

Appendix 5.5 Mitigated Construction Noise Impact

Noise Sensitive Receiver						2015												2016											
N1 - Village House No. 308, Sha Ling	SWL	Dist.(m) ¹	DC ²	FC ³	CNL, dB(A)	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
OWTF Construction Site 1																													
Activity 1 - Demolition and Site Clearance	109	75	46	3	66	66	66																						
Activity 2 - Construction Piling	113	75	46	3	70			70	70	70	70	70	70	70	70*														
Activity 3 - Site Formation	107	75	46	3	64			64	64	64	64	64	64	64	64*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	75	46	3	69										69*	69	69	69	69	69	69	69	69	69	69	69			
Activity 5 - Road Widening	109	75	46	3	66				66	66	66	66	66	66	66	66	66												
Activity 6 - Sewerage System Construction	110	75	46	3	67					67	67	67	67	67	67	67	67	67	67	67	67								
Activity 7 - Landscaping	106	75	46	3	63													63	63	63	63	63							
Activity 8 - Process Plants and E&M Plants Installation	107	75	46	3	64												64	64	64	64	64	64	64	64	63	63			
Activity 9 - Utilies Installation	108	75	46	3	65											65	65	65	65	65	65	65	65						
OWTF Construction Site 2																													
Activity 1 - Demolition and Site Clearance	109	196	54	3	58	58	58																						
Activity 2 - Construction Piling	113	196	54	3	62			62	62	62	62	62	62	62	62*														
Activity 3 - Site Formation	107	196	54	3	56			56	56	56	56	56	56	56	56*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	196	54	3	61										61*	61	61	61	61	61	61	61	61	61	61	61			
Activity 5 - Road Widening	109	196	54	3	58				58	58	58	58	58	58	58	58	58												
Activity 6 - Sewerage System Construction	110	196	54	3	59					59	59	59	59	59	59	59	59	59	59	59	59								
Activity 7 - Landscaping	106	196	54	3	55													55	55	55	55	55	55	55	55	55			
Activity 8 - Process Plants and E&M Plants Installation	107	196	54	3	56												56	56	56	56	56	56	56	56					
Activity 9 - Utilies Installation	108	196	54	3	57											57	57	57	57	57	57	57	57						
Construction of Rising Main and Gas Pipeline																													
Activity 1 - Rising Main Installation	104	220	55	3	52						52	52	52	52	52	52	52	52	52	52									
Activity 2 - Gas Pipeline Installation	104	220	55	3	52						52	52	52	52	52	52	52	52	52	52									
Activity 3 - Minor Modification of Access Road ^	106	220	55	3	54	54	54	54	54	54											54	54	54	54	54	54			
Cumulative Noise Impact, dB(A)						67	67	73	73	74	74	74	74	74	74	74	74	73	74	74	74	74	73	72	71	71			

Remarks:

1. Slant distance is adopted for the construction noise assessment
2. Distance correction in dB(A)
3. Facade correction in dB(A)

* According to the construction programme, activity 2&3 will be finished on 18-12-2015 and activity 4 will be started on 21-12-2015 so that they will not working simultaneously.

Therefore, noise level of activity 4 which is less than that of activity 2&3 is not take into account at the cumulative noise impact.

^ Access road modification work will not coincide with installation work. Worst case sceanrio of construction programme has been shown in calculation for conservative approach.

