#### **Appendix 4-7**

Industrial Noise Calculations (Worst Case Scenario, Nighttime)



Figure:	-	RAMBOLL ENVIRON
Title:	Key of NSRs (Industrial Noise)	Drawn by: CC
		Checked by: KW
Project:	EIA for Proposed Low-rise and Low-density Residential Development at Various Lots and Their	Rev.: -
•	Adjoining Government Land in D.D. 104, East of Kam Pok Road, Mai Po, Yuen Long, N.T.	Date:November 2015

Job Title.: Kam Pok Road
Job No.: 22080
Date: 30/11/2015
Scenario: Noise Barrier (Norl

Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)

Floor	NSR 1	NSR 2	NSR 3	NSR 4	NSR 5	NSR 6	NSR 7	NSR 8	NSR 9
G/F (House Type C with ground level 7.2mPD)	31.1	30.9	25.6	26.6	30.6				
G/F (House Type C with ground level 6.7mPD)						37.7	37.8	41.9	41.7
1/F (House Type C with ground level 7.2mPD)	32.9	32.8	28.0	29.8	32.1				
1/F (House Type C with ground level 6.7mPD)						38.9	38.8	43.3	43.4
Max:	32.9	32.8	28.0	29.8	32.1	38.9	38.8	43.3	43.4
(ANL - 5) Criterion	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Compliance	YES								

Kam Pok Road	22080	30/11/2015	Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)
Job Title.:	Job No.:	Date:	Scenario:

Floor	NSR 10	NSR 11	NSR 12	NSR 13	NSR 14	NSR 15	NSR 16	NSR 17	NSR 18
G/F (House Type A with ground level 5.45mPD)	40.7	36.1	35.8	40.0	38.7	37.2	34.5	34.1	38.2
1/F (House Type A with ground level 5.45mPD)	42.6	37.6	36.9	41.4	40.3	38.9	36.2	35.4	39.5
TATALANA TA									
Max:	42.6	37.6	36.9	4.14	40.3	38.9	36.2	35.4	39.5
(ANL - 5) Criterion	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Compliance	YES								

Job Title.: Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (No	Kam Pok Road 22080 30/11/2015 Voise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	South: Sew	/age Treatmo	ent Plant on	S.		
Floor	NSR 19	NSR 20	NSR 21	NSR 22	NSR 23	NSR 24	NSR 25	
G/F (House Type A with ground level 5.45mPD)	37.1	35.6	33.7	32.7	37.0	35.1	34.1	
1/F (House Type A with ground level 5.45mPD)	38.8	37.5	35.7	34.2	38.3	36.9	36.3	
Max	38.8	37.5	35.7	34.9	38.3	98	36	
(ANL - 5) Criterion	45.0	45.0	45.0	45.0	45.0	45.0	45.0	
Compliance	YES	YES	YES	YES	YES	YES	YES	

Kam Pok Road	22080	30/11/2015	Noise Barrier (Norl
Job Title.:	Job No.:	Date:	Scenario:

Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only) 30/11/2015

Floor	NSR 56	<b>NSR 57</b>	NSR 58	<b>NSR</b> 59	NSR 60	NSR 61	NSR 62	NSR 63	NSR 64
G/F (House Type A with ground level 5.45mPD)	43.0	39.4	41.6	42.7	43.8	39.4	36.5	38.9	39.2
1/F (House Type A with ground level 5.45mPD)	44.0	40.0	43.1	44.1	45.0	40.7	37.5	40.4	40.7
потительной потительном потите									
Мах:	44.0	40.0	43.1	44.1	45.0	40.7	37.5	40.4	40.7
(ANL - 5) Criterion	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
Compliance	YES	YES	YES	YES	YES	YES	YES	YES	YES

