Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-1 : Summary of Predicted Fixed Plant Noise Levels due to the Operation of the Proposed Development
          (During Day-time & Evening Time Periods)

NSRs		Predicted Fixed Plant Noise Level (dB(A))	Predicted PA Noise Level (dB(A))	Cumulative Predicted Noise Level (dB(A))	Noise Criteria (dB(A))
		Day-time & Evening Time Periods	Day-time & Evening Time Periods	Day-time & Evening Time Periods	Day-time & Evening Time Periods
N1	Amber Lodge	42	53	53	59
N2	Ho Fook Building	48	50	52	59
N3	Old Bailey Street Police Married Quarters	49	55	56	59
N4	Cambridge Villa	45	52	53	54
N5	Chancery House	49	53	54	54
N6	Chancery Mansion	50	51	54	54

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2a   Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N1   Amber Lodge

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For — Quantity dB(A) [1]	Corrections For — Distance dB(A) [2]	Corrections For — Façade dB(A)	Corrections For — Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	148.0	5	-51.4	3	0	28
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	148.0	5	-51.4	3	0	28
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	155.5	5	-51.8	3	0	36
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	164.0	5	-52.3	3	-10	20
5	Genset	G/F plant room of Old Bailey Wing	84	1	107.0	0	-48.6	3	-10	28
6	Transformer	West louvre of transformer room of Ablution Block	75	2	90.0	3	-47.1	3	-10	24
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	90.0	6	-47.1	3	-10	27
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	38.0	0	-39.6	3	-10	38
9		East louvre of Police Headquarters at lower courtyard	85	1	66.0	0	-44.4	3	-10	34

Predicted Façade Noise Level (dB(A)) = 42

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2a   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A)	Predicted Noise Level (dB(A) L$_{eq, 30min}$)
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	41.0	0	-40.2	3	-10	44
2			91	1	61.0	0	-43.7	3	-10	40
3			91	1	66.0	0	-44.4	3	0	50
4			91	1	81.0	0	-46.2	3	0	48
5	PA system	Upper courtyard	86	1	122.0	0	-49.7	3	-10	29
6			86	1	138.0	0	-50.8	3	0	38
							Predicted Façade Noise Level (dB(A)) =			**53**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2b   Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N2   Ho Fook Building

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A) [3]	Predicted Noise Level (dB(A) $L_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	107.0	5	-48.6	3	-10	21
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	107.0	5	-48.6	3	-10	21
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	120.0	5	-49.6	3	-10	28
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	131.0	5	-50.3	3	-10	22
5	Genset	G/F plant room of Old Bailey Wing	84	1	40.5	0	-40.1	3	-10	37
6	Transformer	West louvre of transformer room of Ablution Block	75	2	22.0	3	-34.8	3	0	46
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	31.0	6	-37.8	3	-10	36
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	33.0	0	-38.4	3	-10	40
9		East louvre of Police Headquarters at lower courtyard	85	1	83.0	0	-46.4	3	-10	32

Predicted Façade Noise Level (dB(A)) =   48

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL	Sound Pressure Level, in dB(A)
Max. SWL	Maximum Allowable Sound Power Level, in dB(A)
DC	Distance Attenuation, in dB(A)
FC	Facade Correction, in dB(A) (i.e. 3 dB(A))
BC	Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2b   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A)	Predicted Noise Level (dB(A) L$_{eq, 30min}$)
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	43.0	0	-40.7	3	-10	43
2			91	1	71.0	0	-45.0	3	-10	39
3			91	1	32.5	0	-38.2	3	-10	46
4			91	1	67.5	0	-44.6	3	-10	39
5	PA system	Upper courtyard	86	1	66.5	0	-44.4	3	-10	35
6			86	1	93.0	0	-47.4	3	0	42
							Predicted Façade Noise Level (dB(A)) =			**50**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2c   Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N3   Old Bailey Street Police Married Quarters

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) $L_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	97.0	5	-47.7	3	0	32
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	97.0	5	-47.7	3	0	32
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	111.0	5	-48.9	3	0	39
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	124.0	5	-49.9	3	-10	23
5	Genset	G/F plant room of Old Bailey Wing	84	1	27.5	0	-36.8	3	-10	40
6	Transformer	West louvre of transformer room of Ablution Block	75	2	20.0	3	-34.0	3	0	47
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	31.0	6	-37.8	3	-10	36
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	69.0	0	-44.8	3	-10	33
9		East louvre of Police Headquarters at lower courtyard	85	1	109.5	0	-48.8	3	-10	29
								Predicted Façade Noise Level (dB(A)) =		**49**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = $-10*log(2\pi(d2)^2)$