Bold figures denote exceedance of relevant noise criteria

Noise Sensitive Receiver						2015												2016											
N2 - Village House No. 319, Sha Ling	SWL	Dist.(m) ¹	DC ²	FC ³	CNL, dB(A)	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
OWTF Construction Site 1																													
Activity 1 - Demolition and Site Clearance	109	92	47	3	65	65	65																						
Activity 2 - Construction Piling	113	92	47	3	69			69	69	69	69	69	69	69	69*														
Activity 3 - Site Formation	107	92	47	3	63			63	63	63	63	63	63	63	63*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	92	47	3	68										68*	68	68	68	68	68	68	68	68	68	68	68			
Activity 5 - Road Widening	109	92	47	3	65				65	65	65	65	65	65	65	65													
Activity 6 - Sewerage System Construction	110	92	47	3	66					66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66			
Activity 7 - Landscaping	106	92	47	3	62													62	62	62	62	62	62	62	62	62			
Activity 8 - Process Plants and E&M Plants Installation	107	92	47	3	63												63	63	63	63	63	63	63	63	63	63			
Activity 9 - Utilies Installation	108	92	47	3	64											64	64	64	64	64	64	64	64	64	64	64			
OWTF Construction Site 2																													
Activity 1 - Demolition and Site Clearance	109	207	54	3	58	58	58																						
Activity 2 - Construction Piling	113	207	54	3	62			62	62	62	62	62	62	62	62*														
Activity 3 - Site Formation	107	207	54	3	56			56	56	56	56	56	56	56	56*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	207	54	3	61										61*	61	61	61	61	61	61	61	61	61	61	61			
Activity 5 - Road Widening	109	207	54	3	58				58	58	58	58	58	58	58	58													
Activity 6 - Sewerage System Construction	110	207	54	3	59					59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59			
Activity 7 - Landscaping	106	207	54	3	55													55	55	55	55	55	55	55	55	55			
Activity 8 - Process Plants and E&M Plants Installation	107	207	54	3	56												56	56	56	56	56	56	56	56	56	56			
Activity 9 - Utilies Installation	108	207	54	3	57											57	57	57	57	57	57	57	57	57	57	57			
Construction of Rising Main and Gas Pipeline																													
Activity 1 - Rising Main Installation	104	244	56	3	51						51	51	51	51	51	51	51	51	51	51	51								
Activity 2 - Gas Pipeline Installation	104	244	56	3	51						51	51	51	51	51	51	51	51	51	51	51								
Activity 3 - Minor Modification of Access Road ^	106	244	56	3	53	53	53	53	53	53												53	53	53	53	53			
Cumulative Noise Impact, dB(A)						66	66	72	72	73	73	73	73	73	73	73	73	73	73	73	73	73	72	71	70	70			
																										63			

Remarks:

1. Slant distance is adopted for the construction noise assessment
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3. Facade correction in dB(A)

* According to the construction programme, activity 2&3 will be finished on 18-12-2015 and activity 4 will be started on 21-12-2015 so that they will not working simultaneously.

Therefore, noise level of activity 4 which is less than that of activity 2&3 is not take into account at the cumulative noise impact.

^ Access road modification work will not coincide with installation work. Worst case sceanrio of construction programme has been shown in calculation for conservative approach.

Bold figures denote exceedance of relevant noise criteria

Noise Sensitive Receiver						2015												2016											
N3 - Village House No. 265, Sha Ling	SWL	Dist.(m) ¹	DC ²	FC ³	CNL, dB(A)	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
OWTF Construction Site 1																													
Activity 1 - Demolition and Site Clearance	109	126	50	3	62	62	62	62																					
Activity 2 - Construction Piling	113	126	50	3	66			66	66	66	66	66	66	66	66*														
Activity 3 - Site Formation	107	126	50	3	60			60	60	60	60	60	60	60	60*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	126	50	3	65										65*	65	65	65	65	65	65	65	65	65	65	65			
Activity 5 - Road Widening	109	126	50	3	62				62	62	62	62	62	62	62	62													
Activity 6 - Sewerage System Construction	110	126	50	3	63					63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63			
Activity 7 - Landscaping	106	126	50	3	59													59	59	59	59	59	59	59	59	59			
Activity 8 - Process Plants and E&M Plants Installation	107	126	50	3	60												60	60	60	60	60	60	60	60	60	60			
Activity 9 - Utilies Installation	108	126	50	3	61											61	61	61	61	61	61	61	61	61	61	61			
OWTF Construction Site 2																													
Activity 1 - Demolition and Site Clearance	109	76	46	3	66	66	66	66																					
Activity 2 - Construction Piling	113	76	46	3	70			70	70	70	70	70	70	70	70*														
Activity 3 - Site Formation	107	76	46	3	64			64	64	64	64	64	64	64	64*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	76	46	3	69										69*	69	69	69	69	69	69	69	69	69	69	69			
Activity 5 - Road Widening	109	76	46	3	66				66	66	66	66	66	66	66	66													
Activity 6 - Sewerage System Construction	110	76	46	3	67					67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67			
Activity 7 - Landscaping	106	76	46	3	63													63	63	63	63	63	63	63	63	63			
Activity 8 - Process Plants and E&M Plants Installation	107	76	46	3	64												64	64	64	64	64	64	64	64	64	64			
Activity 9 - Utilies Installation	108	76	46	3	65											65	65	65	65	65	65	65	65	65	65	65			
Construction of Rising Main and Gas Pipeline																													
Activity 1 - Rising Main Installation	104	55	43	3	64						64	64	64	64	64	64	64	64	64	64	64								
Activity 2 - Gas Pipeline Installation	104	55	43	3	64						64	64	64	64	64	64	64	64	64	64	64								
Activity 3 - Minor Modification of Access Road ^	106	55	43	3	66	66	66	66	66	66												66	66	66	66	66			
Cumulative Noise Impact, dB(A)						70	70	74	74	75	75	75	75	75	75	75	75	75	75	75	75	75	74	73	73	73	68		

