Appendix 4.7 – Cumulative Construction Noise Calculation (Unmitigated Scenario)

Appendix 4.7 Cumulative Construction Noise Calculation - Unmitigated Scenario

NSR: CUL1 - The Cullinan I

Scenario: Unmitigated

Item	Construction Activity	Work Site No. [1]	SWL	Dist (m)	Predicted Noise Level [2]	2022 May	2022 Jun	2022 Jul	2022 Aug	2022 Sep	2022 Oct	2022 Nov	2022 Dec	2023 Jan	2023 Feb	2023 Mar	2023 Apr	2023 May	2023 Jun	2023 Jul	2023 Aug	2023 Sep	2023 Oct	2023 Nov	2023 Dec	2024 Jan	2024 Feb	2024 Mar	2024 Apr	2024 May	2024 Jun	2024 Jul	2024 Aug	2024 Sep	2024 Oct	2024 Nov	2024 Dec	2025 Jan	2025 Feb	2025 Mar	2025 Apr	2025 May	2025 Jun	2025 Jul	2025 Aug	2025 Sep
	Phase 1 Construction Works																																													
	Construction of New Exit Road within WKCD Area																																													
A1	Site Clearance / Set-up / Plant Mobilization	101	118	333	62	62	62																																							
A2	UU Protection & Diversion Works	101	113	333	57		57	57																																						
A3.1	Pilling Works	101	117	333	62			62	62	62	62	62	62	62	62	62	62	62	62																											
A3.2	Pile Cap & Pier / Abutment Construction	101	117	333	61					61	61	61	61	61	61	61	61	61	61	61	61	61																								
A3.3	Falsework & Deck construction	101	117	333	62																	62	62	62	62	62	62	62	62	62	62	62	62													
A3.4	Drainage & Pavement Construction	101	117	333	62																							62	62	62	62	62	62	62	62											
A3.5	Construction of At-grade Loop Road	101	113	333	57																													57	57	57	57									
	Phase 2 Construction Works																																													
	Construction of New Exit Road within WKCD Area																																													
B1	Site Clearance / Set-up / Plant Mobilization	102	118	109	72													72	72	72																										
B2	UU Protection & Diversion Works	102	113	109	67															67	67																									
B3.1	Pilling Works	102	117	109	71																71	71	71	71	71	71	71	71	71	71	71														
B3.2	Pile Cap & Pier / Abutment Construction	102	117	109	71																							71	71	71	71	71	71	71												
B3.3	Falsework & Deck construction	102	117	109	71																												71	71	71	71	71	71	71	71	71					
B3.4	Drainage & Pavement Construction	102	117	109	71																																71	71	71	71	71	71	71	71	71	71
	Construction of WHC Flyover within WHC Area																																													
C1	Site Clearance / Set-up	103	118	300	63										63	63	63	63	63	63																										
C2	UU Diversion Works	103	113	300	58																58	58																								
C3.1	Pier Construction	103	117	300	62																		62	62	62	62	62	62	62	62																
C3.2	Deck Construction	103	117	300	63																										63	63	63	63	63	63	63	63	63	63						
C3.3	Drainage & Pavement Construction	103	117	300	62																																62	62	62	62	62	62	62			
	Concurrent Project																																													
	Zone 2BC Integrated Basement																																													
	Bored Piling for Year 2022	Z2BC	112	428	54	54	54	54	54	54	54	54	54																																	
	Bored Piling for Year 2023	Z2BC	108	428	50									50	50	50	50	50	50	50	50	50	50	50	50																					
	Superstructure for 2024	Z2BC	115	428	57																					57	57	57	57	57	57	57	57	57	57	57	57									
	Superstructure for 2025	Z2BC	106	428	48																																	48	48	48	48	48	48	48	48	48
	Zone 3B Integrated Basement																																													
	Superstructure for Year 2022-2023	Z3B	109	409	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52																					
	Zone 4 Exhibition Centre																																													
	Bored Piling for Year 2022	Z4	119	504	60	60	60	60	60	60	60	60	60																																	
	Superstructure for Year 2023-2025	Z4	117	504	58									58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
	Artist Square Bridge																																													
	Footbridge Construction	ASB	119	313	64	64	64	64	64	64	64	64	64																																	
	Overall Noise Level, Leq (30min), dB(A)					67	68	68	67	68	68	68	68	66	68	68	68	73	73	74	73	72	72	72	72	72	72	75	75	75	75	75	75	75	73	72	75	75	75	75	74	72	72	72	71	71

Remarks:

[1] Work areas with length to width ratio exceeding 5 : 1 are divided into subareas.