Job Title Job No Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (N	रेoad ১ er (North: 4.5m, South: Sewage Treatment Plant only)	South: Sew	age Treatm	ent Plant on	(A			
Floor  G/F (House Type A with ground level 5.45mPD)  1/F (House Type A with ground level 5.45mPD)	NSR 65 34.5 40.3	NSR 66 34.8 38.6	NSR 67 32.6 35.8	NSR 68 31.7 38.9	NSR 69 36.6 39.0	NSR 70 36.8 38.1	NSR 71 36.7 35.2	NSR 72 34.6 34.4	NSR 73 30.7 37.7

Kam Pok Road	22080	30/11/2015	Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)
Job Title.:	Job No.:	Date:	Scenario:

	32.7	45.0	YES
	35.9	45.0	YES
	38.0	45.0	YES
	38.3	45.0	YES
	37.9	45.0	YES
	33.6	45.0	YES
	34.8	45.0	YES
	36.9	45.0	YES
	36.7	45.0	YES
	Max:	(ANL - 5) Criterion	Compliance

NSR 82 30.7 32.7

34.6 35.9

36.8 38.3

36.6 37.9

31.7 33.6

32.6 34.8

34.8 36.9

34.5 36.7

Floor

G/F (House Type A with ground level 5.45mPD)

1/F (House Type A with ground level 5.45mPD)

36.7 38.0

Kam Pok Road 22080 30/11/2015 Voise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	NSR 83 NSR 84 NSR 85	36.0 36.1	37.8 37.8
Kam Pok Road 22080 30/11/2015 <b>Noise Barrier (N</b>	NSR 83	35.8	37.5
Job Title.: Job No.: Date: Scenario:	Floor	G/F (House Type A with ground level 5.45mPD)	1/F (House Type A with ground level 5.45mPD)

37.8 37.8 45.0 45.0 YES YES		(ANL - 5) Criterion 45.0	
<b>37.8</b> 45.0 YES	37.8	45.0	YES
	37.8	45.0	YES

Job Title.: Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	ad (North: 4.5m,	South: Sew	age Treatm	ent Plant on	ŝ	
Floor	NSR 87	NSR 91	NSR 95	NSR 99	NSR 103	NSR 95 NSR 99 NSR 103 NSR 107	NSR 111
G/F (House Type A with ground level 5.6mPD)	31.7	31.1					
G/F (House Type A with ground level 5.75mPD)			30.6	30.1			
G/F (House Type A with ground level 6mPD)					30.8		
G/F (House Type A with ground level 6.5mPD)						30.1	28.3
1/F (House Type A with ground level 5.6mPD)	34.0	33.4					
1/F (House Type A with ground level 5.75mPD)			32.8	32.3			
1/F (House Type A with ground level 6mPD)					32.2		
1/F (House Type A with ground level 6.5mPD)						32.0	30.4

**30.4** 45.0 YES

**32.0** 45.0 YES

**32.2** 45.0 YES

**32.3** 45.0 YES

**32.8** 45.0 YES

**33.4** 45.0 YES

**34.0** 45.0 YES

Job Title.: Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (N	Kam Pok Road 22080 30/11/2015 Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	South: Sew	age Treatme	ent Plant on	<b>\$</b>			
Floor G/F (Houes Type C with ground level 5.6mPD) 1/F (Houes Type C with ground level 5.6mPD)	NSR 114 33.8 36.2	NSR 115 28.6 31.5	NSR 116 28.7 31.6	34.6 36.5	35.2 37.8	NSR 115 NSR 116 NSR 117 NSR 118 NSR 119 28.6 28.7 34.6 35.2 29.2 31.5 31.6 36.5 37.8 31.7	NSR 120 29.2 32.2	NSR 121 NSR 122 29.3 34.4 32.4 40.0	NSR 122 34.4 40.0

