

**Appendix 4.6 Tuen Mun Road Widening - Tsing Tin Interchange (Unmitigated Scenario)**

NSR ID	Use	criterion	Level	Height /mPD	Predicted Noise Levels, dB(A)		
					New	Existing	Overall
TMHQ	Residential	70	1	11	59.3	63.2	64.7
			5	23	67.6	73.4	74.4
			10	38	69.9	74.2	75.6
			15	53	70.7	74.5	76.0
			19	65	71.0	74.7	76.2
BG1	Residential	70	1	13	62.4	78.7	78.8
			5	25	68.4	82.1	82.3
			10	40	68.2	82.2	82.4
			11	43	68.1	82.1	82.3
VB	Residential	70	1	13.2	60.9	67.1	68.0
			5	25.2	68.3	71.5	73.2
			10	40.2	72.2	74.0	76.2
			15	55.2	72.6	74.4	76.6
			20	70.2	72.5	74.4	76.5
			25	85.2	72.3	74.2	76.3
LB1	Residential	70	1	15.4	74.3	84.7	85.1
			5	27.4	73.0	84.1	84.4
			10	42.4	72.0	83.1	83.4
			15	57.4	71.1	82.2	82.5
			20	72.4	70.4	81.4	81.7
KF	Residential	70	1	13.2	66.8	83.5	83.5
			5	25.2	66.5	83.1	83.2
			10	40.2	65.1	82.5	82.5
			15	55.2	64.3	81.7	81.8
			18	64.2	64.0	81.3	81.4
TLLF*	School	65	1	6.7	-	-	84.6
			6	21.7	-	-	82.6
MYS	School	65	1	13.6	61.0	67.6	68.5
			4	22.6	64.3	68.5	69.9
			7	31.6	66.8	69.1	71.1

\* Prediction by measurement results and normalization with traffic forecast 2024.

**Appendix 4.6 Tuen Mun Road Widening - Tsing Tin Interchange (Mitigated Scenario)**

NSR ID	Use	criterion	Level	Height /mPD	Predicted Noise Levels, dB(A)		
					New	Existing	Overall
TMHQ	Residential	70	1	11	55.6	63.2	63.9
			5	23	63.6	73.4	73.8
			10	38	65.1	74.2	74.7
			15	53	65.7	74.5	75.0
			19	65	66.7	74.7	75.3
BG1	Residential	70	1	13	59.8	78.7	78.7
			5	25	65.6	82.1	82.2
			10	40	65.4	82.2	82.3
			11	43	65.3	82.1	82.2
VB	Residential	70	1	13.2	56.5	67.1	67.4
			5	25.2	61.0	71.4	71.8
			10	40.2	65.9	74.0	74.6
			15	55.2	67.1	74.4	75.1
			20	70.2	68.0	74.3	75.2
			25	85.2	67.9	74.2	75.1
LB1	Residential	70	1	15.4	70.4	84.7	84.9
			5	27.4	69.7	84.1	84.2
			10	42.4	68.6	83.1	83.3
			15	57.4	67.9	82.2	82.4
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KF	Residential	70	1	13.2	65.1	83.5	83.5
			5	25.2	64.8	83.1	83.2
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			15	55.2	62.7	81.7	81.8
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TLLF*	School	65	1	6.7	-	-	84.6
			6	21.7	-	-	82.6
MYS	School	65	1	13.6	56.1	67.5	67.8
			4	22.6	59.1	68.4	68.8
			7	31.6	61.0	69.0	69.7

\* Prediction by measurement results and normalization with traffic forecast 2024.

Widening of Tuen Mun Road at Tsing Tin Interchange  
Normalization of Noise Level to 2024

$$L_0 + 10 \log \frac{Q_1}{Q_0} + 33 \log \frac{V_1 + 40 + \frac{500}{V_1}}{V_0 + 40 + \frac{500}{V_0}} + 10 \log \left( \frac{1 + \frac{5p_1}{V_1}}{1 + \frac{5p_0}{V_0}} \right) = L_{forecast}$$

$Q_0, V_0$  and  $p_0$  : Flow, Velocity and Percentage of Heavy Vehicles during measurement (2007) respectively

$Q_1, V_1$  and  $p_1$  : Flow, Velocity and Percentage of Heavy Vehicles in traffic forecast (2024) respectively

$L_0$  : Noise Level at TLLF during 1-hour noise measurement

$L_{forecast}$  : Normalized Noise Level with traffic forecast 2024

At Roof Floor

	$L_0 (L_{10})$	$Q_0$ (veh/hr)	$Q_1$ (veh/hr)	$V_0$ (km/h)	$V_1$ (km/h)	$p_0$	$p_1$	Factor
North Bound	78.5	4088	9881	67.02066	70	51%	43%	4.13
South Bound								

$L_{forecast} = 82.63$

At 1st Floor

	$L_0 (L_{10})$	$Q_0$ (veh/hr)	$Q_1$ (veh/hr)	$V_0$ (km/h)	$V_1$ (km/h)	$p_0$	$p_1$	Factor
North Bound	80.5	4088	9881	67.02066	70	51%	43%	4.13
South Bound								

$L_{forecast} = 84.63$