Supporting Information for Noise Impact Assessment

Preliminary Construction Programme

Regulation of Shenzhen River Stage IV <u>Annex B1: Preliminary Summarised Construction Programme</u>

	2012			2013				2014				2015				2016				2017
No. Activity Description	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01	02	03	04	01
No. Activity Description	Q-	Q5	21	QI	Q2	Q9	Q1	QI	Q2	Q.9	QŦ	Q1	Q4	Q5	Q1	Q1	Q2	Q9	21	Q1
DESIGNATED PROJECT																				
Regulation of Shenzhen River Stage IV																				
I Site Preparation																				
1 Site Clearance						Y														
2 Haul Road						Y														
II Works Area I																				
3 River Excavation (Sediment)							Y	Y												
4 Haul Road							Y	Y	Y	Y	Y	Y	Y	Y						
5 Excavation and River Training							Y	Y	Y	Y	Y	Y	Y	Y						
6 Landscaping											Y	Y	Y	Y						
III Works Area II																				
7 River Excavation (Sediment)							Y	Y												
8 Haul Road							Y	Y	Y	Y	Y	Y	Y	Y						
9 Excavation and River Training							Y	Y	Y	Y	Y	Y	Y	Y						
10 Landscaping											Y	Y	Y	Y						
IV Works Area III																				
11 River Excavation (Sediment)											Y	Y								
12 Haul Road											Y	Y	Y	Y	Y	Y	Y	Y	Y	
13 Excavation and River Training											Y	Y	Y	Y	Y	Y	Y	Y	Y	
14 Landscaping																Y	Y	Y	Y	
V Works Area IV																				
15 River Excavation (Sediment)											Y	Y								
16 Haul Road											Y	Y	Y	Y	Y	Y	Y	Y	Y	
17 Excavation and River Training											Y	Y	Y	Y	Y	Y	Y	Y	Y	
18 Landscaping																Y	Y	Y	Y	
VI Others																				
19 Reprovisioning Works																				Y
VII Advanced Works																				
20 Backfilling	Y	Y	Y	Y																
21 Road Construction			Y	Y	Y															
22 Fence Installation				Y	Y	Y	Y	Y												
23 Drainage / Sinage Works							Y	Y	Y	Y										
CONCURRENT PROJECTS																				
Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)																				
24 Construction Activities (Section 3 - Ng Tung River to Ping Yuen River) [1]	Y	Y	Y	Y																
25 Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road) ^[1]	Y	Y	Y	Y	Y	Y	Y													
Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing																				
Point and Associated Works ¹²¹																				
26 BCP Site Formation	L					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Ŷ
27 Lin Ma Hang Road next to BCP	<u> </u>					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
28 Chuk Yuen Village Access Road	└──								Y											
29 Lin Ma Hang Road Improvement Work	L					Y	Y	Y	Y	Y	Y	Y	Y	Y	Y					
30 Viaduct Section from BCP to Wo Keng Shan	<u> </u>										Y	Y	Y			Y	Y	Y	Y	Ŷ
	1																			

Notes:

[1] Reference was made to the latest tentative construction programme provided by ArchSD.

[2] Reference was made to Appendices 4.4b2 and 4.4g2 of the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

Construction Plant Inventory (Unmitigated)

Regulation of Shenzhen River Stage IV

Annex B2: Construction Plant Inventory (Unmitigated)

<u> Daytime Period (Normal days 0700 - 1900 hrs)</u>

No.	Activities	Plant Item	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Unit SW dB(A)	L, SWL, dB(A)	Total SWL, dB(A) ^[2]
Cons	struction of Shenzhen River Stage	e IV						
I)	Site Preparation							
	1 Site Clearance	Excavator/loader_wheeled/tracked	CNP 081	1	75%	112	111	111
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
	2 Haul Road	Bulldozer	CNP 030	1	75%	115	114	116
		Excavator/loader, wheeled/tracked Lorry, with crane/grab, 5.5 toppe \leq gross vehicle weight \leq 38 toppe	CNP 081 FPD/PMF/36	1	75% 50%	112 105	111 102	
		2000 , which cance, $\frac{1}{2}$ and $\frac{1}{2}$ to $\frac{1}{2}$ and $\frac{1}{2}$ to $\frac{1}{2}$ to $\frac{1}{2}$ to $\frac{1}{2}$	EI D/ I MIL/ 50			100	102	
II)	Works Area I							
	3 River Excavation (Sediment)	Bulldozer	CNP 030	1	75% 75%	115	114	119
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	3	50%	105	107	
		Drill rig, rotary type (diesel)	CNP 072	1	50%	110	107	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50% 50%	112	109	
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	105	103	
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	98	95	
	4 Haul Road	Bulldozer	CNP 030	1	75%	115	114	116
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
	5 Excavation and River Training	Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	115
	J. J	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	111	111	
		Concrete pump, stationary/lorry mounted	CNP 048 CNP 047	1	50%	109	106	
	6 Landscaping	Bulldozer Evcavator/loador_whoolod/trackad	CNP 030 CNP 081	1	75% 75%	115	114	117
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Drill rig, rotary type (diesel)	CNP 072	1	50%	110	107	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
III)	Works Area II							
	7 River Excavation (Sediment)	Bulldozer	CNP 030	1	75%	115	114	119
		Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne Drill rig, rotary type (discel)	EPD/PME/36 CNIP 072	3	50% 50%	105	107	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	110	109	
		Concrete lorry mixer	CNP 044	1	50%	109	106	
		Concrete pump, stationary/lorry mounted Drill/grinder_band_beld (electric)	BS C6 36 CNP 065	1	50% 50%	106 98	103	
		Sim, Sinder, hand heid (cecure)				,,,	20	
	8 Haul Road	Bulldozer	CNP 030	1	75%	115	114	116
		Excavator/loader, wheeled/tracked Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	75% 50%	112	102	
			, ,					
	9 Excavation and River Training	Excavator/loader, wheeled/tracked	CNP 081	1	75% 50%	112	111	115
		Breaker, hand-held, mass > 20 kg and < 35 kg	CNP 025	2	50%	105	102	
		Concrete mixer (petrol)	CNP 046	1	50%	96	93	
		Concrete pump, stationary/lorry mounted	CNP 047	1	50%	109	106	
1	0 Landscaping	Bulldozer	CNP 030	1	75%	115	114	117
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne Drill rig, rotary type (diesel)	EPD/PME/36 CNP 072	1	50%	105 110	102	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
IV)	Works Area III							
10,		P.111	CN III 000	1	750/	115	114	110
1	1 Kiver Excavation (Sediment)	Excavator/loader. wheeled/tracked	CNP 030 CNP 081	2	75%	115	114	119
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	3	50%	105	107	
		Drill rig, rotary type (diesel)	CNP 072	1	50%	110	107	
		Concrete lorry mixer	CNP 048 CNP 044	1	50%	112	109	
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	106	103	
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	98	95	
1	2 Haul Road	Bulldozer	CNP 030	1	75%	115	114	116
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	50%	105	102	
1	3 Excavation and River Training	Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	115
	0	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	111 96	111 93	
		Concrete pump, stationary/lorry mounted	CNP 047	1	50%	109	106	

