

Appendix 6.10
Calculation of Fixed Plant Noise during Night Time Operation

| NSR No | Description | Plant item | Direction Facing | Distance , m | SWL, dB(A) | Correction for line of sight ^[1] , dB(A) | Distance Correction, dB(A) | Facade Correction, dB(A) | Total Noise Level, dB(A) | Corrected Noise Level (CNL), dB(A) | Night time Noise Criteria, dB(A), ANL-5 | |
|--------|--------------------------|---|------------------|--------------|------------|---|----------------------------|--------------------------|--------------------------|------------------------------------|---|----|
| HH4 | | | | | | | | | | | | |
| HH4 | Royal Peninsula, Block 2 | HUH VS1 - Exhaust | East | 198 | 92 | 0 | -54 | 3 | 41 | | | |
| | | HUH VS2 - Intake/ Exhaust ^[2] | North | 197 | 92 | 0 | -54 | 3 | 41 | | | |
| | | HUH VS3 - Intake/ Exhaust ^[2] | North | 183 | 92 | 0 | -53 | 3 | 42 | | | |
| | | HUH VS4 - Exhaust | North | 167 | 92 | 0 | -52 | 3 | 43 | | | |
| | | HUH VS5 - Intake | North | 160 | 92 | 0 | -52 | 3 | 43 | | | |
| | | HUH VS6 - Exhaust | North | 153 | 92 | 0 | -52 | 3 | 43 | | | |
| | | HUH VS7 - Exhaust | North | 146 | 92 | 0 | -51 | 3 | 44 | | | |
| | | HUH VS8 - Intake | South | 515 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS9 - Exhaust | South | 512 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS10 - Intake/ Exhaust ^[2] | South | 509 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS11 - Intake/ Exhaust ^[2] | South | 507 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS12 - Exhaust | South | 504 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS13 - Intake | South | 502 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS14 - Exhaust | South | 500 | 88 | -10 | -62 | 3 | 19 | | | |
| | | HUH VS15 - Exhaust | South | 499 | 88 | -10 | -62 | 3 | 19 | | | |
| | | Cooling Tower | North_1 | | 560 | 88 | -5 | -63 | 3 | | | 23 |
| | | | Top_1 | | 566 | 94 | 0 | -63 | 3 | | | 34 |
| | | | Top_2 | | 586 | 94 | 0 | -63 | 3 | | | 34 |
| | | | Top_3 | | 590 | 94 | 0 | -63 | 3 | | | 34 |
| | | | Top_4 | | 594 | 94 | 0 | -63 | 3 | | | 34 |
| | | | Top_5 | | 598 | 94 | 0 | -64 | 3 | | | 33 |
| | | | East_1 | | 577 | 88 | -10 | -63 | 3 | | | 18 |
| | | NOV VS1 | Top | | 565 | 90 | 0 | -63 | 3 | | | 30 |
| | NOV VS2 | Top | | 562 | 90 | 0 | -63 | 3 | 30 | | | |
| | | | | | | | | | | 51 | 55 | |