Remarks:

1. Slant distance is adopted for the construction noise assessment
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Bold figures denote exceedance of relevant noise criteria

Noise Sensitive Receiver						2015												2016											
N4 - Village House in Sha Ling	SWL	Dist.(m) ¹	DC ²	FC ³	CNL, dB(A)	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12		
OWTF Construction Site 1																													
Activity 1 - Demolition and Site Clearance	109	221	55	3	57	57	57																						
Activity 2 - Construction Piling	113	221	55	3	61			61	61	61	61	61	61	61	61*														
Activity 3 - Site Formation	107	221	55	3	55			55	55	55	55	55	55	55	55*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	221	55	3	60										60*	60	60	60	60	60	60	60	60	60	60	60			
Activity 5 - Road Widening	109	221	55	3	57				57	57	57	57	57	57	57	57													
Activity 6 - Sewerage System Construction	110	221	55	3	58					58	58	58	58	58	58	58	58	58	58	58	58								
Activity 7 - Landscaping	106	221	55	3	54													54	54	54	54	54	54	54	54	54			
Activity 8 - Process Plants and E&M Plants Installation	107	221	55	3	55												55	55	55	55	55	55	55	55					
Activity 9 - Utilies Installation	108	221	55	3	56											56	56	56	56	56	56	56	56						
OWTF Construction Site 2																													
Activity 1 - Demolition and Site Clearance	109	77	46	3	66	66	66	66																					
Activity 2 - Construction Piling	113	77	46	3	70			70	70	70	70	70	70	70	70*														
Activity 3 - Site Formation	107	77	46	3	64			64	64	64	64	64	64	64	64*														
Activity 4 - Buildings (Pre-treatment, Office, Wastewater Treatment, Composting)	112	77	46	3	69										69*	69	69	69	69	69	69	69	69	69	69	69			
Activity 5 - Road Widening	109	77	46	3	66				66	66	66	66	66	66	66	66													
Activity 6 - Sewerage System Construction	110	77	46	3	67					67	67	67	67	67	67	67	67	67	67	67	67								
Activity 7 - Landscaping	106	77	46	3	63													63	63	63	63	63	63	63	63	63			
Activity 8 - Process Plants and E&M Plants Installation	107	77	46	3	64												64	64	64	64	64	64	64	64	64	64			
Activity 9 - Utilies Installation	108	77	46	3	65											65	65	65	65	65	65	65	65						
Construction of Rising Main and Gas Pipeline																													
Activity 1 - Rising Main Installation	104	138	51	3	56						56	56	56	56	56	56	56	56	56	56	56								
Activity 2 - Gas Pipeline Installation	104	138	51	3	56						56	56	56	56	56	56	56	56	56	56	56								
Activity 3 - Minor Modification of Access Road ^	106	138	51	3	58	58	58	58	58	58												58	58	58	58	58			
Cumulative Noise Impact, dB(A)						67	67	73	73	74	74	74	74	74	74	74	74	73	74	74	74	74	73	72	71	71			

Remarks:

1. Slant distance is adopted for the construction noise assessment
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