Regulation of Shenzhen River Stage IV

Annex B2: Construction Plant Inventory (Unmitigated)

Daytime Period (Normal days 0700 - 1900 hrs)

No.	Activities	Plant Item	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Unit SWI dB(A)	., SWL, dB(A)	Total SWL, dB(A) ^[2]
1	4 Landscaping	Bulldozer	CNP 030	1	75%	115	114	117
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Drill rig, rotary type (diesel)	CNP 072	1	50%	110	107	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
V)	Works Area IV							
1	5 River Excavation (Sediment)	Bulldozer	CNP 030	1	75%	115	114	119
		Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	3	50%	105	107	
		Drill rig, rotary type (diesel)	CNP 072	1	50%	110	107	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
		Concrete lorry mixer	CNP 044	1	50%	109	106	
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	106	103	
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	98	95	
1	6 Haul Road	Bulldozer	CNP 030	1	75%	115	114	116
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
1	7 Excavation and River Training	g Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	115
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	111	111	
		Concrete mixer (petrol)	CNP 046	1	50%	96	93	
		Concrete pump, stationary/lorry mounted	CNP 047	1	50%	109	106	
1	8 Landscaping	Bulldozer	CNP 030	1	75%	115	114	117
		Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Drill rig, rotary type (diesel) Crane, mobile/barge mounted (diesel)	CNP 072 CNP 048	1 1	50% 50%	110 112	107 109	
VI)	Others							
1	9 Reprovisioning Works	Excavator/loader_wheeled/tracked	CNP 081	1	75%	112	111	114
	, replotisioning tronks	Crane mehile/harge mounted (diesel)	CNP 001	1	50%	112	100	114
		Concrete lorry mixer	CNP 044	2	50%	109	109	
VII)	Advanced Works							
2	0 Backfilling	Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	112
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Generator, standard	CNP 101	1	50%	108	105	
		Water pump (electric)	CNP 281	1	50%	88	85	
2	1 Road Construction	Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	112
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	
		Road roller	CNP 185	1	50%	108	105	
2	2 Fence Installation	Lorry, with crane/grab, 5.5 tonne < gross vehicle weight \leq 38 tonne	EPD/PME/36	1	50%	105	102	107
		Generator, standard	CNP 101	1	50%	108	105	
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	98	95	
2	3 Drainage / Sinage Works	Excavator/loader, wheeled/tracked	CNP 081	1	75%	112	111	115
-		Lorry, with crane/grab, 5.5 tonne < gross vehicle weight ≤ 38 tonne	EPD/PME/36	1	50%	105	102	
		Breaker, hand-held, mass > 20kg and < $35kg$	CNP 025	2	50%	111	111	
		Concrete mixer (petrol)	CNP 046	-	50%	96	93	
		Concrete pump, stationary/lorry mounted	CNP 047	1	50%	109	106	
Conc	urrent Project :							
Cons	truction of a Secondary Boundar	ry Fence and New Sections of Primary Boundary Fence and Boundary I	Patrol Road (AEIAR	2-136/2009))			
Maxi	mum SWLs for Activities 24 and	1 25 were extracted from the approved EIA Report (AEIAR-136/2009)						
24	Construction Activities (Sectio	on 3 - Ng Tung River to Ping Yuen River)						104

Construction Activities (Section 3 - Ng Tung River to Ping Yuen River) Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road) 24 25

 Notes:

 [1]
 BS - British Standard BS 5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites SWLs of EPD/PME items refer to the document prepared by the Noise Control Authority (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)

 [2]
 The figures are rounded-up to a whole number.

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Summaries of Predicted Noise Levels (due to the Project and Cumulative Impact – Unmitigated)

		EIAO-TM							Pre	dicte	d Con	struc	tion 1	Noise	Leve	el (dB	(A))						
		Noise Criteria,		2012			20)13			20	14			20	15			20	16		2017	Max. CNL,
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	dB(A)
HK1	Tsung Yuen Ha	75	62	62	65	66	64	57	66	66	65	65											66
HK2	Chuk Yuen Village	75	66	66	69	69	67																69
HK3	Kaw Liu Village	75	76	76	79	80	77	71	79	79	79	79											80
HK4	Kan Tau Wai	75	60	60	63	63	61	54	63	63	62	62											63
HK5	Ta Kwu Ling Village	75	71	71	74	75	73	66	75	75	74	74											75

Annex B3-a : I) Summary of Predicted Noise Levels due to Advanced Works during Daytime Period (Unmitigated)

		EIAO-TM							Pre	dicteo	d Con	struc	tion 1	Noise	Leve	l (dB	(A))						
		Noise Criteria,		2012			20	13			20	14			20	15			20	16		2017	Max. CNL,
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	dB(A)
	T							(0)											(0)	(0)	()		
HK1	Tsung Yuen Ha	75	62	62	65	66	64	68	74	74	71	71	73	73	73	73	57	60	60	60	60	65	74
HK2	Chuk Yuen Village	75	66	66	69	69	67																69
HK3	Kaw Liu Village	75	76	76	79	80	77	81	79	79	79	79	85	85	82	82	82	85	85	85	85	78	85
HK4	Kan Tau Wai	75	60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	69	62	70
HK5	Ta Kwu Ling Village	75	71	71	74	75	73	77	75	75	74	74	81	81	78	78	78	80	80	80	80	74	81