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|--------|--------------------------|---|------------------|--------------|------------|---|----------------------------|--------------------------|--------------------------|------------------------------------|---|----|
| HH7 | | | | | | | | | | | | |
| HH7 | The Metropolis Residence | HUH VS1 - Exhaust | East | 176 | 92 | -10 | -53 | 3 | 32 | | | |
| | | HUH VS2 - Intake/ Exhaust ^[2] | North | 169 | 92 | -10 | -53 | 3 | 32 | | | |
| | | HUH VS3 - Intake/ Exhaust ^[2] | North | 156 | 92 | -10 | -52 | 3 | 33 | | | |
| | | HUH VS4 - Exhaust | North | 142 | 92 | -10 | -51 | 3 | 34 | | | |
| | | HUH VS5 - Intake | North | 136 | 92 | -10 | -51 | 3 | 34 | | | |
| | | HUH VS6 - Exhaust | North | 130 | 92 | -10 | -50 | 3 | 35 | | | |
| | | HUH VS7 - Exhaust | North | 124 | 92 | -10 | -50 | 3 | 35 | | | |
| | | HUH VS8 - Intake | South | 341 | 88 | -10 | -59 | 3 | 22 | | | |
| | | HUH VS9 - Exhaust | South | 337 | 88 | -10 | -59 | 3 | 22 | | | |
| | | HUH VS10 - Intake/ Exhaust ^[2] | South | 334 | 88 | -10 | -58 | 3 | 23 | | | |
| | | HUH VS11 - Intake/ Exhaust ^[2] | South | 331 | 88 | -10 | -58 | 3 | 23 | | | |
| | | HUH VS12 - Exhaust | South | 329 | 88 | -10 | -58 | 3 | 23 | | | |
| | | HUH VS13 - Intake | South | 327 | 88 | -10 | -58 | 3 | 23 | | | |
| | | HUH VS14 - Exhaust | South | 325 | 88 | -10 | -58 | 3 | 23 | | | |
| | | HUH VS15 - Exhaust | South | 323 | 88 | -10 | -58 | 3 | 23 | | | |
| | | Cooling Tower | North_1 | | 390 | 88 | -5 | -60 | 3 | | | 26 |
| | | | Top_1 | | 395 | 94 | 0 | -60 | 3 | | | 37 |
| | | | Top_2 | | 415 | 94 | 0 | -60 | 3 | | | 37 |
| | | | Top_3 | | 419 | 94 | 0 | -60 | 3 | | | 37 |
| | | | Top_4 | | 422 | 94 | 0 | -61 | 3 | | | 36 |
| | | | Top_5 | | 427 | 94 | 0 | -61 | 3 | | | 36 |
| | | | East_1 | | 406 | 88 | -10 | -60 | 3 | | | 21 |
| | | NOV VS1 | Top | | 389 | 90 | 0 | -60 | 3 | | | 33 |
| | NOV VS2 | Top | | 386 | 90 | 0 | -60 | 3 | 33 | | | |
| | | | | | | | | | | 47 | 50 | |

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|--------|----------------------|---|------------------|--------------|------------|---|----------------------------|--------------------------|--------------------------|------------------------------------|---|
| HH9b | | | | | | | | | | | |
| HH9b | Harbourfront Horizon | HUH VS1 - Exhaust | East | 529 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS2 - Intake/ Exhaust ^[2] | North | 522 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS3 - Intake/ Exhaust ^[2] | North | 514 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS4 - Exhaust | North | 507 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS5 - Intake | North | 503 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS6 - Exhaust | North | 500 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS7 - Exhaust | North | 497 | 92 | -10 | -62 | 3 | 23 | | |
| | | HUH VS8 - Intake | South | 245 | 88 | 0 | -56 | 3 | 35 | | |
| | | HUH VS9 - Exhaust | South | 237 | 88 | 0 | -55 | 3 | 36 | | |
| | | HUH VS10 - Intake/ Exhaust ^[2] | South | 228 | 88 | 0 | -55 | 3 | 36 | | |
| | | HUH VS11 - Intake/ Exhaust ^[2] | South | 220 | 88 | 0 | -55 | 3 | 36 | | |
| | | HUH VS12 - Exhaust | South | 212 | 88 | 0 | -55 | 3 | 36 | | |
| | | HUH VS13 - Intake | South | 204 | 88 | 0 | -54 | 3 | 37 | | |
| | | HUH VS14 - Exhaust | South | 197 | 88 | 0 | -54 | 3 | 37 | | |
| | | HUH VS15 - Exhaust | South | 189 | 88 | 0 | -54 | 3 | 37 | | |
| | Cooling Tower | North_1 | 307 | 88 | -10 | -58 | 3 | 23 | | | |
| | | Top_1 | 309 | 94 | 0 | -58 | 3 | 39 | | | |
| | | Top_2 | 311 | 94 | 0 | -58 | 3 | 39 | | | |
| | | Top_3 | 311 | 94 | 0 | -58 | 3 | 39 | | | |
| | | Top_4 | 312 | 94 | 0 | -58 | 3 | 39 | | | |
| Top_5 | | 313 | 94 | 0 | -58 | 3 | 39 | | | | |
| | East_1 | 305 | 88 | 0 | -58 | 3 | 33 | | | | |
| | NOV VS1 | Top | 237 | 90 | 0 | -55 | 3 | 38 | 50 | 50 | |
| | NOV VS2 | Top | 227 | 90 | 0 | -55 | 3 | 38 | | | |

Remark:
 [1] A negative correction of 10 dB(A) has been adopted to the direction facing of the ventilation shaft totally screened by buildings and negative correction of 5 dB(A) for NSR do not have direct line of sight to the ventilation shaft.
 [2] Ventilation shafts HUH VS2, HUH VS3, HUH VS10 and HUH VS11 will be operated on switch mode, only 1 louver will be on at one time (either intake or exhaust).