

Annex B4

Construction Noise Impact Assessment (Unmitigated)

Annex B4-a

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK1 Tsung Yuen Ha

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	2012		2013				2014				2015				2016				2017	
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<u>DESIGNATED PROJECT</u>																									
<u>Regulation of Shenzhen River Stage IV</u>																									
I	Site Preparation																								
	1 Site Clearance	111	175	-53	3																				
	2 Haul Road	116	175	-53	3																				
II	Works Area I																								
	3 River Excavation (Sediment)	119	175	-53	3																				
	4 Haul Road	116	175	-53	3																				
	5 Excavation and River Training	115	175	-53	3																				
	6 Landscaping	117	175	-53	3																				
III	Works Area II																								
	7 River Excavation (Sediment)	119	265	-56	3																				
	8 Haul Road	116	265	-56	3																				
	9 Excavation and River Training	115	265	-56	3																				
	10 Landscaping	117	265	-56	3																				
IV	Works Area III																								
	11 River Excavation (Sediment)	119	720	-65	3																				
	12 Haul Road	116	720	-65	3																				
	13 Excavation and River Training	115	720	-65	3																				
	14 Landscaping	117	720	-65	3																				
V	Works Area IV																								
	15 River Excavation (Sediment)	119	1300	-70	3																				
	16 Haul Road	116	1300	-70	3																				
	17 Excavation and River Training	115	1300	-70	3																				
	18 Landscaping	117	1300	-70	3																				
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																				
<u>CONCURRENT PROJECTS</u>																									
<u>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)</u>																									
	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													
<u>Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works^[3]</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																								
Predicted Noise Levels during Daytime Period, dB(A)						62	62	65	66	64	68	74	74	71	71	73	73	73	73	57	60	60	60	65	
Predicted Cumulative Noise Levels during Daytime Period, dB(A)						62	62	65	66	64	72	75	75	73	73	74	74	74	74	70	68	68	68	69	
Predicted Noise Level due to Advanced Works only, dB(A)						62	62	65	66	64	57	66	66	65	65										

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.
- [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 Associated 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 Activities 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).
- ii) Maximum predicted noise levels for Activities 28 to 30 were extracted from Appendix 4.4g2 of the LT/HYW EIA Report for KL1 & TKL1 (ie HK3 & HK5 respectively).

Annex B4-b

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK2 Chuk Yuen Village

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	2012		2013			2014			2015			2016			2017				
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q1		
<u>DESIGNATED PROJECT</u>																								
<u>Regulation of Shenzhen River Stage IV</u>																								
I	Site Preparation																							
	1 Site Clearance	111	120	-50	3																			
	2 Haul Road	116	120	-50	3																			
II	Works Area I																							
	3 River Excavation (Sediment)	119	520	-62	3																			
	4 Haul Road	116	520	-62	3																			
	5 Excavation and River Training	115	520	-62	3																			
	6 Landscaping	117	520	-62	3																			
III	Works Area II																							
	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	117	120	-50	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	Others																							
	19 Reprovisioning Works	114	120	-50	3																			
VII	Advanced Works																							
	20 Backfilling	112	120	-50	3	66	66	66	66															
	21 Road Construction	112	120	-50	3			66	66	66														
	22 Fence Installation	107	120	-50	3				60	60														
	23 Drainage / Sinage Works	115	120	-50	3																			
<u>CONCURRENT PROJECTS</u>																								
<u>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)</u>																								
	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														
<u>Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works^[3]</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																							
Predicted Noise Levels during Daytime Period, dB(A)						66	66	69	69	67														
Predicted Cumulative Noise Levels during Daytime Period, dB(A)						66	66	69	69	67														
Predicted Noise Level due to Advanced Works only, dB(A)						66	66	69	69	67														

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.
- [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 Associated 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 Activities 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).
 - ii) Maximum predicted noise levels for Activities 28 to 30 were extracted from Appendix 4.4g2 of the LT/HYW EIA Report for KL1 & TKL1 (ie HK3 & HK5 respectively).

