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?		No (behind substantial solid barrier)

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	45							N, PC, RO	20	75	N, PC, RO	20	75	N, PC, RO	20	75	
	Day (OOHW)	75				N, R1, DR	45	65	N, R1, DR	20	75	N, R1, DR, PC, SN	10	85	N, PC, RO	20	75	
	Evening	120				N, R1, DR	75	60	N, R1, DR	25	70	N, R1, DR, PC, SN	15	80	N, PC, RO	20	75	
	Night	175	N	175	50	N, R2, DR	120	55	N, PC, SN, R2, DR	45	65	AA, N, PC, SN, R2, DR	20	75	N, PC, RO	20	75	120
	Highly Affected	20													N, PC, RO	20	75	
Developed settlements (urban and suburban)	Day	50							N, PC, RO	20	75	N, PC, RO	20	75	N, PC, RO	20	75	
	Day (OOHW)	85				N, R1, DR	50	65	N, R1, DR	20	75	N, R1, DR, PC, SN	10	85	N, PC, RO	20	75	
	Evening	135				N, R1, DR	85	60	N, R1, DR	30	70	N, R1, DR, PC, SN	15	80	N, PC, RO	20	75	
	Night	200	N	200	50	N, R2, DR	135	55	N, PC, SN, R2, DR	50	65	AA, N, PC, SN, R2, DR	20	75	N, PC, RO	20	75	135
	Highly Affected	20													N, PC, RO	20	75	
Propagation across a valley / over water	Day	60							N, PC, RO	20	75	N, PC, RO	20	75	N, PC, RO	20	75	
	Day (OOHW)	95				N, R1, DR	60	65	N, R1, DR	20	75	N, R1, DR, PC, SN	10	85	N, PC, RO	20	75	
	Evening	160				N, R1, DR	95	60	N, R1, DR	35	70	N, R1, DR, PC, SN	15	80	N, PC, RO	20	75	
	Night	255	N	255	50	N, R2, DR	160	55	N, PC, SN, R2, DR	60	65	AA, N, PC, SN, R2, DR	20	75	N, PC, RO	20	75	160
	Highly Affected	20													N, PC, RO	20	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	120				N	45	65	N, PC, RO	20	75
Hospital wards and operating theatres	Day	65	45							N, PC, RO	20	75
Place of worship	Day	55	120				N	45	65	N, PC, RO	20	75
Active recreation	Day	65	45							N, PC, RO	20	75
Passive recreation	Day	60	75				N	25	70	N, PC, RO	20	75
Industrial premise	Day	75	20							N, PC, RO	20	75
Offices, retail outlets	Day	70	25							N, PC, RO	20	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	45				N, R1, DR	25	70	N, R1, DR	11	80	N, R1, DR, PC, SN	4	90
	Night	65	45	N	45	65	N, R2, NR	25	70	N, PC, SN, R2, DR	11	80	AA, N, PC, SN, R2, DR	4	90
Place of worship	Evening	55	120				N, R1, DR	75	60	N, R1, DR	25	70	N, R1, DR, PC, SN	11	80
	Night	55	120	N	120	55	N, R2, NR	75	60	N, PC, SN, R2, DR	25	70	AA, N, PC, SN, R2, DR	11	80
Active recreation	Evening	65	45				N, R1, DR	25	70	N, R1, DR	11	80	N, R1, DR, PC, SN	4	90
Passive recreation	Evening	60	75				N, R1, DR	45	65	N, R1, DR	20	75	N, R1, DR, PC, SN	6	85
Industrial premise	Evening	75	20				N, R1, DR	11	80	N, R1, DR	4	90	N, R1, DR, PC, SN	1	100
	Night	75	20	N	20	75	N, R2, NR	11	80	N, PC, SN, R2, DR	4	90	AA, N, PC, SN, R2, DR	1	100
Offices, retail outlets	Evening	70	25				N, R1, DR	20	75	N, R1, DR	6	85	N, R1, DR, PC, SN	2	95