**40.0** 45.0 YES

**32.4** 45.0 YES

**32.2** 45.0 YES

**31.7** 45.0 YES

**37.8** 45.0 YES

**36.5** 45.0 YES

**31.6** 45.0 YES

**31.5** 45.0 YES

**36.2** 45.0 YES

Job Title.: Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (N	১০ad ১ er (North: 4.5m, South: Sewage Treatment Plant only)	, South: Sew	age Treatm	ent Plant on	(A)			
Floor  G/F (House Type C with ground level 5.6mPD)  1/F (House Type C with ground level 5.6mPD)	NSR 123 29.0 32.0	NSR 124 28.8 31.9	NSR 125 29.0 32.2	NSR 126 32.9 34.8	NSR 125 NSR 126 NSR 127 NSR 128 29.0 32.9 30.3 30.5 32.2 34.8 32.5 32.9	NSR 128 30.5 32.9	NSR 129 32.4 34.6	NSR 130 31.5 34.6	32.6 35.6

Job Title∴ Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	ıd (North: 4.5m,	South: Sew	age Treatm	ent Plant on	<del>(</del>			
Floor	<b>NSR 132</b>	NSR 133	NSR 134	NSR 135	NSR 136	NSR 132 NSR 133 NSR 134 NSR 135 NSR 136 NSR 137 NSR 138 NSR 139 NSR 140	NSR 138	NSR 139	NSR 140
G/F (House Type C with ground level 5.6mPD) G/F (House Type D with ground level 6mPD)	27.7	27.7	33.0	33.7	28.1	31.2	32.5	26.1	27.6
1/F (House Type C with ground level 5.6mPD)	30.5	30.4	38.6	37.4	31.5	38.8	<u>}</u>	; !	)
1/F (House Type D with ground level 6mPD)							34.7	28.7	30.8

**30.8** 45.0 YES

**28.7** 45.0 YES

**34.7** 45.0 YES

**38.8** 45.0 YES

**31.5** 45.0 YES

**37.4** 45.0 YES

**38.6** 45.0 YES

**30.4** 45.0 YES

**30.5** 45.0 YES

Job Title.: Job No.: Date: Scenario:	Kam Pok Road 22080 30/11/2015 Noise Barrier (N	ad (North: 4.5m,	South: Sew	age Treatme	Kam Pok Road 22080 30/11/2015 Noise Barrier (North: 4.5m, South: Sewage Treatment Plant only)	
Floor	NSR 141	<b>NSR 142</b>	NSR 142 NSR 143 NSR 144 NSR 145	NSR 144	NSR 145	
G/F (House Type D with ground level 6mPD) 1/F (House Type D with ground level 6mPD)	31.3 33.0	32.3 35.3	29.5 32.0	26.2 28.8	26.2 28.9	

**28.9** 45.0 YES

**28.8** 45.0 YES

**32.0** 45.0 YES

**35.3** 45.0 YES

**33.0** 45.0 YES

Kam Pok Road Job Title.:

22080 Job No.:

09/08/16 Date:

NSR	NSR 81	×	Xr: 823421							*			
	G/F	:: <u>}</u>	Yr: 837223 Hr: 6.70										
	TOTAL CONTRACTOR CONTR			Sour	Source location & distance	k distan	8		්	Corrections			S
ode	Code Description	SWL	No.	××	Ys	¥.	Lsr	Cno	CLsr	Catm	Csri	Cfac	۷,
S2-2	S2-2 Mobile Crane (Fan Keung Kee)	6	С	823530	837121 2	4 د	148.2	c	7,	0	ر د	c	c
50		. (	) (		1	)		)	ļ.	5	5.5	)	5
-70	SZ-1 LOITY (Fan Keung Kee)	66	0	823530	837121.2	4.5	148.2	0	-514	0.0	-13.3	က	0.0
S1-1	Operating Noise (Fan Keung Kee)	94	_	823530	837121.2	4.5	148.2	0	-51.4	0.0	-13.3	ო	32.3
S2-3	S2-3 Forklift (Fan Keung Kee)	91	0	823530	837121.2	4.5	148.2	0	-51,4	0.0	-13.3	· ෆ	0.0
S10-1	S10-1 Forklift (Shing Fat Logistics Ltd.)	91	7	823601	837190.9	4.5	182.5	က	-53.2	0.0	-22.5	; m	21.3
S10-2	S10-2 Lorry (Shing Fat Logistics Ltd.)	66	0	823601	837190.9	4.5	182.5	0	-53.2	0.0	-22.5	· "	0.0
S3-1	S3-1   Sewage Treatment Plant	74	-1	823477	837149.7	5.4	91.4	0	-47.2	0.0	0.0	က	29.8
											-	TOTAL	34.6