Annex B3-b: II) Summary of Predicted Noise Levels during Daytime Period (Unmitigated)

		EIAO-TM							Pre	dicte	d Con	struc	tion	Noise	Leve	el (dB	(A))						
		Noise Criteria,		2012			20	13			20	14			20	15			20	16		2017	Max. CNL,
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	dB(A)
HK1	Tsung Yuen Ha	75	62	62	65	66	64	72	75	75	73	73	74	74	74	74	70	68	68	68	68	69	75
HK2	Chuk Yuen Village	75	66	66	69	69	67																69
НКЗ	Kaw Liu Village	75	76	76	79	80	77	81	80	80	79	79	85	85	82	82	82	85	85	85	85	78	85
HK4	Kan Tau Wai	75	60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	69	62	70
НК5	Ta Kwu Ling Village	75	71	71	74	75	73	78	76	76	76	76	81	81	79	78	78	80	80	80	80	74	81

Annex B3-c: III) Summary of Predicted Cumulative Noise Levels during Daytime Period (Unmitigated)

Construction Noise Impact Assessment (Unmitigated)

NSR: HK1 Tsung Yuen Ha

	Corr. for				0																				
		SWL	Distance	distance	façade	2012			2013	•			2014				2015			2	2016			2	.017
No.	Activity Description	dB(A) ^[2]	m	dB(A) ^{[1][2]}	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DEGLOVI																									
DESIGNA	<u>TTED PROJECT</u>																								
<u>Regulation</u>	<u>i of Shenzhen River Stage IV</u>																								
Ι	Site Preparation																								
1	Site Clearance	111	175	-53	3						61														
2	Haul Road	116	175	-53	3						66														
II	Works Area I																								
3	River Excavation (Sediment)	119	175	-53	3							69	69												
4	Haul Road	116	175	-53	3							66	66	66	66	66	66	66	66						
5	Excavation and River Training	115	175	-53	3							65	65	65	65	65	65	65	65						
6	Landscaping	117	175	-53	3											67	67	67	67						
···· _	Works Area II		a / =																						
7	River Excavation (Sediment)	119	265	-56	3							65	65	(2)	<i>(</i>)	()	()	()	()						
8	Haul Koad	116	265	-56	3							62	62	62	62	62	62	62	62						
10	Excavation and River Training	115	265	-56	3							61	61	61	61	61	61	61	61						
10		117	265	-36	3											64	64	64	64						
11	Diver Everyotion (Codiment)	110	720	65	2											56	56								
11	Haul Road	119	720	-05	3											50	50	54	54	54	54	54	54	54	
12	Figure Road	110	720	-65	3											53	53	53	53	53	53	53	53	53	
13	Landscaping	117	720	-65	3											55	55	55	55	55	55	55	55	55	
v	Works Area IV	11/	120	00	0																00	00	00	00	
. 15	River Excavation (Sediment)	119	1300	-70	3											51	51								
16	Haul Road	116	1300	-70	3											48	48	48	48	48	48	48	48	48	
17	Excavation and River Training	115	1300	-70	3											48	48	48	48	48	48	48	48	48	
18	Landscaping	117	1300	-70	3																50	50	50	50	
VI	Others																								
19	Reprovisioning Works	114	175	-53	3																				65
VII	Advanced Works				-																				
20	Backfilling	112	175	-53	3	62	62	62	62																
21	Road Construction	112	175	-53	3			62	62	62															
22	Fence Installation	107	175	-53	3				57	57	57	57	57												
23	Drainage / Sinage Works	115	175	-53	3							65	65	65	65										
CONCUR	RENT PROJECTS																								
concan	<u>KENTTROJECTS</u>																								
Construct	ion of a Secondary Boundary Fence and New Sections of Primary Boundary Fence																								
and Bound	lary Patrol Road (AEIAR-136/2009)																								
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	1917	-74	3	33	33	33	33																
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	1042	-68	3	39	39	39	39	39	39	39													
Agreemen	t No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and																								
Associated	Works ^[3]																								
26	BCP Site Formation										67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
27	Lin Ma Hang Road next to BCP										66	66	66	66	66	66	66	66	66	66					
28	Chuk Yuen Village Access Road																								
29	Lin Ma Hang Road Improvement Work																								
30	Viaduct Section from BCP to Wo Keng Shan																								
		<u> </u>	I																						
	Predicted	l Noise Le	evels during	Daytime Per	riod , $dB(A)$	62	62	65	66	64	68	74	74	71	71	73	73	73	73	57	60	60	60	60	65
	Predicted Cumulative	Noise Le	evels during	Daytime Per	riod, dB(A)	62	62	65	66	64	72	75	75	73	73	74	74	74	74	70	68	68	68	68	69
	Deadiata Niaia	L ovol J	un to Adver	end Worke a	anly dP(A)	62	62	65	64	61	57	64	66	65	65										
	r redicted Nois	se Levei a	ue to Auvan	ceu works 0	uny, ub(A)	02	02	03	00	04	57	00	00	03	03										

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

The figures are rounded-up to a whole number.

[2] [3] The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

- HK1 refers to TYH in the LT/HYW EIA Report

- HK2 refers to Chuen Yuen, which should be moved up on the commencement of LT/HYW.

