

Project 227724-50 Anderson Road Quarry
Title Fixed Noise Source Maximum Allowable Sound Power Level Limits for Proposed Pumping Station for Saltwater and Freshwater & Planned Rock Cavern +200mPD
Date 24-Mar-14

Receiver	ASR	Noise Levels / Criteria, dB(A)			Contributing Noise Sources	Permissible SWL, dB(A)	Propagation		Corrections, dB(A)					SPL, dB(A)	Exceedance
		Background Noise Level	ANL-5 for Pumping Station & Cavern	Noise Criteria			Distance, m	Directivity, deg	Facade	Distance	Directivity	Tonality	Intermittency		
R2-1-R006															
Daytime & Evening time	B	56	60	56	Planned Rock Cavern +200mPD	93	80	0	3	-46	0	3	0	53	-
		56	60	56	Proposed Pumping Station	97	220	0	3	-55	0	3	0	48	-
				56	Total SPL, dB(A)									54	-
Night-time	B	49	50	49	Planned Rock Cavern +200mPD	86	80	0	3	-46	0	3	0	46	-
		49	50	49	Proposed Pumping Station	94	220	0	3	-55	0	3	0	45	-
				49	Total SPL, dB(A)									49	-
R2-2-R013															
Daytime & Evening time	B	56	60	56	Planned Rock Cavern +200mPD	93	195	0	3	-54	0	3	0	45	-
		56	60	56	Proposed Pumping Station	97	180	0	3	-53	0	3	0	50	-
				56	Total SPL, dB(A)									51	-
Night-time	B	49	50	49	Planned Rock Cavern +200mPD	86	195	0	3	-54	0	3	0	38	-
		49	50	49	Proposed Pumping Station	94	180	0	3	-53	0	3	0	47	-
				49	Total SPL, dB(A)									47	-
Site A&B - R203															
Daytime & Evening time	B	53	60	53	Proposed Pumping Station	97	130	0	3	-50	0	3	0	53	-
Night-time	B	50	50	50	Proposed Pumping Station	94	130	0	3	-50	0	3	0	50	-
Site A&B - School 01															
Daytime & Evening time	B	53	60	53	Proposed Pumping Station	97	125	0	3	-50	0	3	0	53	-

Project 227724-50 Anderson Road Quarry
Title Fixed Noise Source Maximum Allowable Sound Power Level Limits for Planned Rock Cavern +310mPD & +190mPD
Date 24-Mar-14

