

Distanced Based Assessment (Noisiest Plant)

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 examples 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 sight to receiver' drop-down list. Solid barriers can be in the form of road cutting, timber lapped and capped 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 construction 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 reasonable 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 Estimator should be investigated on a project-by-project basis. Please contact a Roads and Maritime noise specialist 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		LAeq(15minute) noise level above background (LA90)												LAeq(15minute) 75 dB(A) or greater (Highly affected)			Sleep disturbance L _{max} 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						
		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		95					N, PC, RO	30	75	N, PC, RO	30	75	N, PC, RO	30	75	
	Day (OOHW)		140					N, R1, DR	30	75	N, R1, DR, PC, SN	15	85	N, PC, RO	30	75	
	Evening		200					N, R1, DR	55	70	N, R1, DR, PC, SN	25	80	N, PC, RO	30	75	
	Night	N	290	50	N, R2, DR	200	55	N, PC, SN, R2, DR	95	65	AA, N, PC, SN, R2, DR	30	75	N, PC, RO	30	75	160
	Highly Affected		30											N, PC, RO	30	75	
Developed settlements (urban and suburban)	Day		105					N, PC, RO	35	75	N, PC, RO	35	75	N, PC, RO	35	75	
	Day (OOHW)		155					N, R1, DR	35	75	N, R1, DR, PC, SN	15	85	N, PC, RO	35	75	
	Evening		240					N, R1, DR	60	70	N, R1, DR, PC, SN	25	80	N, PC, RO	35	75	
	Night		360					N, PC, SN, R2, DR	105	65	AA, N, PC, SN, R2, DR	35	75	N, PC, RO	35	75	185
	Highly Affected	N	360	50	N, R2, DR	240	55							N, PC, RO	35	75	
Propagation across a valley / over water	Day		115					N, PC, RO	45	75	N, PC, RO	45	75	N, PC, RO	45	75	
	Day (OOHW)		190					N, R1, DR	45	75	N, R1, DR, PC, SN	15	85	N, PC, RO	45	75	
	Evening		310					N, R1, DR	70	70	N, R1, DR, PC, SN	25	80	N, PC, RO	45	75	
	Night	N	485	50	N, R2, DR	310	55	N, PC, SN, R2, DR	115	65	AA, N, PC, SN, R2, DR	45	75	N, PC, RO	45	75	230
	Highly Affected		45											N, PC, RO	45	75	

Non-residential receiver				LAeq(15minute) noise level above NML									LAeq(15minute) 75 dB(A) or greater (Highly affected)		
Undeveloped green fields, rural areas with isolated dwellings				<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	200				N	95	65	N, PC, RO	30	75
Hospital wards and operating theatres				Day	65	95							N, PC, RO	30	75
Place of worship				Day	55	200				N	95	65	N, PC, RO	30	75
Active recreation				Day	65	95							N, PC, RO	30	75
Passive recreation				Day	60	140				N	55	70	N, PC, RO	30	75
Industrial premise				Day	75	30							N, PC, RO	30	75
Offices, retail outlets				Day	70	55							N, PC, RO	30	75

				LAeq(15minute) noise level above NML											
				< 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))
Hospital wards and operating theatres				Evening	65	95				N, R1, DR	55	70	N, R1, DR, PC, SN	5	90
				Night	65	95	N	95	65	N, R2, NR	55	70	AA, N, PC, SN, R2, DR	5	90
Place of worship				Evening	55	200				N, R1, DR	140	60	N, R1, DR, PC, SN	17	80
				Night	55	200	N	200	55	N, R2, NR	140	60	AA, N, PC, SN, R2, DR	17	80
Active recreation				Evening	65	95				N, R1, DR	55	70	N, R1, DR, PC, SN	5	90
Passive recreation				Evening	60	140				N, R1, DR	95	65	N, R1, DR, PC, SN	9	85
Industrial premise				Evening	75	30				N, R1, DR	17	80	N, R1, DR, PC, SN	2	100
				Night	75	30	N	30	75	N, R2, NR	17	80	AA, N, PC, SN, R2, DR	2	100
Offices, retail outlets				Evening	70	55				N, R1, DR	30	75	N, R1, DR, PC, SN	3	95
				Night	70	55	N	55	70	N, R2, NR	30	75	AA, N, PC, SN, R2, DR	3	95