- HK3 refers to KL1 in the LT/HYW EIA Report

- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

NSR: HK2 Chuk Yuen Village

				Corr. for	Corr. for													1		1
		SWL	Distance	distance	façade	2012	2		2013			2	014		201	5		2016		2017
No.	Activity Description	dB(A) ^[2]	m	dB(A) ^{[1][2]}	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 Q2	Q3 (Q4 Q1	Q2 Q	Q3 Q4	Q1 Q2	Q3 Q	Q4 Q1
DEGLOVIA																				
DESIGNA	<u>TED PROJECT</u>																			
<u>Regulation</u>	of Shenzhen River Stage IV																			
I	Site Preparation																			
1	Site Clearance	111	120	-50	3															
2	Haul Road	116	120	-50	3															
11	Works Area I																			
3	River Excavation (Sediment)	119	520	-62	3															
4	Haul Koad	116 115	520 520	-62	3															
5	Excavation and Kiver Training	115	520 520	-62 -62	3															
ш	Works Area II	117	520	-02	5															
7	River Excavation (Sediment)	119	120	-50	3															
8	Haul Road	116	120	-50	3															
9	Excavation and River Training	115	120	-50	3															
10	Landscaping	3																		
IV	Works Area III																			
11	River Excavation (Sediment)	119	300	-58	3															
12	Haul Road	116	300	-58	3															
13	Excavation and River Training	115	300	-58	3															
14	Landscaping	117	300	-58	3															
v	Works Area IV																			
15	River Excavation (Sediment)	119	890	-67	3															
16	Haul Road	116	890	-67	3															
17	Excavation and River Training	115	890	-67	3															
18	Landscaping	117	890	-67	3															
VI 10	Others		100	-0																
19	Reprovisioning Works	114	120	-50	3															
VII 20	Advanced works	110	100	50	2															
20	Backfilling	112	120	-50	3	66	66	66	66	66										
21	Fonce Installation	112	120	-50	3			00	60	60										
22	Drainage / Sinage Works	107	120	-50	3				00	00										
20	Dianage / Shage Works	115	120	-50	5															
CONCUR	<u>RENT PROJECTS</u>																			
Constructi	on of a Secondary Boundary Fence and New Sections of Primary Boundary Fence																			
and Bound	ary Patrol Road (AEIAR-136/2009)																			
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	1252	-70	3	37	37	37	37											
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	1685	-73	3	34	34	34	34	34										
Agreement	No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and																			
Associated	Works ^[3]																			
26	BCP Site Formation																			
27	Lin Ma Hang Road next to BCP																			
28	Chuk Yuen Village Access Road																			
29	Lin Ma Hang Road Improvement Work																			
30	Viaduct Section from BCP to Wo Keng Shan																			
		NT-1 T		Denstin P	:			(0)	(0)	(7										
	Predicted	Noise Le	evels during	Daytime Per	10d, dB(A)	66	66	69	69	67										
	Predicted Cumulative	66	66	69	69	67														
	Predicted Noise Level due to Advanced Works only, dB(A) 66																			
ļ	11040000		a · all																	

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

The figures are rounded-up to a whole number.

[2] [3] The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

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- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

Annex B4-c

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK3 Kaw Liu Village

		Corr. for																							
		SWL	Distance	distance	façade	2012			2013				2014				2015				2016			2	2017
No.	Activity Description	dB(A) ^[2]	m	dB(A) ^{[1][2]}	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<u>DESIGNA</u>	<u>TED PROJECT</u>																								
Regulation	of Shenzhen River Stage IV																								
I	Site Preparation																								
1	Site Clearance	111	36	-39	3						75														
2	Haul Road	116	36	-39	3						80														
II	Works Area I																								
3	River Excavation (Sediment)	119	1500	-72	3							50	50												
4	Haul Road	116	1500	-72	3							47	47	47	47	47	47	47	47						
5	Excavation and River Training	115	1500	-72	3							46	46	46	46	46	46	46	46						
6	Landscaping	117	1500	-72	3											48	48	48	48						
III	Works Area II																								
7	River Excavation (Sediment)	119	800	-66	3							55	55												
8	Haul Road	116	800	-66	3							53	53	53	53	53	53	53	53						
9	Excavation and River Training	115	800	-66	3							52	52	52	52	52	52	52	52						
10	Landscaping	117	800	-66	3											54	54	54	54						
IV	Works Area III																								
11	River Excavation (Sediment)	119	210	-54	3											67	67								
12	Haul Road	116	210	-54	3											64	64	64	64	64	64	64	64	64	
13	Excavation and River Training	115	210	-54	3											63	63	63	63	63	63	63	63	63	
14	Landscaping	117	210	-54	3																66	66	66	66	
v	Works Area IV				_																				
15	River Excavation (Sediment)	119	36	-39	3											82	82	0.0	00	00	0.0	0.0	0.0	00	
16	Haul Road	116	36	-39	3											80	80	80	80	80	80	80	80	80	
17	Excavation and River Training	115	36	-39	3											79	79	79	79	79	79	79	79 01	79	
18	Landscaping	117	36	-39	3																81	81	81	81	
VI 10	Others		2.	20	-																				-
19	Reprovisioning Works	114	36	-39	3																				78
VII	Advanced Works				-	-	- /		- /																
20	Backfilling	112	36	-39	3	76	76	76	76	=															
21	Road Construction	112	36	-39	3			76	76	76	71	71	71												
22	Protect Installation	107	30 26	-39	2				/1	/1	/1	71	71	70	70										
23	Dramage / Sinage Works	115	30	-39	3							79	79	79	79										
CONCUR	<u>RENT PROJECTS</u>																								
Construct	on of a Secondary Boundary Eence and New Sections of Primary Boundary Eence																								
and Bound	any Patrol Road (AFIAR-136/2009)																								
24	Construction Activities (Costion 2 No Turne Diver to Dine Vyon Diver)	104	71.0	(E	2	40	40	40	40																
24	Construction Activities (Section 3 - Ng Tung River to Ping Tuen River)	104 104	718	-63 75	3	42	42 32	42 32	42 32	30	32	30													
25	Construction Activities (Section 5 - Fak Fu Shan to Lin Ma Hang Road)	104	2340	-75	3	32	32	32	32	32	32	32													
Aoreemen	 : No. CE 45/2008 (CE) Liantano/Heuno Yuen Wai Roundaru Crossing Point and																								
Accoriated	Works [3]																								
Associated	PCD City France tion																								
26	DCP Site Formation																								
2/	Chule Vuon Villago Access Road																								
20	Lin Ma Hang Road Improvement Work																								
30	Viaduct Section from BCP to Wo Keng Shan																								
50	, and been non ber to the hengonan																								
	Duadiatas	I Noise L	wale during	Davtimo Por	ind dR(A)	76	76	70	80	77	81	70	70	70	70	85	85	82	ຊາ	87	85	85	85	85	78
	redicted	i noise Le	evers during	Day unle l'el	10u, ub(A)	70	70	17	00	11	01	17	19	17	17	00	00	02	02	02	05	05	05	00	70
	Predicted Cumulative	e Noise Le	evels during	Daytime Per	riod , $dB(A)$	76	76	79	80	77	81	80	80	79	79	85	85	82	82	82	85	85	85	85	78
	Predicted Nois	se Level d	ue to Advan	ced Works o	nly, dB(A)	76	76	79	80	77	71	79	79	79	79										
JL					· , ··- (- ·)				. •																

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

The figures are rounded-up to a whole number.