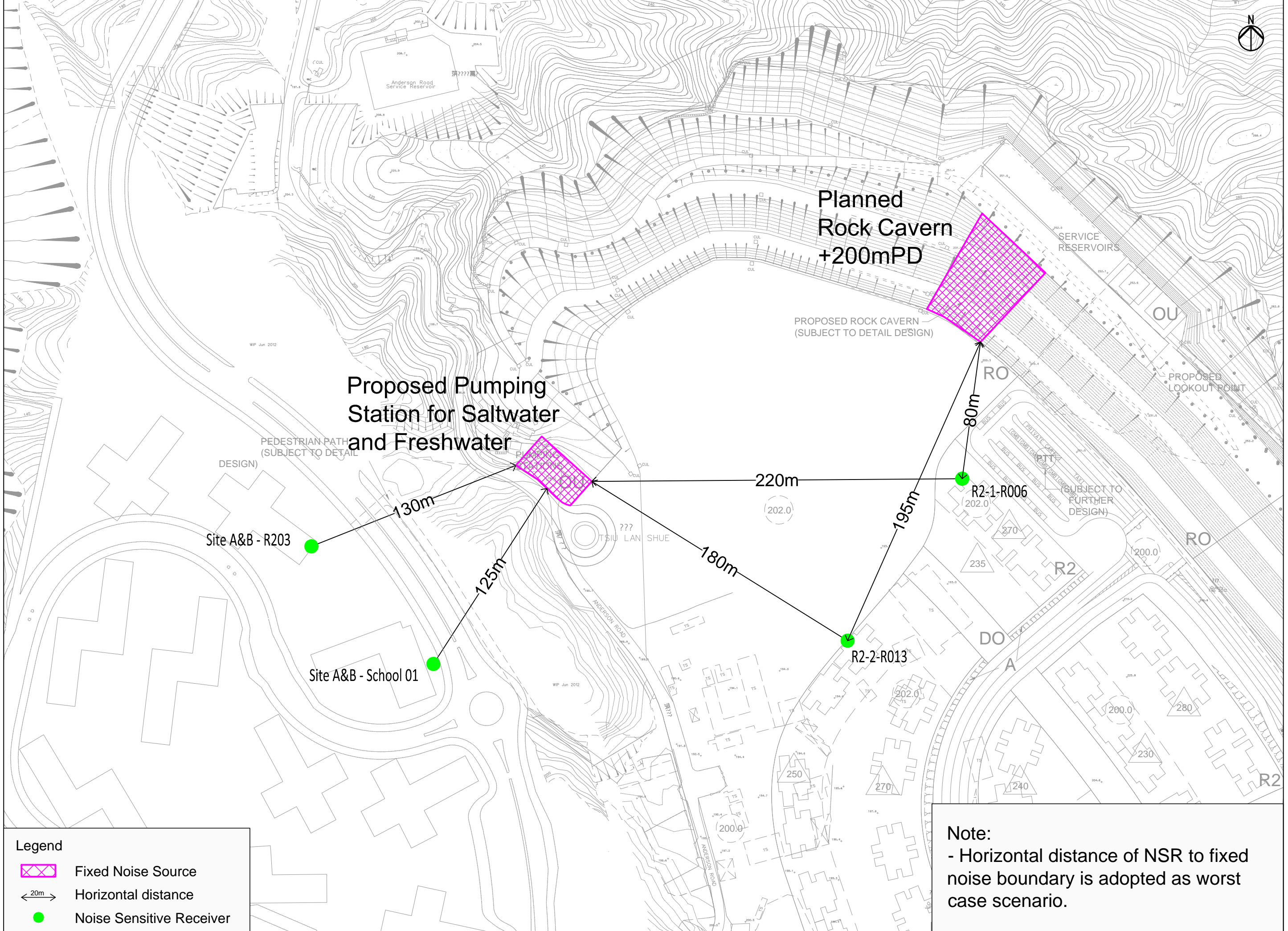
Receiver	ASR	Noise Levels / Criteria, dB(A)			Contributing Noise Sources	Permissible SWL, dB(A)	Propagation		Corrections, dB(A)					SPL, dB(A)	Exceedance
		Background Noise Level	ANL-5 for Cavern	Noise Criteria			Distance, m	Directivity, deg	Facade	Distance	Directivity	Tonality	Intermittency		
R2-6-R010															
Daytime & Evening time	B	56	60	56	Planned Rock Cavern +310mPD	99	155	0	3	-52	0	3	0	53	-
		56	60	56	Planned Rock Cavern +190mPD	88	75	0	3	-46	0	3	0	48	-
				56	Total SPL, dB(A)									54	-
Night-time	B	49	50	49	Planned Rock Cavern +310mPD	92	155	0	3	-52	0	3	0	46	-
		49	50	49	Planned Rock Cavern +190mPD	81	75	0	3	-46	0	3	0	41	-
				49	Total SPL, dB(A)									47	-
R2-7-R009															
Daytime & Evening time	B	56	60	56	Planned Rock Cavern +310mPD	99	155	0	3	-52	0	3	0	53	-
		56	60	56	Planned Rock Cavern +190mPD	88	45	0	3	-41	0	3	0	53	-
				56	Total SPL, dB(A)									56	-
Night-time	B	49	50	49	Planned Rock Cavern +310mPD	92	155	0	3	-52	0	3	0	46	-
		49	50	49	Planned Rock Cavern +190mPD	81	45	0	3	-41	0	3	0	46	-
				49	Total SPL, dB(A)									49	-

