

## **APPENDIX H**

### Details of Depot Operation Noise Assessment (Night-time)

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Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99  
 NSR: SQ1, Chai Wan TC Staff Quarter

NSRs	Height (m)	Predicted CNL (dB(A))
G/F	1.5	36.4
1/F	4.5	36.4
2/F	7.5	36.4
3/F	10.5	36.4
4/F	13.5	36.4
5/F	16.5	36.4
6/F	19.5	36.4
7/F	22.5	36.4
8/F	25.5	36.4
9/F	28.5	36.4
10/F	31.5	36.4
11/F	34.5	36.4
12/F	37.5	36.4
13/F	40.5	36.4
14/F	43.5	36.4
15/F	46.5	36.4
16/F	49.5	36.4
17/F	52.5	36.3
18/F	55.5	36.3
19/F	58.5	36.3
20/F	61.5	36.3
21/F	64.5	36.3
22/F	67.5	36.2
23/F	70.5	36.2
24/F	73.5	36.2
25/F	76.5	36.2
<End of NSR>		

4/F	
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Calculation of Depot Noise Levels (Night-time Operaiton)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99


NSR	SQ1, Chai Wan TC Staff Quarter <sup>[1]</sup>			Xr: 842837			Yr: 814876			Hr: 13.5						
	Code	Description	SWL	SPL(int)	S (sqm)	No.	Source location & distance			Corrections			CNL <sup>[2]</sup>			
							Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	
S1	Bus/car wash (G/F)	88.4	0	0	4	843065	814809	1.5	238.4	6	-47.5	0.0	-10.0	3	21.9	
S2	Test lane (G/F)	87.9	0	0	1	843057	814837	1.5	223.4	0	-47.0	0.0	-10.0	3	15.9	
S4	Battery Charging (G/F)	0	74.1	76	1	843087	814892	1.5	250.7	0	-48.0	0.0	-20.0	3	11.9	
S5	Workshop (G/F)	0	82.6	76	1	843098	814879	1.5	261.3	0	-48.3	0.0	-20.0	3	20.1	
S6	Maintenance Area (G/F)	0	77.8	76	5	843074	814876	1.5	237.0	7	-47.5	0.0	-20.0	3	23.1	
S7	Blacksmith Workshop (G/F)	0	73.6	76	1	843120	814844	1.5	285.5	0	-49.1	0.0	-20.0	3	10.3	
S8	Tyre Changing Lane (G/F)	97.6	0	0	1	843057	814837	1.5	223.4	0	-47.0	0.0	-10.0	3	25.6	
S10	Bus Refuelling (G/F)	82	0	0	4	843030	814842	1.5	196.3	6	-45.9	0.0	-10.0	3	17.2	
S3	Engine Axle Workshop (1/F)	0	83.6	76	0	843060	814837	9.7	226.8	0	-47.1	0.0	-20.0	3	0.0	
S5	Workshop (1/F)	0	82.6	76	0	843081	814826	9.7	248.7	0	-47.9	0.0	-20.0	3	0.0	
S6	Maintenance Area (1/F)	0	77.8	76	0	843045	814830	9.7	213.1	0	-46.6	0.0	0.0	3	0.0	
S9	Bus Parking (2/F)	87.8	0	0	2	843046	814849	18.7	210.4	3	-46.5	0.0	0.0	3	29.3	
S9	Bus Parking (4/F)	87.8	0	0	2	843046	814849	26.9	210.8	3	-46.5	0.0	0.0	3	29.3	
S9	Bus Parking (6/F)	87.8	0	0	2	843046	814849	35.1	211.5	3	-46.5	0.0	0.0	3	29.3	
S9	Bus Parking (R/F)	87.8	0	0	2	843046	814849	43.3	212.5	3	-46.5	0.0	0.0	3	29.3	
<b>TOTAL</b>															<b>36.4</b>	

Definition of terms:

- SWL - the sound power level of a source, dB(A)
- SPL(int) - the internal sound pressure level within a building, dB(A)
- S (sqm) - the surface area of the wall of a building which faces the NSR, m<sup>2</sup>
- No. - the number of items of plant operating simultaneously
- Xr, Yr, Hr - the coordinates of the NSR, m
- Xs, Ys, Hs - the coordinates of the source, m
- Lsr - the horizontal distance between the source and NSR, m
- Cno - correction for no. of plant items
- CLsr - the correction for slant distance between the source and the NSR, dB(A)
- Catm - the air absorption using CONCAWE methodology
- Cfac - the facade correction, dB(A)
- Csri - the sound reduction provided by the building envelope, dB(A)
- CNL - the corrected noise level, dB(A)(30 minutes)
- [1] - NSR with fixed glazing facing the depot
- [2] - attenuation of 10dB(A) for NSR totally screened by building design

**Calculation of Depot Noise Levels (Night-time Operation)**

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99  
 NSR: SQ2, Chai Wan TC Staff Quarter

NSRs	Height (m)	Predicted CNL (dB(A))	
G/F	1.5	35.7	4/F 
1/F	4.5	35.8	
2/F	7.5	35.8	
3/F	10.5	35.8	
4/F	13.5	35.8	
5/F	16.5	35.8	
6/F	19.5	35.8	
7/F	22.5	35.8	
8/F	25.5	35.8	
9/F	28.5	35.8	
10/F	31.5	35.8	
11/F	34.5	35.8	
12/F	37.5	35.8	
13/F	40.5	35.8	
14/F	43.5	35.8	
15/F	46.5	35.8	
16/F	49.5	35.8	
17/F	52.5	35.7	
18/F	55.5	35.7	
19/F	58.5	35.7	
20/F	61.5	35.7	
21/F	64.5	35.7	
22/F	67.5	35.7	
23/F	70.5	35.6	
24/F	73.5	35.6	
25/F	76.5	35.6	
<End of NSR>			

Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99

NSR	SQ2, Chai Wan TC Staff Quarter <sup>[1]</sup>			Xr: 842834			Yr: 814900			Hr: 13.5					
	Code	Description	Basic Noise Level, dB(A)	No.	Source location & distance			Corrections			CNL <sup>[2]</sup>				
			SWL	SPL(int)	S (sqm)	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	CNL dB(A)
S1	Bus/car wash (G/F)	88.4	0	0	843065	814809	1.5	248.6	6	-47.9	0.0	-10.0	3	21.5	
S2	Test lane (G/F)	87.9	0	0	843057	814837	1.5	231.3	0	-47.3	0.0	-10.0	3	15.6	
S4	Battery Charging (G/F)	0	74.1	76	843087	814892	1.5	253.0	0	-48.1	0.0	-20.0	3	11.8	
S5	Workshop (G/F)	0	82.6	76	843098	814879	1.5	264.8	0	-48.5	0.0	-20.0	3	20.0	
S6	Maintenance Area (G/F)	0	77.8	76	843074	814876	1.5	240.9	7	-47.6	0.0	-20.0	3	23.0	
S7	Blacksmith Workshop (G/F)	0	73.6	76	843120	814844	1.5	291.7	0	-49.3	0.0	-20.0	3	10.1	
S8	Tyre Changing Lane (G/F)	97.6	0	0	843057	814837	1.5	231.3	0	-47.3	0.0	-20.0	3	15.3	
S10	Bus Refuelling (G/F)	82	0	0	843030	814842	1.5	204.4	6	-46.2	0.0	-10.0	3	16.8	
S3	Engine Axle Workshop (1/F)	0	83.6	76	843060	814837	9.7	234.6	0	-47.4	0.0	-20.0	3	0.0	
S5	Workshop (1/F)	0	82.6	76	843081	814826	9.7	257.1	0	-48.2	0.0	-20.0	3	0.0	
S6	Maintenance Area (1/F)	0	77.8	76	843045	814830	9.7	222.1	0	-46.9	0.0	0.0	3	0.0	
S9	Bus Parking (2/F)	87.8	0	0	843046	814849	18.7	217.4	3	-46.7	0.0	0.0	3	29.1	
S9	Bus Parking (4/F)	87.8	0	0	843046	814849	26.9	217.7	3	-46.8	0.0	0.0	3	29.1	
S9	Bus Parking (6/F)	87.8	0	0	843046	814849	35.1	218.4	3	-46.8	0.0	0.0	3	29.0	
S9	Bus Parking (R/F)	87.8	0	0	843046	814849	43.3	219.4	3	-46.8	0.0	0.0	3	29.0	
														<b>TOTAL</b>	<b>35.8</b>