[2] [3] The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

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- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

NSR: HK4 Kan Tau Wai

		Corr. for				r																			
		SWL	Distance	distance	façade	2012			2013	6			2014				2015	6			2016			2	2017
No.	Activity Description	dB(A) ^[2]	m	$dB(A)^{[1][2]}$	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DESIGNA																									
Regulation	1 of Shenzhen River Stage IV																								
I	Site Preparation																								
1	Cite Closence	111	240	56	2						50														
2	Haul Road	111	240	-56	3						63														
Π	Works Area I	110	210	50	0						00														
3	River Excavation (Sediment)	119	1700	-73	3							49	49												
4	Haul Road	116	1700	-73	3							46	46	46	46	46	46	46	46						
5	Excavation and River Training	115	1700	-73	3							45	45	45	45	45	45	45	45						
6	Landscaping	117	1700	-73	3							10	10	-10	40	47	47	47	47						
ш	Works Area II		1,00		0														17						
7	River Excavation (Sediment)	119	1080	-69	3							53	53												
8	Haul Road	116	1080	-69	3							50	50	50	50	50	50	50	50						
9	Excavation and River Training	115	1080	-69	3							49	49	49	49	49	49	49	49						
10	Landscaping	117	1080	-69	3											51	51	51	51						
IV	Works Area III				-																				
11	River Excavation (Sediment)	119	480	-62	3											60	60								
12	Haul Road	116	480	-62	3											57	57	57	57	57	57	57	57	57	
13	Excavation and River Training	115	480	-62	3											56	56	56	56	56	56	56	56	56	
14	Landscaping	117	480	-62	3																58	58	58	58	
v	Works Area IV																								
15	River Excavation (Sediment)	119	240	-56	3											66	66								
16	Haul Road	116	240	-56	3											63	63	63	63	63	63	63	63	63	
17	Excavation and River Training	115	240	-56	3											62	62	62	62	62	62	62	62	62	
18	Landscaping	117	240	-56	3																64	64	64	64	
VI	Others																								
19	Reprovisioning Works	114	240	-56	3																				62
VII	Advanced Works																								
20	Backfilling	112	240	-56	3	60	60	60	60																
21	Road Construction	112	240	-56	3			60	60	60															
22	Fence Installation	107	240	-56	3				54	54	54	54	54												
23	Drainage / Sinage Works	115	240	-56	3							62	62	62	62										
CONCUR	RENT PROJECTS																								
concur	<u>INEINI I ROJECI 5</u>																								
Construct	ion of a Secondary Boundary Fence and New Sections of Primary Boundary Fence																								
and Bound	lary Patrol Road (AEIAR-136/2009)																								
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	772	-66	3	41	41	41	41																
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	2636	-76	3	31	31	31	31	31	31	31													
Agreemen	t No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and																								
Associated	! Works ^[3]																								
26	BCP Site Formation																								
27	Lin Ma Hang Road next to BCP																								
28	Chuk Yuen Village Access Road																								
29	Lin Ma Hang Road Improvement Work																								
30	Viaduct Section from BCP to Wo Keng Shan																								
	Predicted	Noise Le	evels during	Daytime Per	riod, dB(A)	60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	69	62
	Pradicted Cumulative	Noise L	vels during	Davtime Por	ind $dR(\Delta)$	60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	69	62
	r reacted Culturative	INDISE LE	vers during	Day unite i el	10u, uD(A)	00	00	05	05	01	05	04	04	00	05	70	70	07	07	07	09	07	57	07	04
	Predicted Nois	e Level d	ue to Advan	ced Works o	only, dB(A)	60	60	63	63	61	54	63	63	62	62										

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

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[2] [3] The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

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- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

