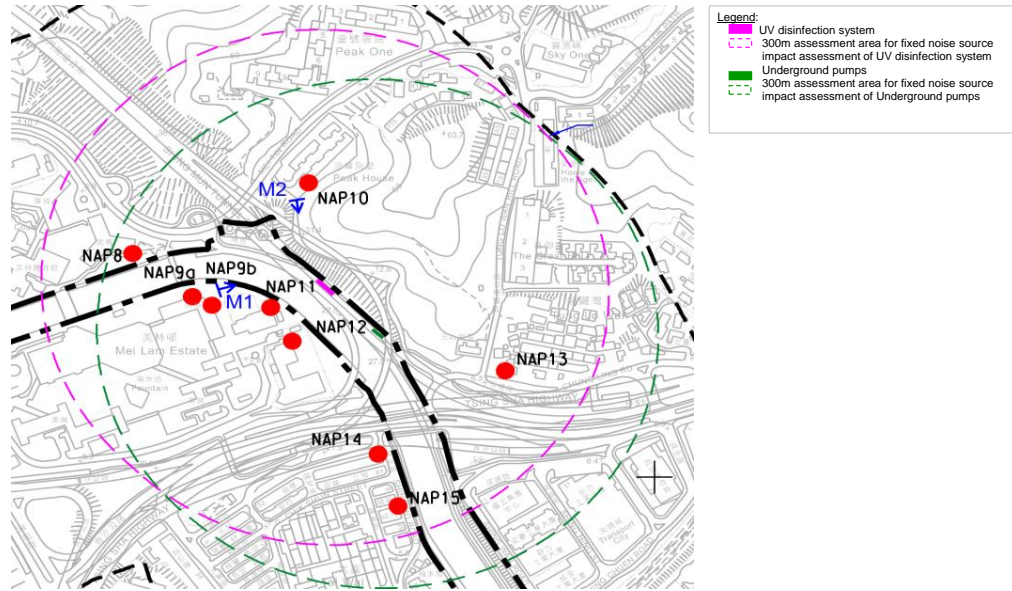


Appendix 4.5 Operational Phase Fixed Plant Noise Calculation (Unmitigated Scenario)



i. Predicted Fixed Plant Noise Levels from Proposed Underground Pumps

NAP ID	NSR Description	Fixed Plant Noise Criteria Adopted ^[1] , dB(A)		Fixed Noise Source	SWL / Item, dB(A) ^[2]	No. of Items ^[3]	Minimum Horizontal Distance, m	Distance Attenuation, dB(A) ^[4]	Correction, dB(A)			Predicted Noise Level, $L_{eq(30-min)}$, dB(A)	Exceedance, dB(A)	
		Daytime & Evening	Night-time						Screening Effect ^[5]	Façade	Sight Line		Daytime & Evening	Night-time
NAP8	Mei Wai House	55	N/A	Underground pump	85	1 duty + 1 standby	277	-57	-20	3	0	11	0	N/A
NAP9a	Mei Yeung House, Mei Lam Estate (North Façade)	55	N/A	Underground pump	85	1 duty + 1 standby	200	-54	-20	3	0	14	0	N/A
NAP9b	Mei Yeung House, Mei Lam Estate (East Façade)	55	N/A	Underground pump	85	1 duty + 1 standby	176	-53	-20	3	0	15	0	N/A
NAP10	Peak House	50	N/A	Underground pump	85	1 duty + 1 standby	116	-49	-20	3	0	19	0	N/A
NAP11	TWGHs Tsoi Wing Sing Primary School	55	N/A	Underground pump	85	1 duty + 1 standby	114	-49	-20	3	0	19	0	N/A
NAP12	Buddhist Wong Wan Tin College	55	N/A	Underground pump	85	1 duty + 1 standby	87	-47	-20	3	0	21	0	N/A
NAP13	Tung Lo Wan Village	50	N/A	Underground pump	85	1 duty + 1 standby	139	-51	-20	3	0	17	0	N/A
NAP14	Lin Fung House	55	N/A	Underground pump	85	1 duty + 1 standby	138	-51	-20	3	0	17	0	N/A
NAP15	Shing Ho Building	55	N/A	Underground pump	85	1 duty + 1 standby	201	-54	-20	3	0	14	0	N/A

Notes:

- [1] See **Appendix 4.1** for determination of fixed plant noise criteria. There would be no night-time operation (2300 to 0700) for the proposed fixed plants. Only the noise criteria for day-time / evening (0700 to 2300 hrs) are therefore
- [2] Manufacturer's catalogue, assuming maximum 85 dB(A) at the best efficiency point of pump with power output greater than 30 kW.
- [3] Standby items are not included in noise assessment.
- [4] Distance Attenuation in dB(A) = $20 \log D + 8$, where D is horizontal distance in metres.
- [5] Noise reduction of 20 dB(A) is assumed for the submersible pumps which will be housed in the underground wet well below the channel bed.