Definition of terms:

- SWL - the sound power level of a source, dB(A)
- SPL(int) - the internal sound pressure level within a building, dB(A)
- S (sqm) - the surface area of the wall of a building which faces the NSR, m<sup>2</sup>
- No. - the number of items of plant operating simultaneously
- Xr, Yr, Hr - the coordinates of the NSR, m
- Xs, Ys, Hs - the coordinates of the source, m
- Lsr - the horizontal distance between the source and NSR, m
- Cno - correction for no. of plant items
- CLsr - the correction for slant distance between the source and the NSR, dB(A)
- Catm - the air absorption using CONCAWE methodology
- Cfac - the facade correction, dB(A)
- Csri - the sound reduction provided by the building envelope, dB(A)
- CNL - the corrected noise level, dB(A)(30 minutes)
- [1] - NSR with fixed glazing facing the depot
- [2] - attenuation of 15dB(A) included due to the effect of fixed glazing

Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99  
 NSR: HFC1, Heng Fa Chuen

NSRs	Height (m)	Predicted CNL (dB(A))		Barrier effect due to Roof Top parapet
G/F	1.5	50.0	1/F	-15.0
1/F	4.5	50.0		-15.0
2/F	7.5	50.0		-15.0
3/F	10.5	50.0		-15.0
4/F	13.5	50.0		-15.0
5/F	16.5	50.0		-15.0
6/F	19.5	50.0		-15.0
7/F	22.5	50.0		-10.0
8/F	25.5	50.0		-10.0
9/F	28.5	50.0		-10.0
10/F	31.5	50.0		-10.0
11/F	34.5	50.0		-10.0
12/F	37.5	50.0		-10.0
13/F	40.5	50.0		-5.0
14/F	43.5	50.0		-5.0
15/F	46.5	50.0		-5.0
16/F	49.5	50.0		-5.0
17/F	52.5	49.9		-5.0
18/F	55.5	49.9		-5.0
19/F	58.5	49.9		-5.0
20/F	61.5	49.9		-5.0