NSR: HK5 Ta Kwu Ling Village

		Corr. for	Corr. for				1								4										
		SWL	Distance	distance	façade	2012			2013			-	2014				2015				2016			2	.017
No.	Activity Description	dB(A) ^[2]	m	$dB(A)^{[1][2]}$	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4 (Q1
DESIGN	ΑΤΕΠ ΡRΟΙΕCΤ																								
Regulation	1 of Shenzhen River Stage IV																								
T	Site Propagation																								
1	Site Clearance	111	67	44	2						70														
2	Haul Road	111	62	-44	3						75														
II	Works Area I				-																				
3	River Excavation (Sediment)	119	1650	-72	3							49	49												
4	Haul Road	116	1650	-72	3							46	46	46	46	46	46	46	46						
5	Excavation and River Training	115	1650	-72	3							45	45	45	45	45	45	45	45						
6	Landscaping	117	1650	-72	3											48	48	48	48						
III	Works Area II																								
7	River Excavation (Sediment)	119	950	-68	3							54	54			-									
8	Haul Road	116	950	-68	3							51	51	51	51	51	51	51	51						
10	Excavation and River Training	115	950 050	-68	3							50	50	50	50	50	50	50 50	50						
10	Works Area III	117	950	-00	3											52	52	52	52						
11	River Excavation (Sediment)	110	360	-59	3											62	62								
11	Haul Road	119	360	-59	3											60	60	60	60	60	60	60	60	60	
13	Excavation and River Training	115	360	-59	3											59	59	59	59	59	59	59	59	59	
14	Landscaping	117	360	-59	3											0,	0,2	0,	0,	0,5	61	61	61	61	
v	Works Area IV																								
15	River Excavation (Sediment)	119	62	-44	3											78	78								
16	Haul Road	116	62	-44	3											75	75	75	75	75	75	75	75	75	
17	Excavation and River Training	115	62	-44	3											74	74	74	74	74	74	74	74	74	
18	Landscaping	117	62	-44	3																76	76	76	76	
VI	Others																								
19	Reprovisioning Works	114	62	-44	3																				74
VII	Advanced Works																								
20	Backfilling	112	62	-44	3	71	71	71	71	=1															
21	Road Construction	112	62	-44	3			71	71	71															
22	Fence Installation	107	62	-44	3				66	66	66	66 74	66 74	74	74										
23	Drainage / Sinage Works	115	62	-44	3							74	74	74	74										
<u>CONCUF</u>	<u>RENT PROJECTS</u>																								
Construct	ion of a Secondary Boundary Fence and New Sections of Primary Boundary Fence																								
and Bound	lary Patrol Road (AEIAR-136/2009)																								
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	449	-61	3	46	46	46	46																
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	2758	-77	3	30	30	30	30	30	30	30													
Agreemen	t No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and																								
Associated	<u>! Works</u> ^[3]																								
26	BCP Site Formation																								
27	Lin Ma Hang Road next to BCP																								
28	Chuk Yuen Village Access Road													47											
29	Lin Ma Hang Road Improvement Work										71	71	71	71	71	71	71	71	71	71					
30	Viaduct Section from BCP to Wo Keng Shan															55	55	55			55	55	55	55	55
	ן	Nieł T	l	L Desetion - P	and JD(A)	71	71	74	75	70	77	75	75	74	74	01	01	70	70	70	00	00	00	80	74
	Predicted	i inoise Le	eveis auring	Daytime Per	10a, dB(A)	/1	/1	74	75	13	11	13	13	/4	/4	δ1	81	78	78	78	80	80	80	ðU 1	/4
	Predicted Cumulative	Noise Le	evels during	Daytime Per	riod, dB(A)	71	71	74	75	73	78	76	76	76	76	81	81	79	78	78	80	80	80	80	74
	Predicted Nois	e Level d	ue to Advan	ced Works c	only, dB(A)	71	71	74	75	73	66	75	75	74	74										
<u> </u>																									

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

The figures are rounded-up to a whole number.

[2] [3] The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

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- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report







Construction Plant Inventory (Mitigated)

Regulation of Shenzhen River Stage IV

Annex B5: Construction Plant Inventory (Mitigated)

Daytime Period (Normal days 0700 - 1900 hrs)

No.	Activities	Plant Item	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Type of Noise Control ^[3]	Noise reduction, dB(A)	Unit SV dB(A)	WL, SWL, dB(A)	Total S dB(A) ^{[2}	WL, Gr	oups ^[4]
Cons	struction of Shenzhen River Stag	e IV										
I)	Site Preparation											
	1 Site Clearance	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	101		
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97			
	2 Haul Road	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	106		
		Tracked Excavator/loader Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	BS C3 97 EPD/PME/36	1 1	75% 50%	Noise barrier Noise barrier	-5 -5	105 105	99 97			
IV)	Works Area III											
1	1 River Excavation (Sediment)	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	110		
		Lorry, with crane/grab, 5,5 tonne < gross vehicle weight	z EPD/PME/36	2	50%	Noise barrier	-5 -5	105	102			
		Drill rig, rotary type (diesel)	CNP 072	1	50%	Noise barrier	-5	110	102			
		Mobile crane (62kW)	BS C7 114	1	50%	Noise barrier	-5	101	93			
		Concrete lorry mixer	CNP 044	1	50%	Noise barrier	-5	109	101			
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	Noise barrier	-5 E	106	98			
		Dim/grinder, nand-neid (electric)	CINF 005	1	5070	Noise barrier	-5	90	90			
1	2 Haul Road	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	106		
		Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99			
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	gl EPD/PME/36	1	50%	Noise barrier	-5	105	97			
1	2 Excavation and River Training	Tracked Excavator /loader	BS C3 07	1	75%	Noise barrier	-5	105	99	108		
1	5 Excavation and Kiver Hammig	Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	EPD/PME/36	1	50%	Noise barrier	-5	105	97	100		
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	Noise barrier	-5	111	106			
		Concrete mixer (petrol)	CNP 046	1	50%	Noise barrier	-5	96	88			
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	Noise barrier	-5	106	98			
1	4 Landscaping	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	108		
	Landscaping	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	100		
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97			
		Dump Truck (450kW, 50t)	CNP 072	1	50%	Noise barrier	-5	110	102			
		Mobile crane (62kW)	BS C7 114	1	50%	Noise barrier	-5	101	93			
V)	Works Area IV											
1	5 River Excavation (Sediment)	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	105	А	105
		Tracked Excavator/loader	BS C3 97	2	75%	Noise barrier	-5	105	102		В	105
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	3	50%	Noise barrier	-5	105	102		С	105
		Drill rig, rotary type (diesel)	CNP 072	1	50%	Noise barrier	-5	110	102		C	
		Mobile crane (62kW)	BS C7 114	1	50%	Noise barrier	-5 5	101	93		C P	
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	Noise barrier	-5	109	98		B	
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	Noise barrier	-5	98	90		С	
1	6 Haul Road	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	106		
-		Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99			
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97			
1	7 Excavation and River Training	Tracked Excavator/loader	BS C 3 97	1	75%	Noise barrier	-5	105	99	106	А	101
	, Excavation and River Hamming	Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	EPD/PME/36	1	50%	Noise barrier	-5	105	97	100	A	101
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	Noise barrier	-5	111	106		В	106
		Concrete mixer (petrol)	CNP 046	1	50%	Noise barrier	-5	96	88		С	98
		Concrete pump, stationary/lorry mounted	BS C6 36	1	50%	Noise barrier	-5	106	98		С	
1	8 Landscaping	Bulldozer	BS C3 65	1	75%	Noise barrier	-5	111	105	105	Α	105
		Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99		В	105
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	EPD/PME/36	1	50%	Noise barrier	-5	105	97		B	
		Mobile crane (62kW)	CNP 072 BS C7 114	1	50%	Noise barrier	-5 -5	101	102 93		В	
VI)	Others											
1	9 Reprovisioning Works	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	105		
		Mobile crane (62kW)	BS C7 114	1	50%	Noise barrier	-5	101	93			
		Concrete lorry mixer	CNP 044	2	50%	Noise barrier	-5	109	104			
VII)	Advanced Works											
2	0 Backfilling	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	101		
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97			
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	50%	Noise barrier	-5	95	87			
		wodile crane (62kW)	CNP 281	1	50%	Noise barrier	-5	88	80			
2	1 Road Construction	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	104		
		Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97			
		Road roller	CNP 185	1	50%	Noise barrier	-5	108	100			
2	2 Fence Installation	Lorry, with crane/grab, 5.5 tonne < gross vehicle weig	g EPD/PME/36	1	50%	Noise barrier	-5	105	97	102		
		Generator, standard	CNP 101	1	50%	Noise barrier	-5	108	100			
		Drill/grinder, hand-held (electric)	CNP 065	1	50%	Noise barrier	-5	98	90			