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2c   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A)	Predicted Noise Level (dB(A) L_{eq, 30min})
								Corrections For		
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	76.0	0	-45.6	3	0	48
2			91	1	97.0	0	-47.7	3	0	46
3			91	1	55.0	0	-42.8	3	0	51
4			91	1	84.5	0	-46.5	3	0	47
5	PA system	Upper courtyard	86	1	50.0	0	-42.0	3	-10	37
6			86	1	88.0	0	-46.9	3	0	42
							Predicted Façade Noise Level (dB(A)) =			**55**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = $-10*\log(2\pi(d2)^2)$

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2d Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N4   Cambridge Villa

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	64.0	5	-44.1	3	0	36
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	64.0	5	-44.1	3	0	36
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	77.0	5	-45.7	3	0	42
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	90.0	5	-47.1	3	-10	26
5	Genset	G/F plant room of Old Bailey Wing	84	1	43.0	0	-40.7	3	-10	36
6	Transformer	West louvre of transformer room of Ablution Block	75	2	64.0	3	-44.1	3	-10	27
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	60.5	6	-43.6	3	-10	30
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	112.0	0	-49.0	3	-10	29
9		East louvre of Police Headquarters at lower courtyard	85	1	129.0	0	-50.2	3	-10	28

Predicted Façade Noise Level (dB(A)) = 45

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2d   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Corrections For Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A)	Predicted Noise Level (dB(A) $L_{eq,\,30min}$)
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	112.0	0	-49.0	3	-10	35
2			91	1	118.0	0	-49.4	3	-10	35
3			91	1	84.5	0	-46.5	3	-10	37
4			91	1	96.0	0	-47.6	3	-10	36
5	PA system	Upper courtyard	86	1	34.0	0	-38.6	3	0	50
6			86	1	60.0	0	-43.5	3	0	45
									Predicted Façade Noise Level (dB(A)) =	**52**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = $-10 \cdot \log(2\pi(d2)^2)$

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2e   Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N5   Chancery House

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	33.0	5	-38.4	3	0	41
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	33.0	5	-38.4	3	0	41
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	42.5	5	-40.5	3	0	47
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	54.0	5	-42.6	3	-10	30
5	Genset	G/F plant room of Old Bailey Wing	84	1	67.0	0	-44.5	3	-10	32
6	Transformer	West louvre of transformer room of Ablution Block	75	2	90.0	3	-47.1	3	-10	24
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	80.5	6	-46.1	3	-10	28
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	126.0	0	-50.0	3	-10	28
9		East louvre of Police Headquarters at lower courtyard	85	1	125.5	0	-50.0	3	-10	28
								Predicted Façade Noise Level (dB(A)) =		**49**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where
SPL   Sound Pressure Level, in dB(A)
Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
DC   Distance Attenuation, in dB(A)
FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2e   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A)	Predicted Noise Level (dB(A) L$_{eq, 30min}$)
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	123.0	0	-49.8	3	-10	34
2			91	1	118.0	0	-49.4	3	-10	35
3			91	1	91.0	0	-47.2	3	-10	37
4			91	1	93.0	0	-47.4	3	-10	37
5	PA system	Upper courtyard	86	1	44.5	0	-40.9	3	0	48
6			86	1	33.0	0	-38.4	3	0	51
							Predicted Façade Noise Level (dB(A)) =			**53**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-2f   Operational Noise Impact Assessment - Fixed Plant (During Day-time & Evening Time Periods)

NSR: N6   Chancery House

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	3	33.0	5	-38.4	3	0	41
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	3	33.0	5	-38.4	3	0	41
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	3	35.0	5	-38.9	3	0	49
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	3	40.0	5	-40.0	3	-10	33
5	Genset	G/F plant room of Old Bailey Wing	84	1	86.0	0	-46.7	3	-10	30
6	Transformer	West louvre of transformer room of Ablution Block	75	2	109.0	3	-48.7	3	-10	22
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	95.0	6	-47.5	3	-10	26
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	143.0	0	-51.1	3	-10	27
9		East louvre of Police Headquarters at lower courtyard	85	1	134.0	0	-50.5	3	-10	27
							Predicted Façade Noise Level (dB(A)) =			**50**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage.
       The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