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Receiver	ASR	Noise Levels / Criteria, dB(A)			Contributing Noise Sources	Permissible SWL, dB(A)	Propagation		Corrections, dB(A)					SPL, dB(A)	Exceedance
		Background Noise Level	ANL-5 for Cavern	Noise Criteria			Distance, m	Directivity, deg	Facade	Distance	Directivity	Tonality	Intermittency		
R2-7-R010															
Daytime & Evening time	B	56	60	56	Planned Rock Cavern +310mPD	99	155	0	3	-52	0	3	0	53	-
		56	60	56	Planned Rock Cavern +190mPD	88	45	0	3	-41	0	3	0	53	-
				56	Total SPL, dB(A)									56	-
Night-time	B	49	50	49	Planned Rock Cavern +310mPD	92	155	0	3	-52	0	3	0	46	-
		49	50	49	Planned Rock Cavern +190mPD	81	45	0	3	-41	0	3	0	46	-
				49	Total SPL, dB(A)									49	-
R2-8-R016															
Daytime & Evening time	B	58	60	58	Planned Rock Cavern +310mPD	99	190	0	3	-54	0	3	0	51	-
		58	60	58	Planned Rock Cavern +190mPD	88	95	0	3	-48	0	3	0	46	-
				58	Total SPL, dB(A)									53	-
Night-time	B	54	50	50	Planned Rock Cavern +310mPD	92	190	0	3	-54	0	3	0	44	-
		54	50	50	Planned Rock Cavern +190mPD	81	95	0	3	-48	0	3	0	39	-
				50	Total SPL, dB(A)									46	-

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Receiver	ASR	Noise Levels / Criteria, dB(A)			Contributing Noise Sources	Permissible SWL, dB(A)	Propagation		Corrections, dB(A)					SPL, dB(A)	Exceedance
		Background Noise Level	ANL-5 for Cavern	Noise Criteria			Distance, m	Directivity, deg	Facade	Distance	Directivity	Tonality	Intermittency		
R2-8-R009															
Daytime & Evening time	B	58	60	58	Planned Rock Cavern +310mPD	99	160	0	3	-52	0	3	0	53	-
		58	60	58	Planned Rock Cavern +190mPD	88	100	0	3	-48	0	3	0	46	-
				58	Total SPL, dB(A)									54	-
Night-time	B	54	50	50	Planned Rock Cavern +310mPD	92	160	0	3	-52	0	3	0	46	-
		54	50	50	Planned Rock Cavern +190mPD	81	100	0	3	-48	0	3	0	39	-
				50	Total SPL, dB(A)									47	-
RS-1-R001															
Daytime & Evening time	B	58	60	58	Planned Rock Cavern +310mPD	99	135	0	3	-51	0	3	0	54	-
		58	60	58	Planned Rock Cavern +190mPD	88	220	0	3	-55	0	3	0	39	-
				58	Total SPL, dB(A)									55	-
Night-time	B	54	50	50	Planned Rock Cavern +310mPD	92	135	0	3	-51	0	3	0	47	-
		54	50	50	Planned Rock Cavern +190mPD	81	220	0	3	-55	0	3	0	32	-
				50	Total SPL, dB(A)									48	-



Proposed Pumping Station for Saltwater and Freshwater

Planned Rock Cavern +200mPD

PROPOSED ROCK CAVERN (SUBJECT TO DETAIL DESIGN)