Annex B5: Construction Plant Inventory (Mitigated)

Daytime Period (Normal days 0700 - 1900 hrs)

No.	Activities	Plant Item	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Type of Noise Control ^[3]	Noise reduction, dB(A)	Unit SW dB(A)	L, SWL, dB(A)	Total SWL, Groups ^[4] dB(A) ^[2]
2	3 Drainage / Sinage Works	Tracked Excavator/loader	BS C3 97	1	75%	Noise barrier	-5	105	99	107
		Lorry, with crane/grab, 5.5 tonne < gross vehicle wei	igl EPD/PME/36	1	50%	Noise barrier	-5	105	97	
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	2	50%	Noise barrier	-5	111	106	
		Concrete mixer (petrol)	CNP 046	1	50%	Noise barrier	-5	96	88	
		Concrete pump, stationary/lorry mounted	CNP 047	1	50%	Noise barrier	-5	103	95	
~										

104

104

Concurrent Project :

Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)

Maximum SWLs for Activities 24 and 25 were extracted from the approved EIA Report (AEIAR-136/2009)

Construction Activities (Section 3 - Ng Tung River to Ping Yuen River) Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road) 24

25

Notes:

 Notes:

 [1]
 BS - British Standard BS 5228:1997, Part 1 Noise and Vibration Control on Construction and Open Sites SWLs of EPD/PME items refer to the document prepared by the Noise Control Authority (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)

 [2]
 The figures are rounded-up to a whole number.

 [3]
 Noise barrier for mobile PME
 -5dB(A)

 [4]
 Either Group A, B or C will be undertaken at any one time.

Summaries of Predicted Noise Levels (due to the Project and Cumulative Impact – Mitigated)

		EIAO-TM							Pre	dicte	d Con	struc	tion l	Noise	Leve	l (dB)	(A))						
		Noise Critoria		2012 2013						20	14			20	15			20	16		2017	Max.	
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	CNL, dB(A)
НК3	Kaw Liu Village	75	65	65	69	71	70	66	73	73	72	72		1									73
НК5	Ta Kwu Ling Village	75	60	60	65	66	65	61	68	68	67	67											68

Annex B6-a : I) Summary of Predicted Noise Levels due to Advanced Works during Daytime Period (Mitigated)

		EIAO-TM							Pre	dicteo	l Con	struc	tion I	Noise	Leve	1 (dB	(A))						
		Noise Criteria		2012			20	13			20	14			20	15			20	16		2017	Max.
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	CNL, dB(A)
HK3	Kaw Liu Village	75	65	65	69	71	70	72	73	73	72	72	75	75	73	73	73	75	75	75	75	69	75
НК5	Ta Kwu Ling Village	75	60	60	65	66	65	68	68	68	67	67	70	70	68	68	68	70	70	70	70	65	70

Annex B6-b: II) Summary of Predicted Noise Levels during Daytime Period (Mitigated)

		EIAO-TM	Predicted Construction Noise Level (dB(A))																				
		Noise Criteria		2012			20	13			20	14			20	15			20	16		2017	Max.
	NSR Location	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	CNL, dB(A)
			-	-	-		-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	
HK3	Kaw Liu Village	75	65	65	69	71	70	73	74	74	73	73	75	75	74	74	74	75	75	75	75	70	75
HK5	Ta Kwu Ling Village	75	61	61	65	66	65	73	73	73	73	73	74	74	73	73	73	70	70	70	70	65	74

Annex B6-c: III) Summary of Predicted Cumulative Noise Levels during Daytime Period (Mitigated)

Construction Noise Impact Assessment (Mitigated)

Annex B7-a

Construction Airborne Noise Impact Assessment (Mitigated)

NSR: HK3 Kaw Liu Village

				Corr. for	Corr. for												-								
		SWL	Distance	distance	façade	2012	2		2013				2014				2015	5			2016				2017
No.	Activity Description	dB(A) ^[2]	m	dB(A) ^{[1][2]}	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DESIGN	ATED PROJECT																								
Regulation	n of Shenzhen River Stave IV																								
I	Site Prenaration																								
1	Site Clearance	101	36	-39	3						65														
2	Haul Road	106	36	-39	3						70														
IV	Works Area III	100		0,	C .																				
11	River Excavation (Sediment)	110	210	-54	3											58	58								
12	Haul Road	106	210	-54	3											55	55	55	55	55	55	55	55	55	
13	Excavation and River Training	108	210	-54	3											56	56	56	56	56	56	56	56	56	
14	Landscaping	108	210	-54	3																56	56	56	56	
v	Works Area IV																								
15	River Excavation (Sediment)	105	36	-39	3											69	69								
16	Haul Road	106	36	-39	3											70	70	70	70	70	70	70	70	70	
17	Excavation and River Training	106	36	-39	3											70	70	70	70	70	70	70	70	70	
18	Landscaping	105	36	-39	3																69	69	69	69	
VI	Others																								
19	Reprovisioning Works	105	36	-39	3																				69
VII	Advanced Works																								
20	Backfilling	101	36	-39	3	65	65	65	65																
21	Road Construction	104	36	-39	3			67	67	67															
22	Fence Installation	102	36	-39	3				66	66	66	66	66												
23	Drainage / Sinage Works	107	36	-39	3							71	71	71	71										
CONCLU																									
CONCU	<u>RRENT PROJECTS</u>																								
Construct	ion of a Secondary Boundary Fence and New Sections of Primary Boundary Fence	_																							
and Boun	dary Patrol Road (AEIAR-136/2009)																								
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	718	-65	3	42	42	42	42																
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	2340	-75	3	32	32	32	32	32	32	32													
Agreemen	t No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and	-																							
Associated	<u>l Works</u>																								
26	BCP Site Formation																								
27	Lin Ma Hang Road next to BCP																								
28	Chuk Yuen Village Access Road																								
29	Lin Ma Hang Road Improvement Work																								
30	Viaduct Section from BCP to Wo Keng Shan																								
	Prodicted	Noise Lo	vols during	L Davtime Por	I	65	65	69	71	70	72	72	72	71	71	75	75	73	73	73	75	75	75	75	69
	Duradiated Commute time	Noice I -	wole during	Daytime P-	riad dP(A)	65	65	60	71	70	72	72	72	71	71	75	75	73	73	73	75	75	75	75	70
		TNOISE LE	evels auring		1 ID(A)	65	65	69	/1	70	13	73	73	12	12	15	75	74	74	/4	13	13	13	13	70
	Predicted Nois	e Level d	ue to Advan	ced Works o	only, dB(A)	65	65	69	71	70	66	72	72	71	71										