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5 运行

5.1 注意事项

在该装置投入使用之前，请检查以下各项：

- 所有建议的安全装置均已安装。
- 电缆和电缆引入线没有受损。
- 清除了所有细屑和废物。

注意:

切勿在排放管阻塞或者排出阀关闭时操作泵。

警告: 人身危险

自动重启的风险。



湿区距离



警告: 电机危险

触电或燃烧的危险。如果人员可能接触到与泵也会发生接触的液体（即抽运液体），则必须将一个额外的接地故障保护设备连接到接地连接器。



小心: 电机危险

触电或燃烧的危险。设备制造商尚未对本设备进行泳池适用性评估。如果用于泳池，应遵守特别的安全规定。

5.2 噪声级

在某些安装内及泵性能曲线上的某些运行点，声能级可能超过 70 dB(A)。如下图所示，泵的功率输出超过 30 kW，则在最佳的效率点，声能级可能介于 70 dB(A) 和最大 85 dB(A) 之间。

确保了解安装产品的环境的噪音等级要求。未能遵照此要求将造成听力损害或违反当地法律。

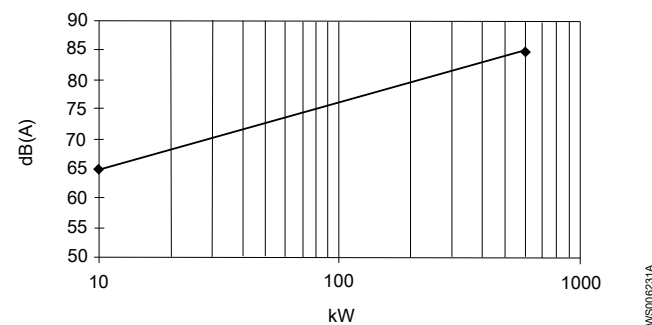
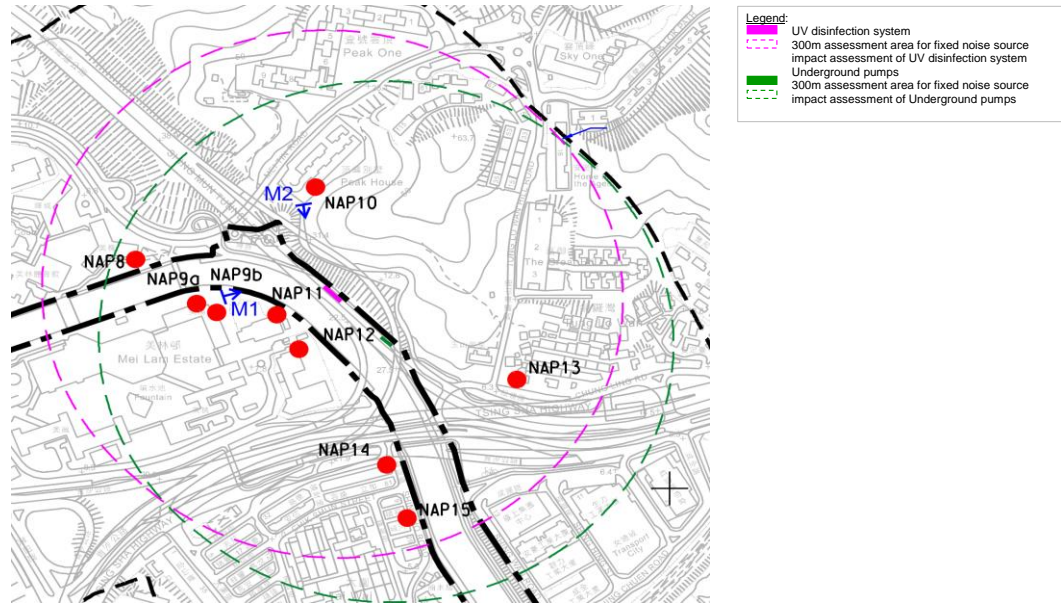


图 68: 声压

Appendix 4.5 Operational Phase Fixed Plant Noise Calculation (Unmitigated Scenario)



ii. Maximum Allowable Noise Levels from Proposed UV Disinfection System

NAP ID	NSR Description	Fixed Plant Noise Criteria Adopted ^{[1][2]} , dB(A)		Fixed Noise Source	Appointed Criteria ^[2] , dB(A)	Minimum Horizontal Distance, m	Correction, dB(A)		Maximum Allowable SWL, dB(A)
		Daytime & Evening	Night-time				Distance ^[3]	Façade	
NAP8	Mei Wai House	55	N/A	UV Disinfection System	55	202	-54	3	106
NAP9a	Mei Yeung House, Mei Lam Estate (North Façade)	55	N/A	UV Disinfection System	55	136	-51	3	102
NAP9b	Mei Yeung House, Mei Lam Estate (East Façade)	55	N/A	UV Disinfection System	55	117	-49	3	101
NAP10	Peak House	50	N/A	UV Disinfection System	50	116	-49	3	96
NAP11	TWGHs Tsoi Wing Sing Primary School	55	N/A	UV Disinfection System	55	58	-43	3	95
NAP12	Buddhist Wong Wan Tin College	55	N/A	UV Disinfection System	55	70	-45	3	96
NAP13	Tung Lo Wan Village	50	N/A	UV Disinfection System	50	209	-54	3	101
NAP14	Lin Fung House	55	N/A	UV Disinfection System	55	197	-54	3	105
NAP15	Shing Ho Building	55	N/A	UV Disinfection System	55	263	-56	3	108

Allowable SWL for UV Disinfection System =95

Notes:

- See **Appendix 4.1** for determination of fixed plant noise criteria. There would be no night-time operation (2300 to 0700) for the proposed fixed plants. Only the noise criteria for day-time / evening (0700 to 2300 hrs) are therefore
- Cumulative fixed plant noise impacts from proposed underground pumps have been review. The predicted fixed plant noise levels from Proposed Underground Pumps are at least over 30 dB(A) below fixed plant noise criteria at all NAPs that the fixed plant noise impacts from the proposed pumps are considered negligible. The appointed criteria hence follows the *Fixed Plant Noise Criteria Adopted*.
- Distance Attenuation in dB(A) = 20 log D + 8, where D is horizontal distance in metres.