Annex B4-c

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK3 Kaw Liu Village

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	2012		2013				2014				2015				2016				2017		
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	
<u>DESIGNATED PROJECT</u>																										
<u>Regulation of Shenzhen River Stage IV</u>																										
I	Site Preparation																									
1	Site Clearance	111	36	-39	3																					
2	Haul Road	116	36	-39	3																					
II	Works Area I																									
3	River Excavation (Sediment)	119	1500	-72	3																					
4	Haul Road	116	1500	-72	3																					
5	Excavation and River Training	115	1500	-72	3																					
6	Landscaping	117	1500	-72	3																					
III	Works Area II																									
7	River Excavation (Sediment)	119	800	-66	3																					
8	Haul Road	116	800	-66	3																					
9	Excavation and River Training	115	800	-66	3																					
10	Landscaping	117	800	-66	3																					
IV	Works Area III																									
11	River Excavation (Sediment)	119	210	-54	3																					
12	Haul Road	116	210	-54	3																					
13	Excavation and River Training	115	210	-54	3																					
14	Landscaping	117	210	-54	3																					
V	Works Area IV																									
15	River Excavation (Sediment)	119	36	-39	3																					
16	Haul Road	116	36	-39	3																					
17	Excavation and River Training	115	36	-39	3																					
18	Landscaping	117	36	-39	3																					
VI	Others																									
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																					
22	Fence Installation	107	36	-39	3																					
23	Drainage / Sinage Works	115	36	-39	3																					
<u>CONCURRENT PROJECTS</u>																										
<u>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)</u>																										
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														
<u>Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works^[3]</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																									
Predicted Noise Levels during Daytime Period, dB(A)						76	76	79	80	77	81	79	79	79	79	85	85	82	82	82	85	85	85	85	78	
Predicted Cumulative Noise Levels during Daytime Period, dB(A)						76	76	79	80	77	81	80	80	79	79	85	85	82	82	82	85	85	85	85	78	
Predicted Noise Level due to Advanced Works only, dB(A)						76	76	79	80	77	71	79	79	79	79											

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.
- [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 Associated 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 Activities 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).
- ii) Maximum predicted noise levels for Activities 28 to 30 were extracted from Appendix 4.4g2 of the LT/HYW EIA Report for KL1 & TKL1 (ie HK3 & HK5 respectively).

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK4 Kan Tau Wai

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	2012		2013				2014				2015				2016				2017	
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DESIGNATED PROJECT																									
<i>Regulation of Shenzhen River Stage IV</i>																									
I	Site Preparation																								
1	Site Clearance	111	240	-56	3																				
2	Haul Road	116	240	-56	3																				
II	Works Area I																								
3	River Excavation (Sediment)	119	1700	-73	3																				
4	Haul Road	116	1700	-73	3																				
5	Excavation and River Training	115	1700	-73	3																				
6	Landscaping	117	1700	-73	3																				
III	Works Area II																								
7	River Excavation (Sediment)	119	1080	-69	3																				
8	Haul Road	116	1080	-69	3																				
9	Excavation and River Training	115	1080	-69	3																				
10	Landscaping	117	1080	-69	3																				
IV	Works Area III																								
11	River Excavation (Sediment)	119	480	-62	3																				
12	Haul Road	116	480	-62	3																				
13	Excavation and River Training	115	480	-62	3																				
14	Landscaping	117	480	-62	3																				
V	Works Area IV																								
15	River Excavation (Sediment)	119	240	-56	3																				
16	Haul Road	116	240	-56	3																				
17	Excavation and River Training	115	240	-56	3																				
18	Landscaping	117	240	-56	3																				
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																				
CONCURRENT PROJECTS																									
<i>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)</i>																									
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													
<i>Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works^[3]</i>																									
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 Levels during Daytime Period, dB(A)						60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	62	
Predicted Cumulative Noise Levels during Daytime Period, dB(A)						60	60	63	63	61	65	64	64	63	63	70	70	67	67	67	69	69	69	62	
Predicted Noise Level due to Advanced Works only, dB(A)						60	60	63	63	61	54	63	63	62	62										

Notes:[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$

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

[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 Associated 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 Activities 26 & 27 were extracted from Appendix 4.4b2 of the LT/HYW EIA Report for TYH (ie HK1).

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

Construction Airborne Noise Impact Assessment (Unmitigated)