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

[2] [3] The figures are rounded-up to a whole number.

The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

- HK1 refers to TYH in the LT/HYW EIA Report

- HK2 refers to Chuen Yuen, which should be moved up on the commencement of LT/HYW.

- HK3 refers to KL1 in the LT/HYW EIA Report

- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

i) Maximum predicted noise levels for Activites 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).

ii) Maximum predicted noise levels for Activites 28 to 30 were extracted from Appendix 4.4g2 of the LT/HYW EIA Report for KL1 & TKL1 (ie HK3 & HK5 respectively).

Annex B7-b

Construction Airborne Noise Impact Assessment (Mitigated)

NSR: HK5 Ta Kwu Ling Village

				Corr. for	Corr. for				0																
		SWL	Distance	distance	façade	2012			2013				2014				2015	5			2016			1	2017
No.	Activity Description	dB(A) ^[2]	m	dB(A) ^{[1][2]}	dB(A)	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DESIGN	ATED PROIECT																								
Regulatio	n of Shenzhen River Stage IV																								
T	Site Preparation																								
[1	Site Clearance	101	62	-44	3						60														
2	Haul Road	106	62	-44	3						65														
IV	Works Area III		-		-																				
11	River Excavation (Sediment)	110	360	-59	3											54	54								
12	Haul Road	106	360	-59	3											50	50	50	50	50	50	50	50	50	
13	Excavation and River Training	108	360	-59	3											52	52	52	52	52	52	52	52	52	
14	Landscaping	108	360	-59	3																52	52	52	52	
V	Works Area IV																								
15	River Excavation (Sediment)	105	62	-44	3											64	64								
16	Haul Road	106	62	-44	3											65	65	65	65	65	65	65	65	65	
17	Excavation and River Training	106	62	-44	3											65	65	65	65	65	65	65	65	65	
18	Landscaping	105	62	-44	3																64	64	64	64	
VI	Others																								
19	Reprovisioning Works	105	62	-44	3																				65
VII	Advanced Works																								
20	Backfilling	101	62	-44	3	60	60	60	60																
21	Road Construction	104	62	-44	3			63	63	63															
22	Fence Installation	102	62	-44	3				61	61	61	61	61												
23	Drainage / Sinage Works	107	62	-44	3							67	67	67	67										
CONCUI	I RENT DROIECTS																								
concar	<u>KLEWI I ROJECIO</u>																								
<u>Construct</u> and Boun	<u>ion of a Secondary Boundary Fence and New Sections of Primary Boundary Fence</u> lary Patrol Road (AEIAR-136/2009)	-																							
24	Construction Activities (Section 3 - Ng Tung River to Ping Yuen River)	104	449	-61	3	46	46	46	46																
25	Construction Activities (Section 3 - Pak Fu Shan to Lin Ma Hang Road)	104	2758	-77	3	30	30	30	30	30	30	30													
Agreemen	t No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and	_																							
Associated	1 Works ^[3]																								
26	BCP Site Formation																								
27	Lin Ma Hang Road next to BCP																								
28	Chuk Yuen Village Access Road													47											
29	Lin Ma Hang Road Improvement Work										71	71	71	71	71	71	71	71	71	71					
30	Viaduct Section from BCP to Wo Keng Shan															55	55	55			55	55	55	55	55
	Predicted	Noise Le	evels during	Daytime Per	iod, dB(A)	60	60	65	66	65	68	68	68	67	67	70	70	68	68	68	70	70	70	70	65
	Predicted Cumulative	Noise Le	evels during	Daytime Per	iod, dB(A)	61	61	65	66	65	73	73	73	72	72	74	74	73	73	73	70	70	70	70	65
	Predicted Nois	e Level d	ue to Advan	ced Works o	nly, dB(A)	60	60	65	66	65	61	68	68	67	67										

Notes:

[1] Distance Correction for PMEs = $10*\log(2*PI*r^2)$

[2] [3] The figures are rounded-up to a whole number.

The maximum predicted noise levels due to Activities 26 to 30 were extracted from the Environmental Impact Assessment Report for Liantang/Heung Yuen Wai Boundary Crossing Point and Associatd Works (LT/HYW EIA Report) dated August 2010.

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- HK2 refers to Chuen Yuen, which should be moved up on the commencement of LT/HYW.

- HK3 refers to KL1 in the LT/HYW EIA Report

- HK4 does not have relevant NSRs in the LT/HYW EIA Report

- HK5 refers to TKL1 in the LT/HYW EIA Report

i) Maximum predicted noise levels for Activites 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).

ii) Maximum predicted noise levels for Activites 28 to 30 were extracted from Appendix 4.4g2 of the LT/HYW EIA Report for KL1 & TKL1 (ie HK3 & HK5 respectively).