[2] Includes a +3 dB(A) Façade Correction.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

Appendix 4.7 Cumulative Construction Noise Calculation - Unmitigated Scenario

NSR: CUL2 - The Cullinan II

Scenario: Unmitigated

Item	Construction Activity	Work Site No. [1]	SWL	Dist (m)	Predicted Noise Level [2]	2022 May	2022 Jun	2022 Jul	2022 Aug	2022 Sep	2022 Oct	2022 Nov	2022 Dec	2023 Jan	2023 Feb	2023 Mar	2023 Apr	2023 May	2023 Jun	2023 Jul	2023 Aug	2023 Sep	2023 Oct	2023 Nov	2023 Dec
	Phase 1 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
A1	Site Clearance / Set-up / Plant Mobilization	101	118	320	63	63	63																		
A2	UU Protection & Diversion Works	101	113	320	58		58	58																	
A3.1	Pilling Works	101	117	320	62			62	62	62	62	62	62	62	62	62	62	62	62						
A3.2	Pile Cap & Pier / Abutment Construction	101	117	320	62					62	62	62	62	62	62	62	62	62	62	62	62	62			
A3.3	Falsework & Deck construction	101	117	320	62																	62	62	62	62
A3.4	Drainage & Pavement Construction	101	117	320	62																				
A3.5	Construction of At-grade Loop Road	101	113	320	58																				
	Phase 2 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
B1	Site Clearance / Set-up / Plant Mobilization	102	118	216	66													66	66	66					
B2	UU Protection & Diversion Works	102	113	216	61															61	61				
B3.1	Pilling Works	102	117	216	66																66	66	66	66	66
B3.2	Pile Cap & Pier / Abutment Construction	102	117	216	65																				
B3.3	Falsework & Deck construction	102	117	216	65																				
B3.4	Drainage & Pavement Construction	102	117	216	65																				
	Construction of WHC Flyover within WHC Area																								
C1	Site Clearance / Set-up	103	118	276	64										64	64	64	64	64	64					
C2	UU Diversion Works	103	113	276	59																59	59			
C3.1	Pier Construction	103	117	276	63																		63	63	63
C3.2	Deck Construction	103	117	276	63																				
C3.3	Drainage & Pavement Construction	103	117	276	63																				
	Concurrent Project																								
	Zone 2BC Integrated Basement																								
	Bored Piling for Year 2022	Z2BC	112	405	55	55	55	55	55	55	55	55	55												
	Bored Piling for Year 2023	Z2BC	108	405	51									51	51	51	51	51	51	51	51	51	51	51	51
	Superstructure for 2024	Z2BC	115	405	58																				
	Superstructure for 2025	Z2BC	106	405	49																				
	Zone 3B Integrated Basement																								
	Superstructure for Year 2022-2023	Z3B	109	368	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
	Zone 4 Exhibition Centre																								
	Bored Piling for Year 2022	Z4	119	451	61	61	61	61	61	61	61	61	61												
	Superstructure for Year 2023-2025	Z4	117	451	59									59	59	59	59	59	59	59	59	59	59	59	59
	Artist Square Bridge																								
	Footbridge Construction	ASB	119	283	65	65	65	65	65	65	65	65	65												
	Overall Noise Level, Leq (30min), dB(A)					68	69	69	68	69	69	69	69	66	68	68	68	70	70	70	69	70	69	69	69