NSR: HK5 Ta Kwu Ling Village

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	2012		2013				2014				2015				2016				2017	
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DESIGNATED PROJECT																									
<i>Regulation of Shenzhen River Stage IV</i>																									
I	Site Preparation																								
	1 Site Clearance	111	62	-44	3																				
	2 Haul Road	116	62	-44	3																				
II	Works Area I																								
	3 River Excavation (Sediment)	119	1650	-72	3																				
	4 Haul Road	116	1650	-72	3																				
	5 Excavation and River Training	115	1650	-72	3																				
	6 Landscaping	117	1650	-72	3																				
III	Works Area II																								
	7 River Excavation (Sediment)	119	950	-68	3																				
	8 Haul Road	116	950	-68	3																				
	9 Excavation and River Training	115	950	-68	3																				
	10 Landscaping	117	950	-68	3																				
IV	Works Area III																								
	11 River Excavation (Sediment)	119	360	-59	3																				
	12 Haul Road	116	360	-59	3																				
	13 Excavation and River Training	115	360	-59	3																				
	14 Landscaping	117	360	-59	3																				
V	Works Area IV																								
	15 River Excavation (Sediment)	119	62	-44	3																				
	16 Haul Road	116	62	-44	3																				
	17 Excavation and River Training	115	62	-44	3																				
	18 Landscaping	117	62	-44	3																				
VI	Others																								
	19 Reprovisioning Works	114	62	-44	3																74				
VII	Advanced Works																								
	20 Backfilling	112	62	-44	3	71	71	71	71																
	21 Road Construction	112	62	-44	3																				
	22 Fence Installation	107	62	-44	3																				
	23 Drainage / Sinage Works	115	62	-44	3																				
CONCURRENT PROJECTS																									
<i>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road (AEIAR-136/2009)</i>																									
	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													
<i>Agreement No. CE 45/2008 (CE) Liantang/Heung Yuen Wai Boundary Crossing Point and Associated Works^[3]</i>																									
	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 Levels during Daytime Period, dB(A)						71	71	74	75	73	77	75	75	74	74	81	81	78	78	78	80	80			
Predicted Cumulative Noise Levels during Daytime Period, dB(A)						71	71	74	75	73	78	76	76	76	76	81	81	79	78	78	80	80	80		
Predicted Noise Level due to Advanced Works only, dB(A)						71	71	74	75	73	66	75	75	74	74										

Notes:[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$

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

[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 Associated 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.

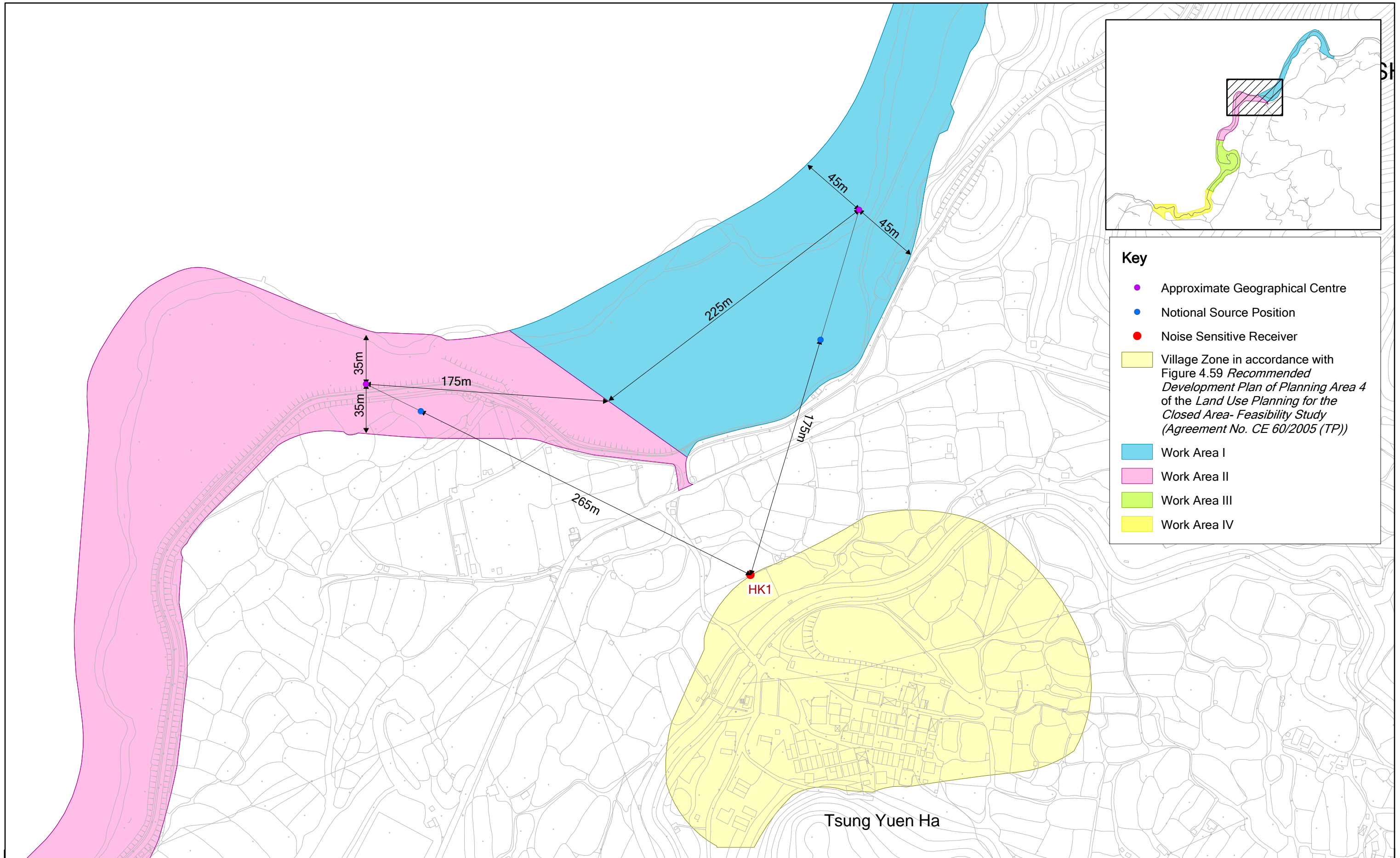
- HK3 refers to KL1 in the LT/HYW EIA Report