	Night	70	25	N	25	70	N, R2, NR	20	75	N, PC, SN, R2, DR	6	85	AA, N, PC, SN, R2, DR	2	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	135				N	50	65	N, PC, RO	20	75
Hospital wards and operating theatres	Day	65	50							N, PC, RO	20	75
Place of worship	Day	55	135				N	50	65	N, PC, RO	20	75
Active recreation	Day	65	50							N, PC, RO	20	75
Passive recreation	Day	60	85				N	30	70	N, PC, RO	20	75
Industrial premise	Day	75	20							N, PC, RO	20	75
Offices, retail outlets	Day	70	30							N, PC, RO	20	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	50				N, R1, DR	30	70	N, R1, DR	11	80	N, R1, DR, PC, SN	4	90
	Night	65	50	N	50	65	N, R2, NR	30	70	N, PC, SN, R2, DR	11	80	AA, N, PC, SN, R2, DR	4	90
Place of worship	Evening	55	135				N, R1, DR	85	60	N, R1, DR	30	70	N, R1, DR, PC, SN	11	80
	Night	55	135	N	135	55	N, R2, NR	85	60	N, PC, SN, R2, DR	30	70	AA, N, PC, SN, R2, DR	11	80
Active recreation	Evening	65	50				N, R1, DR	30	70	N, R1, DR	11	80	N, R1, DR, PC, SN	4	90
Passive recreation	Evening	60	85				N, R1, DR	50	65	N, R1, DR	20	75	N, R1, DR, PC, SN	6	85
Industrial premise	Evening	75	20				N, R1, DR	11	80	N, R1, DR	4	90	N, R1, DR, PC, SN	1	100
	Night	75	20	N	20	75	N, R2, NR	11	80	N, PC, SN, R2, DR	4	90	AA, N, PC, SN, R2, DR	1	100
Offices, retail outlets	Evening	70	30				N, R1, DR	20	75	N, R1, DR	6	85	N, R1, DR, PC, SN	2	95
	Night	70	30	N	30	70	N, R2, NR	20	75	N, PC, SN, R2, DR	6	85	AA, N, PC, SN, R2, DR	2	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	160				N	60	65	N, PC, RO	20	75

Hospital wards and operating theatres	**Day**	65	60						N, PC, RO	20	75
Place of worship	**Day**	55	160				N	60	65	N, PC, RO	20	75
Active recreation	**Day**	65	60							N, PC, RO	20	75
Passive recreation	**Day**	60	95				N	35	70	N, PC, RO	20	75
Industrial premise	**Day**	75	20							N, PC, RO	20	75
Offices, retail outlets	**Day**	70	35							N, PC, RO	20	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	60				N, R1, DR	35	70	N, R1, DR	15	80	N, R1, DR, PC, SN	4	90
	Night	65	60	N	60	65	N, R2, NR	35	70	N, PC, SN, R2, DR	15	80	AA, N, PC, SN, R2, DR	4	90
Place of worship	**Evening**	55	160				N, R1, DR	95	60	N, R1, DR	35	70	N, R1, DR, PC, SN	15	80
	Night	55	160	N	160	55	N, R2, NR	95	60	N, PC, SN, R2, DR	35	70	AA, N, PC, SN, R2, DR	15	80
Active recreation	**Evening**	65	60				N, R1, DR	35	70	N, R1, DR	15	80	N, R1, DR, PC, SN	4	90
Passive recreation	**Evening**	60	95				N, R1, DR	60	65	N, R1, DR	20	75	N, R1, DR, PC, SN	10	85
Industrial premise	**Evening**	75	20				N, R1, DR	15	80	N, R1, DR	4	90	N, R1, DR, PC, SN	1	100
	Night	75	20	N	20	75	N, R2, NR	15	80	N, PC, SN, R2, DR	4	90	AA, N, PC, SN, R2, DR	1	100
Offices, retail outlets	**Evening**	70	35				N, R1, DR	20	75	N, R1, DR	10	85	N, R1, DR, PC, SN	2	95
	Night	70	35	N	35	70	N, R2, NR	20	75	N, PC, SN, R2, DR	10	85	AA, N, PC, SN, R2, DR	2	95