Item	Construction Activity	2024 Jan	2024 Feb	2024 Mar	2024 Apr	2024 May	2024 Jun	2024 Jul	2024 Aug	2024 Sep	2024 Oct	2024 Nov	2024 Dec	2025 Jan	2025 Feb	2025 Mar	2025 Apr	2025 May	2025 Jun	2025 Jul	2025 Aug	2025 Sep
	Phase 1 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
A1	Site Clearance / Set-up / Plant Mobilization																					
A2	UU Protection & Diversion Works																					
A3.1	Pilling Works																					
A3.2	Pile Cap & Pier / Abutment Construction																					
A3.3	Falsework & Deck construction	62	62	62	62	62	62	62	62													
A3.4	Drainage & Pavement Construction			62	62	62	62	62	62	62	62											
A3.5	Construction of At-grade Loop Road									58	58	58	58									
	Phase 2 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
B1	Site Clearance / Set-up / Plant Mobilization																					
B2	UU Protection & Diversion Works																					
B3.1	Pilling Works	66	66	66	66	66	66	66														
B3.2	Pile Cap & Pier / Abutment Construction			65	65	65	65	65	65	65												
B3.3	Falsework & Deck construction								65	65	65	65	65	65	65	65	65					
B3.4	Drainage & Pavement Construction												65	65	65	65	65	65	65	65	65	65
	Construction of WHC Flyover within WHC Area																					
C1	Site Clearance / Set-up																					
C2	UU Diversion Works																					
C3.1	Pier Construction	63	63	63	63	63																
C3.2	Deck Construction						63	63	63	63	63	63	63	63	63	63						
C3.3	Drainage & Pavement Construction												63	63	63	63	63	63	63	63		
	Concurrent Project																					
	Zone 2BC Integrated Basement																					
	Bored Piling for Year 2022																					
	Bored Piling for Year 2023																					
	Superstructure for 2024	58	58	58	58	58	58	58	58	58	58	58	58									
	Superstructure for 2025													49	49	49	49	49	49	49	49	49
	Zone 3B Integrated Basement																					
	Superstructure for Year 2022-2023																					
	Zone 4 Exhibition Centre																					
	Bored Piling for Year 2022																					
	Superstructure for Year 2023-2025	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
	Artist Square Bridge																					
	Footbridge Construction																					
	Overall Noise Level, Leq (30min), dB(A)	70	70	71	71	71	71	71	71	71	69	69	71	70	70	70	70	68	68	68	66	66

Remarks:

[1] Work areas with length to width ratio exceeding 5 : 1 are divided into subareas.

[2] Includes a +3 dB(A) Façade Correction.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

Appendix 4.7 Cumulative Construction Noise Calculation - Unmitigated Scenario

NSR: HT - The Harbourside – Tower 3

Scenario: Unmitigated

Item	Construction Activity	Work Site No. [1]	SWL	Dist (m)	Predicted Noise Level [2]	2022 May	2022 Jun	2022 Jul	2022 Aug	2022 Sep	2022 Oct	2022 Nov	2022 Dec	2023 Jan	2023 Feb	2023 Mar	2023 Apr	2023 May	2023 Jun	2023 Jul	2023 Aug	2023 Sep	2023 Oct	2023 Nov	2023 Dec
	Phase 1 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
A1	Site Clearance / Set-up / Plant Mobilization	101	118	347	62	62	62																		
A2	UU Protection & Diversion Works	101	113	347	57		57	57																	
A3.1	Pilling Works	101	117	347	61			61	61	61	61	61	61	61	61	61	61	61	61						
A3.2	Pile Cap & Pier / Abutment Construction	101	117	347	61					61	61	61	61	61	61	61	61	61	61	61	61	61			
A3.3	Falsework & Deck construction	101	117	347	61																	61	61	61	61
A3.4	Drainage & Pavement Construction	101	117	347	61																				
A3.5	Construction of At-grade Loop Road	101	113	347	57																				
	Phase 2 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
B1	Site Clearance / Set-up / Plant Mobilization	102	118	306	63													63	63	63					
B2	UU Protection & Diversion Works	102	113	306	58															58	58				
B3.1	Pilling Works	102	117	306	62																62	62	62	62	62
B3.2	Pile Cap & Pier / Abutment Construction	102	117	306	62																				
B3.3	Falsework & Deck construction	102	117	306	62																				
B3.4	Drainage & Pavement Construction	102	117	306	62																				
	Construction of WHC Flyover within WHC Area																								
C1	Site Clearance / Set-up	103	118	230	66										66	66	66	66	66	66					
C2	UU Diversion Works	103	113	230	61																61	61			
C3.1	Pier Construction	103	117	230	64																		64	64	64
C3.2	Deck Construction	103	117	230	65																				
C3.3	Drainage & Pavement Construction	103	117	230	65																				
	Concurrent Project																								
	Zone 2BC Integrated Basement																								
	Bored Piling for Year 2022	Z2BC	112	156	63	63	63	63	63	63	63	63	63												
	Bored Piling for Year 2023	Z2BC	108	156	59									59	59	59	59	59	59	59	59	59	59	59	59
	Superstructure for 2024	Z2BC	115	156	66																				
	Superstructure for 2025	Z2BC	106	156	57																				
	Zone 3B Integrated Basement																								
	Superstructure for Year 2022-2023	Z3B	109	149	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	Zone 4 Exhibition Centre																								
	Bored Piling for Year 2022	Z4	119	467	61	61	61	61	61	61	61	61	61												
	Superstructure for Year 2023-2025	Z4	117	467	59									59	59	59	59	59	59	59	59	59	59	59	59
	Artist Square Bridge																								
	Footbridge Construction	ASB	119	117	73	73	73	73	73	73	73	73	73												
	Overall Noise Level, Leq (30min), dB(A)					74	74	74	74	74	74	74	74	67	70	70	70	71	71	70	69	69	69	69	69