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

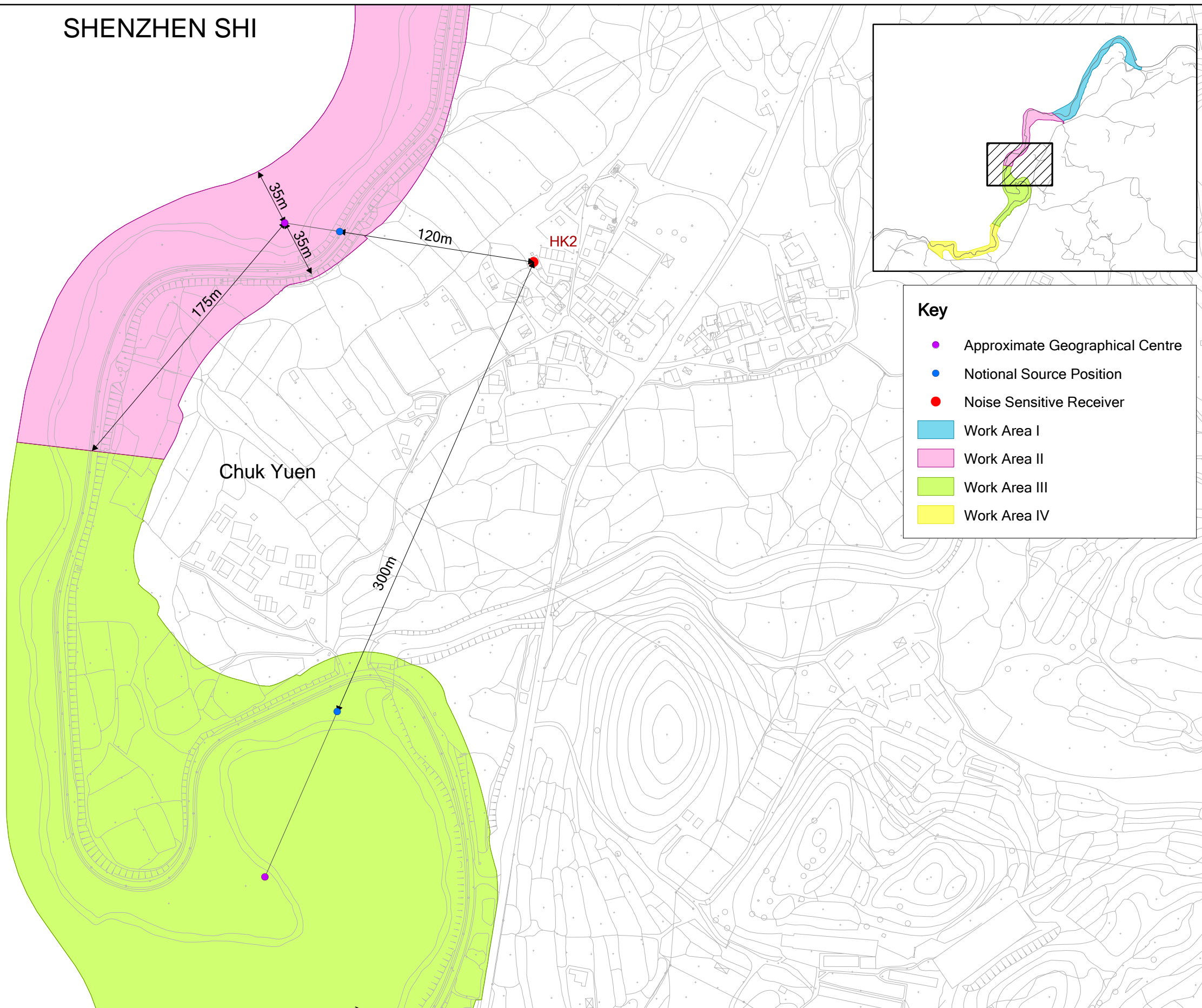
- HK5 refers to TKL1 in the LT/HYW EIA Report