Non-residential receiver				LAeq(15minute) noise level above NML									LAeq(15minute) 75 dB(A) or greater (Highly affected)		
Developed settlements (urban and suburban)				<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	240				N	105	65	N, PC, RO	35	75
Hospital wards and operating theatres				Day	65	105							N, PC, RO	35	75
Place of worship				Day	55	240				N	105	65	N, PC, RO	35	75
Active recreation				Day	65	105							N, PC, RO	35	75
Passive recreation				Day	60	155				N	60	70	N, PC, RO	35	75
Industrial premise				Day	75	35							N, PC, RO	35	75
Offices, retail outlets				Day	70	60							N, PC, RO	35	75

				LAeq(15minute) noise level above NML											
				< 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))
Hospital wards and operating theatres				Evening	65	105				N, R1, DR	60	70	N, R1, DR, PC, SN	6	90
				Night	65	105	N	105	65	N, R2, NR	60	70	AA, N, PC, SN, R2, DR	6	90
Place of worship				Evening	55	240				N, R1, DR	155	60	N, R1, DR, PC, SN	20	80
				Night	55	240	N	240	55	N, R2, NR	155	60	AA, N, PC, SN, R2, DR	20	80
Active recreation				Evening	65	105				N, R1, DR	60	70	N, R1, DR, PC, SN	6	90
Passive recreation				Evening	60	155				N, R1, DR	105	65	N, R1, DR, PC, SN	11	85
Industrial premise				Evening	75	35				N, R1, DR	20	80	N, R1, DR, PC, SN	2	100
				Night	75	35	N	35	75	N, R2, NR	20	80	AA, N, PC, SN, R2, DR	2	100
Offices, retail outlets				Evening	70	60				N, R1, DR	35	75	N, R1, DR, PC, SN	4	95
				Night	70	60	N	60	70	N, R2, NR	35	75	AA, N, PC, SN, R2, DR	4	95

Non-residential receiver				LAeq(15minute) noise level above NML									LAeq(15minute) 75 dB(A) or greater (Highly affected)		
Propagation across a valley / over water				<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	310				N	115	65	N, PC, RO	45	75

Hospital wards and operating theatres	Day	65	115				N, PC, RO	45	75
Place of worship	Day	55	310			N	N, PC, RO	45	75
Active recreation	Day	65	115				N, PC, RO	45	75
Passive recreation	Day	60	190			N	N, PC, RO	45	75
Industrial premise	Day	75	45				N, PC, RO	45	75
Offices, retail outlets	Day	70	70				N, PC, RO	45	75

		OOHW			L _{Aeq} (15minute) noise level above NML											
		Period	NML	Affected distance (m)	< 5 dB(A)			5 to 15 dB(A)			15 to 25 dB(A)			> 25 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))	Measure	Within distance (m)	Mitigation level (dB(A))
Hospital wards and operating theatres	Evening	65	115				N, R1, DR	70	70	N, R1, DR	25	80	N, R1, DR, PC, SN	6	90	
	Night	65	115	N	115	65	N, R2, NR	70	70	N, PC, SN, R2, DR	25	80	AA, N, PC, SN, R2, DR	6	90	
Place of worship	Evening	55	310				N, R1, DR	190	60	N, R1, DR	70	70	N, R1, DR, PC, SN	25	80	
	Night	55	310	N	310	55	N, R2, NR	190	60	N, PC, SN, R2, DR	70	70	AA, N, PC, SN, R2, DR	25	80	
Active recreation	Evening	65	115				N, R1, DR	70	70	N, R1, DR	25	80	N, R1, DR, PC, SN	6	90	
Passive recreation	Evening	60	190				N, R1, DR	115	65	N, R1, DR	45	75	N, R1, DR, PC, SN	15	85	
Industrial premise	Evening	75	45				N, R1, DR	25	80	N, R1, DR	6	90	N, R1, DR, PC, SN	2	100	
	Night	75	45	N	45	75	N, R2, NR	25	80	N, PC, SN, R2, DR	6	90	AA, N, PC, SN, R2, DR	2	100	
Offices, retail outlets	Evening	70	70				N, R1, DR	45	75	N, R1, DR	15	85	N, R1, DR, PC, SN	4	95	
	Night	70	70				N	70	70	N, R2, NR	45	75	N, PC, SN, R2, DR	15	85	AA, N, PC, SN, R2, DR