Site A&B - R203

Site A&B - School 01

R2-1-R006

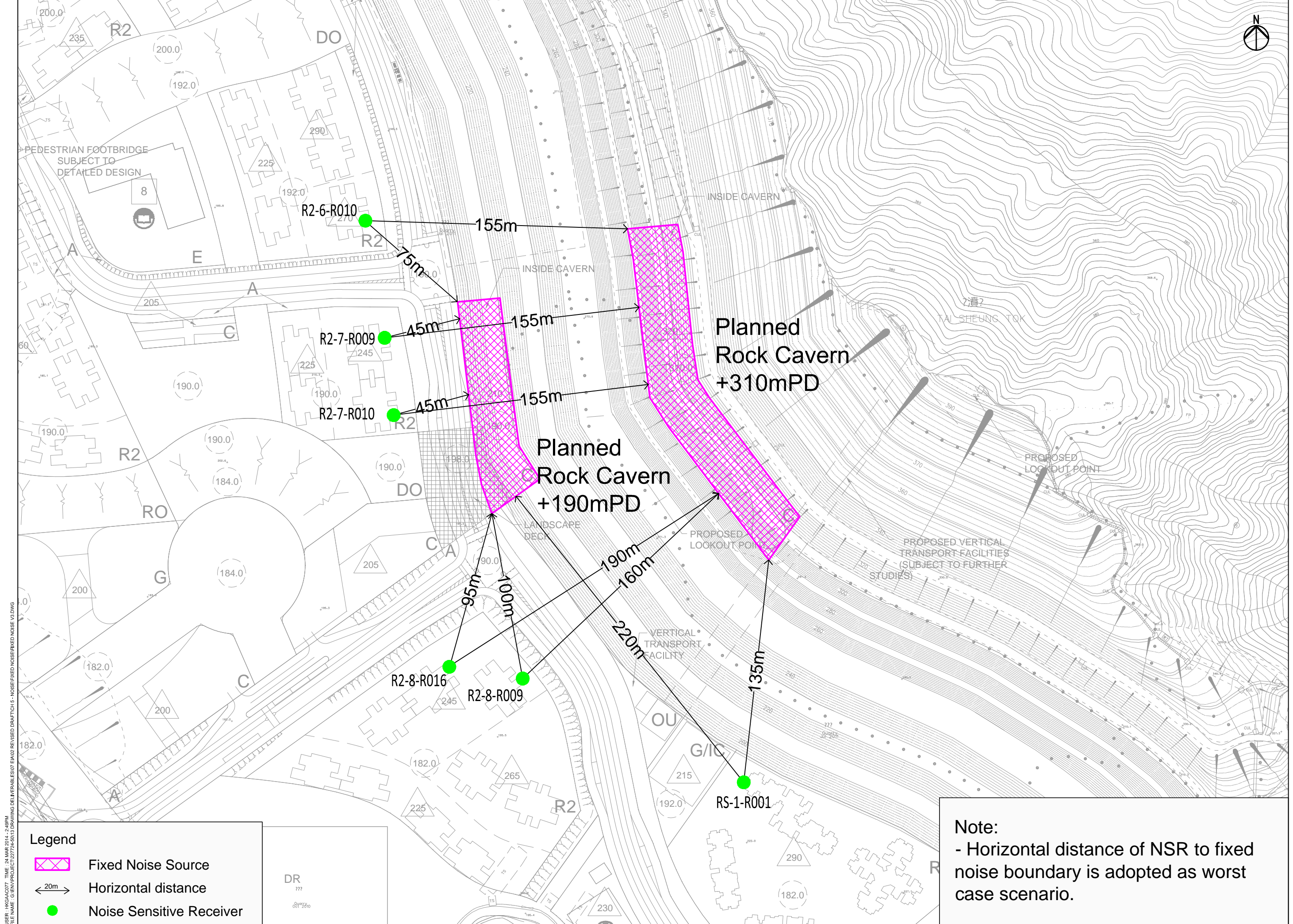
R2-2-R013

Legend

-  Fixed Noise Source
-  Horizontal distance
-  Noise Sensitive Receiver

Note:
 - Horizontal distance of NSR to fixed noise boundary is adopted as worst case scenario.

USER: HKGA0277 TIME: 24 MAR 2014 11:18AM
 FILE NAME: HKGA0277\PROJECT\DRAWING\DELIVERABLES\07 EIA\02 REVISED DRAFT\FIG 15 - NOISE PREDICTION NOISE V.03.D



USER: HKCAD2077 TIME: 24 MAR 2014 2:46PM
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Legend

- Fixed Noise Source
- 20m Horizontal distance
- Noise Sensitive Receiver

Note:
 - Horizontal distance of NSR to fixed noise boundary is adopted as worst case scenario.