#### Definition of terms:

the equivalent continuous noise level over a 30 minute period, dB(A)
the number of items of plant operating simultaneously
the coordinates of the NSR, m
the coordinates of the source, m
the horizontal distance between the source and NSR, m - the sound power level of a source, dB(A) Xr, Yr, Hr Xs, Ys, Hs Lsr SWL LAeq No.

correction for no. of plant items
the correction for slant distance between the source and the NSR, dB(A)
the air absorption using CONCAWE methodology
the facade correction, dB(A)
the sound reduction provided by the building envelope, dB(A)
the corrected noise level, dB(A)(30 minutes) Cno CLsr Catm Cfac Csri CSri

Kam Pok Road 22080 Job Title.:

09/08/16 Job No.: Date:

NSR	NSR 81	: '×	Xr: 823421										
	1/F	Yr:	Yr: 837223										
	- CANADA CAN	Hr:	<b>Hr</b> : 10.20										
····				Sour	Source location & distance	distan	8		ပြီ	Corrections			SN
Code	Code Description	SWL	Š.	Xs	Ys	Нŝ	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)
S2-2	S2-2   Mobile Crane (Fan Keung Kee)	26	0	823530	837121.2	4.5	148.3	0	-51.4	0.0	-11.8	m	0.0
S2-1	Lorry (Fan Keung Kee)	66	0	823530	837121.2	4.5	148.3	0	-51.4	0.0	-11.8	က	0.0
S1-1	S1-1 Operating Noise (Fan Keung Kee)	94	_	823530	837121.2	4.5	148.3	0	-51.4	0.0	-11.8	М	33.8
S2-3	Forklift (Fan Keung Kee)	91	0	823530	837121.2	4.5	148.3	0	-51.4	0.0	-11.8	m	0.0
S10-1	S10-1  Forklift (Shing Fat Logistics Ltd.)	91	2	823601	837190.9	4.5	182.5	ო	-53.2	0.0	-16.8	ო	27.0
S10-2	S10-2 Lorry (Shing Fat Logistics Ltd.)	66	0	823601	837190.9	4.5	182.5	0	-53.2	0.0	-16.8	ო	0.0
S3-1	S3-1   Sewage Treatment Plant	74	<b>4</b>	823477	837149.7	5.4	91.5	0	-47.2	0.0	0.0	ო	29.8
	TANANAS TANANA										<del> -</del>	TOTAL	35.9

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- the equivalent continuous noise level over a 30 minute period, dB(A) - the coordinates of the NSR, m - the coordinates of the source, m - the horizontal distance between the source and NSR, m - the number of items of plant operating simultaneously - the sound power level of a source, dB(A) No. Xr, Yr, Hr Xs, Ys, Hs Lsr LAeq

 correction for no. of plant items
 the correction for slant distance between the source and the NSR, dB(A)
 the air absorption using CONCAWE methodology
 the facade correction, dB(A) - the sound reduction provided by the building envelope, dB(A) - the corrected noise level, dB(A)(30 minutes) Cho CLsr Catm Cfac Csri

Kam Pok Road Job Title.:

22080 Job No.:

09/08/16 Date:

