	35	80	N, PC, SN, R2, DR	9	90	AA, N, PC, SN, R2, DR	3	100
Offices, retail outlets	**Evening**	70	95				N, R1, DR	60	75	N, R1, DR	20	85	N, R1, DR, PC, SN	5	95
	Night	70	95	N	95	70	N, R2, NR	60	75	N, PC, SN, R2, DR	20	85	AA, N, PC, SN, R2, DR	5	95