Item	Construction Activity	2024 Jan	2024 Feb	2024 Mar	2024 Apr	2024 May	2024 Jun	2024 Jul	2024 Aug	2024 Sep	2024 Oct	2024 Nov	2024 Dec	2025 Jan	2025 Feb	2025 Mar	2025 Apr	2025 May	2025 Jun	2025 Jul	2025 Aug	2025 Sep
	Phase 1 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
A1	Site Clearance / Set-up / Plant Mobilization																					
A2	UU Protection & Diversion Works																					
A3.1	Pilling Works																					
A3.2	Pile Cap & Pier / Abutment Construction																					
A3.3	Falsework & Deck construction	61	61	61	61	61	61	61	61													
A3.4	Drainage & Pavement Construction			61	61	61	61	61	61	61	61											
A3.5	Construction of At-grade Loop Road									57	57	57	57									
	Phase 2 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
B1	Site Clearance / Set-up / Plant Mobilization																					
B2	UU Protection & Diversion Works																					
B3.1	Pilling Works	62	62	62	62	62	62	62														
B3.2	Pile Cap & Pier / Abutment Construction			62	62	62	62	62	62	62												
B3.3	Falsework & Deck construction								62	62	62	62	62	62	62	62	62					
B3.4	Drainage & Pavement Construction												62	62	62	62	62	62	62	62	62	62
	Construction of WHC Flyover within WHC Area																					
C1	Site Clearance / Set-up																					
C2	UU Diversion Works																					
C3.1	Pier Construction	64	64	64	64	64																
C3.2	Deck Construction						65	65	65	65	65	65	65	65	65	65						
C3.3	Drainage & Pavement Construction												65	65	65	65	65	65	65	65		
	Concurrent Project																					
	Zone 2BC Integrated Basement																					
	Bored Piling for Year 2022																					
	Bored Piling for Year 2023																					
	Superstructure for 2024	66	66	66	66	66	66	66	66	66	66	66	66									
	Superstructure for 2025													57	57	57	57	57	57	57	57	57
	Zone 3B Integrated Basement																					
	Superstructure for Year 2022-2023																					
	Zone 4 Exhibition Centre																					
	Bored Piling for Year 2022																					
	Superstructure for Year 2023-2025	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
	Artist Square Bridge																					
	Footbridge Construction																					
	Overall Noise Level, Leq (30min), dB(A)	70	70	71	71	71	71	71	71	71	71	70	72	70	70	70	69	68	68	68	65	65

Remarks:

[1] Work areas with length to width ratio exceeding 5 : 1 are divided into subareas.

[2] Includes a +3 dB(A) Façade Correction.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