<End of NSR>

Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99


NSR	HFC1, Heng Fa Chuen		Xr: 842957		Yr: 815126		Hr: 4.5									
	Code	Description	Basic Noise Level, dB(A)		Source location & distance		Corrections			CNL						
			SWL	SPL(int)	S (sqm)	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	CNL
S1	Bus/car wash (G/F)	88.4	0	0	4	843065	814809	1.5	334.9	334.9	6	-50.5	-0.9	-5.0	3	33.0
S2	Test lane (G/F)	87.9	0	0	1	843057	814837	1.5	305.5	305.5	0	-49.7	-0.9	-5.0	3	27.3
S4	Battery Charging (G/F)	0	74.1	76	1	843087	814892	1.5	267.5	267.5	0	-48.5	0.0	-20.0	3	21.4
S5	Workshop (G/F)	0	82.6	76	1	843098	814879	1.5	284.3	284.3	0	-49.1	0.0	-20.0	3	29.3
S6	Maintenance Area (G/F)	0	77.8	76	5	843074	814876	1.5	275.9	275.9	7	-48.8	0.0	-3.0	3	48.8
S7	Blacksmith Workshop (G/F)	0	73.6	76	1	843120	814844	1.5	325.9	325.9	0	-50.3	-0.9	-20.0	3	18.2
S8	Tyre Changing Lane (G/F)	97.6	0	0	1	843057	814837	1.5	305.5	305.5	0	-49.7	-0.9	-5.0	3	37.0
S10	Bus Refuelling (G/F)	82	0	0	4	843030	814842	1.5	293.3	293.3	6	-49.3	0.0	0.0	3	33.7
S3	Engine Axle Workshop (1/F)	0	83.6	76	0	843060	814837	9.7	306.5	306.5	0	-49.7	-0.9	-20.0	3	0.0
S5	Workshop (1/F)	0	82.6	76	0	843081	814826	9.7	324.3	324.3	0	-50.2	-0.9	-20.0	3	0.0
S6	Maintenance Area (1/F)	0	77.8	76	0	843045	814830	9.7	308.9	308.9	0	-49.8	-0.9	0.0	3	0.0
S9	Bus Parking (2/F)	87.8	0	0	2	843046	814849	18.7	291.0	291.0	3	-49.3	0.0	0.0	3	36.5
S9	Bus Parking (4/F)	87.8	0	0	2	843046	814849	26.9	291.6	291.6	3	-49.3	0.0	0.0	3	36.5
S9	Bus Parking (6/F)	87.8	0	0	2	843046	814849	35.1	292.3	292.3	3	-49.3	0.0	0.0	3	36.5
S9	Bus Parking (R/F) <sup>[1]</sup>	87.8	0	0	2	843046	814849	43.3	293.3	293.3	3	-49.3	0.0	-15.0	3	21.5
<b>TOTAL</b>															<b>50.0</b>	

Definition of terms:

- SWL - the sound power level of a source, dB(A)
- SPL(int) - the internal sound pressure level within a building, dB(A)
- S (sqm) - the surface area of the wall of a building which faces the NSR, m<sup>2</sup>
- No. - the number of items of plant operating simultaneously
- Xr, Yr, Hr - the coordinates of the NSR, m
- Xs, Ys, Hs - the coordinates of the source, m
- Lsr - the horizontal distance between the source and NSR, m
- Cno - correction for no. of plant items
- CLsr - the correction for slant distance between the source and the NSR, dB(A)
- Catm - the air absorption using CONCAWE methodology
- Cfac - the facade correction, dB(A)
- Csri - the sound reduction provided by the building envelope, dB(A)
- CNL - the corrected noise level, dB(A)(30 minutes)
- [1] - Attenuation of 15dB(A) at low level, 10dB(A) at mid-level & 5dB(A) at high level included due to rooftop parapet

Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99  
 NSR: TWE1, Tsui Wan Estate

NSRs	Height (m)	Predicted CNL (dB(A))	
G/F	1.5	38.1	1/F 
1/F	4.3	38.1	
2/F	7.1	38.1	
3/F	9.9	38.1	
4/F	12.7	38.1	
5/F	15.5	38.1	
6/F	18.3	38.1	
7/F	21.1	38.1	
8/F	23.9	38.1	
9/F	26.7	38.1	
10/F	29.5	38.1	
11/F	32.3	38.1	
12/F	35.1	38.1	
13/F	37.9	38.1	
14/F	40.7	38.1	
15/F	43.5	38.1	
16/F	46.3	38.1	
17/F	49.1	38.1	
18/F	51.9	38.1	
19/F	54.7	38.1	
20/F	57.5	38.1	
21/F	60.3	38.1	
22/F	63.1	38.1	
23/F	65.9	38.1	
24/F	68.7	38.1	
25/F	71.5	38.0	
26/F	74.3	38.0	
27/F	77.1	38.0	
28/F	79.9	38.0	
29/F	82.7	38.0	
30/F	85.5	38.0	