NSR		×	Xr: 823490									
	G/F	Yr:	Yr: 837285									
		H.	<b>Hr</b> : 6.80									
				Source location & distance	tion & dis	tance		පි	Corrections			S
Code	Description	SWL	Š	Xs Ys	НS	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)
			-									
S2-2	S2-2   Mobile Crane (Fan Keung Kee)	97	0	823530 837121	21 4.5	168.9	0	-52.6	0.0	-14.4	က	0.0
S2-1	Lorry (Fan Keung Kee)	66	0	823530 837121	11 4.5	168.9	0	-52.6	0.0	-14.4		0.0
S1-1	Operating Noise (Fan Keung Kee)	94	-	823530 837121	21 4.5	168.9	0	-52.6	0.0	-14.4	· 10	30.0
S2-3	Forklift (Fan Keung Kee)	91	0	823530 837121	21 4.5	168.9	0	-52.6	0.0	-14.4	) ෆ	0.0
S10-1	S10-1 Forklift (Shing Fat Logistics Ltd.)	91	7	823601 837191	91 4.5	146.2	က	-51.3	0.0	-14.9	හ	30.8
S10-2	S10-2 Lorry (Shing Fat Logistics Ltd.)	66	0	823601 837191	11 4.5	146.2	0	-51.3	0.0	-14.9	3	0.0
S3-1	S3-1  Sewage Treatment Plant	74	*	823477 837150	50 5.4	136.2	0	-50.7	0.0	0.0	က	26.3
	The state of the s									<u></u>	TOTAL	34.4

#### Definition of terms:

the sound power level of a source, dB(A)
the equivalent continuous noise level over a 30 minute period, dB(A)
the number of items of plant operating simultaneously
the coordinates of the NSR, m
the coordinates of the source, m
the horizontal distance between the source and NSR, m No. Xr, Yr, Hr Xs, Ys, Hs Lsr LAeq SWL

- the sound reduction provided by the building envelope, dB(A) - the corrected noise level, dB(A)(30 minutes) - the facade correction, dB(A) Cno CLsr Catm Cfac Csri CNL

- the air absorption using CONCAWE methodology

correction for no. of plant items
 the correction for slant distance between the source and the NSR, dB(A)

Kam Pok Road 22080 Job Title.: Job No.:

09/08/16 Date:

NSR	NSR 122 1/F	X Y	Xr: 823490 Yr: 837285	With the second					744	*		
	minds - remains	H	Hr: 10.30									
-	:			Source location & distance	in & dist	ance	-	ပိ	Corrections			S
ode	Code Description	SWL	No	Xs Ys	완	_s_	Cno	CLsr	Catm	Csri	Cfac	dB(A)
S2-2	S2-2 Mobile Crane (Fan Keung Kee)	26	0	823530 837121	4.5	169.0	c	-526	C	.7.2	۲	0.0
S2-1	S2-1   Lorry (Fan Keung Kee)	66	0		4.5	169.0	0	-52.6	9 0	5.7-	n (	9 0
S1-1	Operating Noise (Fan Keung Kee)	94	~		4.5	169.0	0	-52.6	0.0	.7.	) (r.	37.2
S2-3	Forklift (Fan Keung Kee)	91	0	823530 837121	4.5	169.0	0	-52.6	0.0	-7.2	) m	, C
510-1	S10-1   Forklift (Shing Fat Logistics Ltd.)	91	5	823601 837191	4.5	146.3	က	-51.3	0.0	9.5	, co	36.2
510-2	S10-2 Lorry (Shing Fat Logistics Ltd.)	66	0	823601 837191	4.5	146.3	0	-51.3	0.0	-9.5	က	0.0
23-1	S3-1   Sewage Treatment Plant	74	,,	823477 837150	5.4	136.3	0	-50.7	0.0	0.0	က	26.3
										-	TOTAL	40 0

#### Definition of terms:

 the sound power level of a source, dB(A)
 the equivalent continuous noise level over a 30 minute period, dB(A)
 the number of items of plant operating simultaneously the coordinates of the NSR, m
 the coordinates of the source, m
 the horizontal distance between the source and NSR, m Xr, Yr, Hr Xs, Ys, Hs Lsr LAed SWL Š

- the facade correction,  $\bar{d}B(A)$  - the sound reduction provided by the building envelope, dB(A) - the corrected noise level, dB(A)(30 minutes)Cno CLsr Catm Cfac Csri

- the correction for slant distance between the source and the NSR,  ${\sf dB}({\sf A})$  - the air absorption using CONCAWE methodology

- correction for no. of plant items