

Annex A

LRT Noise Measurement & Assessment

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1. LRT Noise Measurement

Location: south of Lam Tei Station
 No. of Sample: 13
 Estimated Mean Speed (kph): 65
 Measurement Location: 10m from nearside track, 15m from farside track
 Measurement Results:

Data Set 1

Sampling Time	Direction	Track	Parameters (dB(A))						No. of Vehicles
			Lmax	Lmin	L10	L90	Leq	SEL	
13s	South	Far	80.6	59.3	76.0	59.5	71.5	82.7	1
11s	South	Far	81.4	58.9	78.0	59.0	73.4	83.8	1
12s	South	Far	78.6	61.5	75.0	60.5	71.0	81.9	1
13s	South	Far	83.7	61.6	81.5	63.5	75.4	86.5	1
12s	South	Far	80.0	61.4	76.4	62.5	72.0	82.8	1
Standard Deviation			1.9	1.3	2.5	1.9	1.8	1.8	
Mean			80.9	60.5	77.4	61.0	72.7	83.5	
SEL @ 25m @ 65 kph =			81.3						
Lmax @ 25m @ 65 kph =			76.4						

Data Set 2

Sampling Time	Direction	Track	Parameters (dB(A))						No. of Vehicles
			Lmax	Lmin	L10	L90	Leq	SEL	
13s	North	Near	80.7	58.5	77.5	59.5	71.5	83.3	1
13s	North	Near	85.4	62.7	82.5	63.0	76.4	87.5	1
12s	North	Near	82.8	62.5	80.5	63.5	74.5	85.3	1
10s	North	Near	83.8	61.4	81.5	62.5	76.5	86.5	1
Standard Deviation			2.0	1.9	2.2	1.8	2.3	1.8	
Mean			83.2	61.3	80.5	62.1	74.7	85.7	
SEL @ 25m @ 65 kph =			81.7						
Lmax @ 25m @ 65 kph =			75.2						

Data Set 3

Sampling Time	Direction	Track	Parameters (dB(A))						No. of Vehicles
			Lmax	Lmin	L10	L90	Leq	SEL	
12s	North	Near	85.7	59.1	84.0	59.5	78.5	89.3	2
10s	North	Near	84.7	62.3	83.0	63.5	78.9	87.9	2
13s	North	Near	83.7	61.0	81.0	61.5	76.1	87.2	2
13s	North	Near	84.2	58.7	82.0	60.5	76.8	87.9	2
Standard Deviation			0.9	1.7	1.3	1.7	1.3	0.9	
Mean			84.6	60.3	82.5	61.3	77.6	88.1	
SEL @ 25m @ 65 kph =			81.1						
Lmax @ 25m @ 65 kph =			76.6						

Overall Mean SEL @ 25m @ 65 kph = 81.4
Overall Mean Lmax @ 25m @ 65 kph = 76.1

2. LRT Noise Assessment

ASSUMPTIONS:

- 2-car LRT vehicles will run on the future LRT reserve through Tuen Mun Area 54.
- Time headway assumed to be 4 minutes during the peak hour periods for both directions (day and evening peak and the night-time peak).
- Facade correction is +3.0 dB(A).
- Same operation speed as the measured data.

CALCULATIONS:

corr. for 2-car LRT =	3.01
corr. for facade reflection =	3.00
corr. for 2-way traffic =	3.00
corr. for operational characteristic =	-23.80
SEL @ 25m =	81.36
Leq (30 min) @ 25m =	66.57

VARIATION OF Leq WITH DISTANCE

Distance (m)	25	30	35	40	45	50	55	60
Leq (30 min)	67	66	65	65	64	64	63	63