Appendix 4.7 Cumulative Construction Noise Calculation - Unmitigated Scenario

NSR: SRT - Sorrento – Tower 1

Scenario: Unmitigated

Item	Construction Activity	Work Site No. [1]	SWL	Dist (m)	Predicted Noise Level [2]	2022 May	2022 Jun	2022 Jul	2022 Aug	2022 Sep	2022 Oct	2022 Nov	2022 Dec	2023 Jan	2023 Feb	2023 Mar	2023 Apr	2023 May	2023 Jun	2023 Jul	2023 Aug	2023 Sep	2023 Oct	2023 Nov	2023 Dec
	Phase 1 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
A1	Site Clearance / Set-up / Plant Mobilization	101	118	449	60	60	60																		
A2	UU Protection & Diversion Works	101	113	449	55		55	55																	
A3.1	Pilling Works	101	117	449	59			59	59	59	59	59	59	59	59	59	59	59	59						
A3.2	Pile Cap & Pier / Abutment Construction	101	117	449	59					59	59	59	59	59	59	59	59	59	59	59	59	59			
A3.3	Falsework & Deck construction	101	117	449	59																	59	59	59	59
A3.4	Drainage & Pavement Construction	101	117	449	59																				
A3.5	Construction of At-grade Loop Road	101	113	449	55																				
	Phase 2 Construction Works																								
	Construction of New Exit Road within WKCD Area																								
B1	Site Clearance / Set-up / Plant Mobilization	102	118	163	69													69	69	69					
B2	UU Protection & Diversion Works	102	113	163	64															64	64				
B3.1	Pilling Works	102	117	163	68																68	68	68	68	68
B3.2	Pile Cap & Pier / Abutment Construction	102	117	163	67																				
B3.3	Falsework & Deck construction	102	117	163	68																				
B3.4	Drainage & Pavement Construction	102	117	163	68																				
	Construction of WHC Flyover within WHC Area																								
C1	Site Clearance / Set-up	103	118	443	60										60	60	60	60	60	60					
C2	UU Diversion Works	103	113	443	55																55	55			
C3.1	Pier Construction	103	117	443	59																		59	59	59
C3.2	Deck Construction	103	117	443	59																				
C3.3	Drainage & Pavement Construction	103	117	443	59																				
	Concurrent Project																								
	Zone 2BC Integrated Basement																								
	Bored Piling for Year 2022	Z2BC	112	540	52	52	52	52	52	52	52	52	52												
	Bored Piling for Year 2023	Z2BC	108	540	48									48	48	48	48	48	48	48	48	48	48	48	48
	Superstructure for 2024	Z2BC	115	540	55																				
	Superstructure for 2025	Z2BC	106	540	46																				
	Zone 3B Integrated Basement																								
	Superstructure for Year 2022-2023	Z3B	109	548	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	Zone 4 Exhibition Centre																								
	Bored Piling for Year 2022	Z4	119	645	58	58	58	58	58	58	58	58	58												
	Superstructure for Year 2023-2025	Z4	117	645	56									56	56	56	56	56	56	56	56	56	56	56	56
	Artist Square Bridge																								
	Footbridge Construction	ASB	119	459	61	61	61	61	61	61	61	61	61												
	Overall Noise Level, Leq (30min), dB(A)					65	65	65	65	66	66	66	66	63	65	65	65	70	70	71	70	69	69	69	69

Item	Construction Activity	2024 Jan	2024 Feb	2024 Mar	2024 Apr	2024 May	2024 Jun	2024 Jul	2024 Aug	2024 Sep	2024 Oct	2024 Nov	2024 Dec	2025 Jan	2025 Feb	2025 Mar	2025 Apr	2025 May	2025 Jun	2025 Jul	2025 Aug	2025 Sep
	Phase 1 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
A1	Site Clearance / Set-up / Plant Mobilization																					
A2	UU Protection & Diversion Works																					
A3.1	Pilling Works																					
A3.2	Pile Cap & Pier / Abutment Construction																					
A3.3	Falsework & Deck construction	59	59	59	59	59	59	59														
A3.4	Drainage & Pavement Construction			59	59	59	59	59	59	59	59											
A3.5	Construction of At-grade Loop Road									55	55	55	55									
	Phase 2 Construction Works																					
	Construction of New Exit Road within WKCD Area																					
B1	Site Clearance / Set-up / Plant Mobilization																					
B2	UU Protection & Diversion Works																					
B3.1	Pilling Works	68	68	68	68	68	68	68														
B3.2	Pile Cap & Pier / Abutment Construction			67	67	67	67	67	67	67												
B3.3	Falsework & Deck construction								68	68	68	68	68	68	68	68	68					
B3.4	Drainage & Pavement Construction												68	68	68	68	68	68	68	68	68	68
	Construction of WHC Flyover within WHC Area																					
C1	Site Clearance / Set-up																					
C2	UU Diversion Works																					
C3.1	Pier Construction	59	59	59	59	59																
C3.2	Deck Construction						59	59	59	59	59	59	59	59	59	59						
C3.3	Drainage & Pavement Construction												59	59	59	59	59	59	59	59		
	Concurrent Project																					
	Zone 2BC Integrated Basement																					
	Bored Piling for Year 2022																					
	Bored Piling for Year 2023																					
	Superstructure for 2024	55	55	55	55	55	55	55	55	55	55	55	55									
	Superstructure for 2025													46	46	46	46	46	46	46	46	46
	Zone 3B Integrated Basement																					
	Superstructure for Year 2022-2023																					
	Zone 4 Exhibition Centre																					
	Bored Piling for Year 2022																					
	Superstructure for Year 2023-2025	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	Artist Square Bridge																					
	Footbridge Construction																					
	Overall Noise Level, Leq (30min), dB(A)	69	69	72	72	72	72	72	72	71	70	69	72	72	72	72	71	69	69	69	68	68

Remarks:

[1] Work areas with length to width ratio exceeding 5 : 1 are divided into subareas.

[2] Includes a +3 dB(A) Façade Correction.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.