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

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

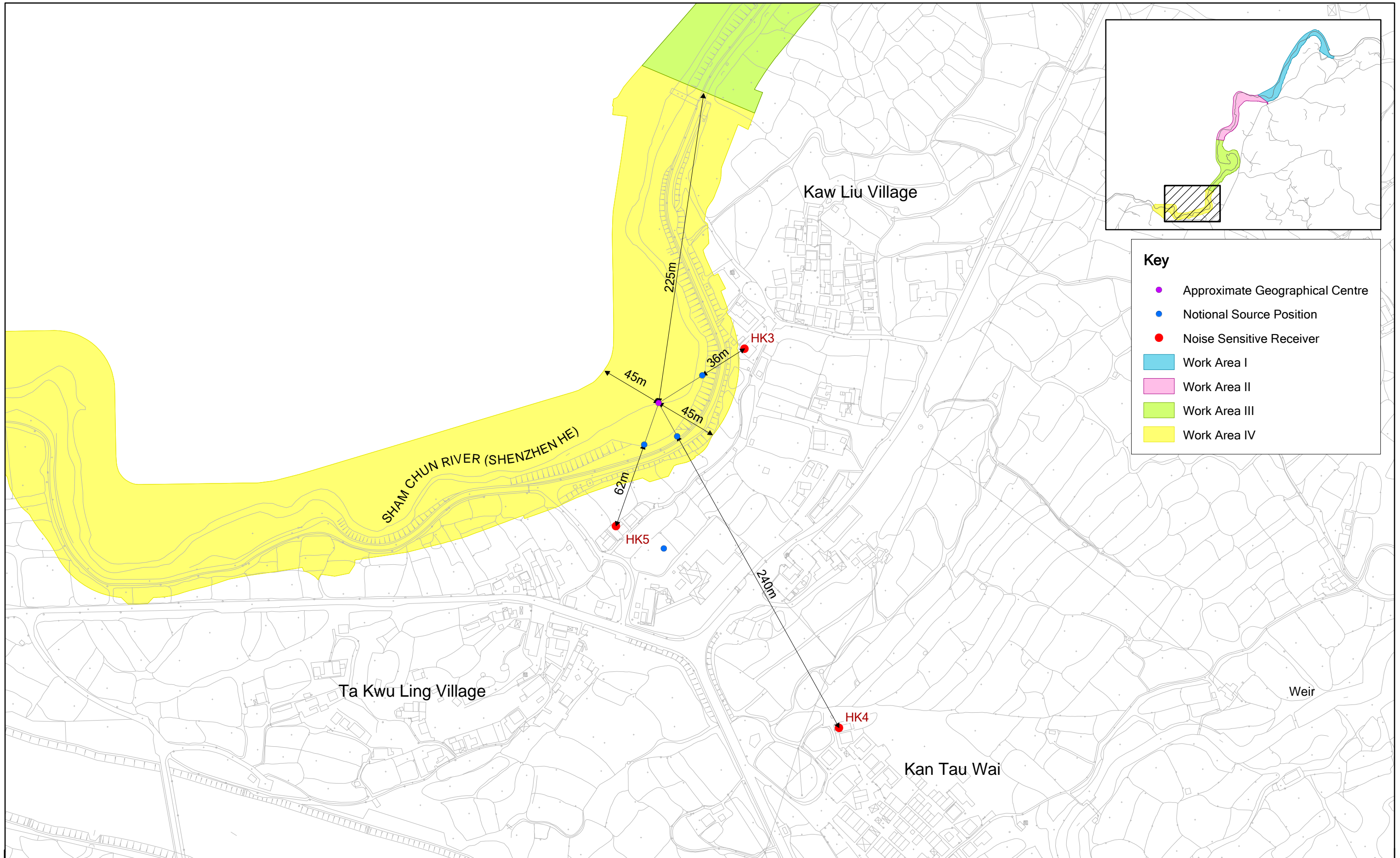


SHENZHEN SHI



Key

- Approximate Geographical Centre
- Notional Source Position
- Noise Sensitive Receiver
- Work Area I
- Work Area II
- Work Area III
- Work Area IV



Key

- Approximate Geographical Centre
- Notional Source Position
- Noise Sensitive Receiver
- Work Area I
- Work Area II
- Work Area III
- Work Area IV