<End of NSR>



Calculation of Depot Noise Levels (Night-time Operation)

Job Title.: New World First Bus  
 Job No.: 21270  
 Date: 20-09-99

NSR		TWE1, Tsui Wan Estate		Xr: 842847		Yr: 814413		Hr: 4.3							
Code	Description	Basic Noise Level, dB(A)		Source location & distance			Corrections					CNL dB(A)			
		SWL	SPL(int)	S (sqm)	No.	Xs	Ys	Hs	Lsr	Cno	CLsr		Catm	Csri	Cfac
S1	Bus/car wash (G/F)	88.4	0	0	4	843065	814809	1.5	452.5	6	-53.1	-1.3	-10.0	3	25.0
S2	Test lane (G/F)	87.9	0	0	1	843057	814837	1.5	473.3	0	-53.5	-1.3	-10.0	3	18.1
S4	Battery Charging (G/F)	0	74.1	76	1	843087	814892	1.5	536.0	0	-54.6	-1.5	-20.0	3	13.8
S5	Workshop (G/F)	0	82.6	76	1	843098	814879	1.5	529.6	0	-54.5	-1.5	-20.0	3	22.4
S6	Maintenance Area (G/F)	0	77.8	76	5	843074	814876	1.5	515.7	7	-54.2	-1.4	-20.0	3	24.9
S7	Blacksmith Workshop (G/F)	0	73.6	76	1	843120	814844	1.5	510.7	0	-54.2	-1.4	-20.0	3	13.8
S8	Tyre Changing Lane (G/F)	97.6	0	0	1	843057	814837	1.5	473.3	0	-53.5	-1.3	-10.0	3	27.8
S10	Bus Refuelling (G/F)	82	0	0	4	843030	814842	1.5	466.3	6	-53.4	-1.3	-10.0	3	18.3
S3	Engine Axle Workshop (1/F)	0	83.6	76	0	843060	814837	9.7	475.3	0	-53.5	-1.3	-20.0	3	0.0
S5	Workshop (1/F)	0	82.6	76	0	843081	814826	9.7	474.9	0	-53.5	-1.3	-20.0	3	0.0
S6	Maintenance Area (1/F)	0	77.8	76	0	843045	814830	9.7	461.7	0	-53.3	-1.3	0.0	3	0.0
S9	Bus Parking (2/F)	87.8	0	0	2	843046	814849	18.7	479.5	3	-53.6	-1.3	0.0	3	30.9
S9	Bus Parking (4/F)	87.8	0	0	2	843046	814849	26.9	479.8	3	-53.6	-1.3	0.0	3	30.8
S9	Bus Parking (6/F)	87.8	0	0	2	843046	814849	35.1	480.3	3	-53.6	-1.3	0.0	3	30.8
S9	Bus Parking (R/F)	87.8	0	0	2	843046	814849	43.3	480.9	3	-53.6	-1.3	0.0	3	30.8
											<b>TOTAL</b>	<b>38.1</b>			

Definition of terms:

- SWL - the sound power level of a source, dB(A)
- SPL(int) - the internal sound pressure level within a building, dB(A)
- S (sqm) - the surface area of the wall of a building which faces the NSR, m<sup>2</sup>
- No. - the number of items of plant operating simultaneously
- Xr, Yr, Hr - the coordinates of the NSR, m
- Xs, Ys, Hs - the coordinates of the source, m
- Lsr - the horizontal distance between the source and NSR, m
- Cno - correction for no. of plant items
- CLsr - the correction for slant distance between the source and the NSR, dB(A)
- Catm - the air absorption using CONCAWE methodology
- Cfac - the facade correction, dB(A)
- Csri - the sound reduction provided by the building envelope, dB(A)
- CNL - the corrected noise level, dB(A)(30 minutes)