       SPL = Max SWL – DC + FC - BC
       where
       SPL   Sound Pressure Level, in dB(A)
       Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
       DC   Distance Attenuation, in dB(A)
       FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
       BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

       intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

Annex B3-2f   Operational Noise Impact Assessment - PA system

No.	Item	Location	Max. Allowable SPL, dB(A) [3]	Quantity	Minimum Distance from site boundary to NSR (d2),m [4]	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A)	Predicted Noise Level (dB(A) L$_{eq, 30min}$)
Day-time & Evening Time Periods (between 0700 to 2300 hours)										
1	PA system	Lower courtyard	91	1	135.0	0	-50.6	3	-10	33
2			91	1	126.0	0	-50.0	3	-10	34
3			91	1	111.0	0	-48.9	3	-10	35
4			91	1	100.0	0	-48.0	3	-10	36
5	PA system	Upper courtyard	86	1	62.0	0	-43.8	3	0	45
6			86	1	40.0	0	-40.0	3	0	49
						Predicted Façade Noise Level (dB(A)) =				**51**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance correction for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door

[4]   Detailed design of the PA system is not yet available at this stage. The speaker clusters are expected to be operated during some special occasions during daytime and evening time periods only (until 23:00 hours).

The maximum allowable SWLs of the PA system were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable SWLs:

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-3 : Summary of Predicted Fixed Plant Noise Levels due to the Operation of the Proposed Development
(During Night-time Period)

NSRs		Predicted Fixed Plant Noise Level (dB(A))	Noise Criteria (dB(A))
		Night-time Period	Night-time Period
N1	Amber Lodge	42	50
N2	Ho Fook Building	48	50
N3	Old Bailey Street Police Married Quarters	48	50
N4	Cambridge Villa	43	49
N5	Chancery House	48	49
N6	Chancery Mansion	49	49

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4a   Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)

NSR: N1   Amber Lodge

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For Quantity dB(A) [1]	Corrections For Distance dB(A) [2]	Corrections For Façade dB(A)	Corrections For Barrier dB(A) [3]	Predicted Noise Level (dB(A) $L_{eq, 30min}$) [4]
	Night-time Periods (between 2300 to 0700 hours)									
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	148.0	3	-51.4	3	0	27
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	148.0	3	-51.4	3	0	27
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	155.5	3	-51.8	3	0	34
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	164.0	3	-52.3	3	-10	19
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	90.0	3	-47.1	3	-10	24
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	90.0	6	-47.1	3	-10	27
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	38.0	0	-39.6	3	-10	38
9		East louvre of Police Headquarters at lower courtyard	85	1	66.0	0	-44.4	3	-10	34
								Predicted Façade Noise Level (dB(A)) =		**41**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log($2\pi(d2)^2$)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4b   Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)

NSR: N2   Ho Fook Building

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Corrections For Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
Night-time Periods (between 2300 to 0700 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	107.0	3	-48.6	3	-10	19
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	107.0	3	-48.6	3	-10	19
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	120.0	3	-49.6	3	-10	26
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	131.0	3	-50.3	3	-10	21
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	22.0	3	-34.8	3	0	46
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	31.0	6	-37.8	3	-10	36
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	33.0	0	-38.4	3	-10	40
9		East louvre of Police Headquarters at lower courtyard	85	1	83.0	0	-46.4	3	-10	32
						Predicted Façade Noise Level (dB(A)) =				**48**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where

SPL   Sound Pressure Level, in dB(A)

Max. SWL   Maximum Allowable Sound Power Level, in dB(A)

DC   Distance Attenuation, in dB(A)

FC   Facade Correction, in dB(A) (i.e. 3 dB(A))

BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4c   Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)

NSR: N3   Old Bailey Street Police Married Quarters

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
								Corrections For		
Night-time Periods (between 2300 to 0700 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	97.0	3	-47.7	3	0	30
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	97.0	3	-47.7	3	0	30
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	111.0	3	-48.9	3	0	37
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	124.0	3	-49.9	3	-10	21
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	20.0	3	-34.0	3	0	47
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	31.0	6	-37.8	3	-10	36
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	69.0	0	-44.8	3	-10	33
9		East louvre of Police Headquarters at lower courtyard	85	1	109.5	0	-48.8	3	-10	29
						Predicted Façade Noise Level (dB(A)) =				**48**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = $-10*log(2\pi(d2)^2)$

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

    The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

    SPL = Max SWL – DC + FC - BC

    where
    SPL   Sound Pressure Level, in dB(A)
    Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
    DC   Distance Attenuation, in dB(A)
    FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
    BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

    intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4d   **Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)**

NSR: N4   Cambridge Villa

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) $L_{eq, 30min}$) [4]
Night-time Periods (between 2300 to 0700 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	64.0	3	-44.1	3	0	34
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	64.0	3	-44.1	3	0	34
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	77.0	3	-45.7	3	0	40
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	90.0	3	-47.1	3	-10	24
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	64.0	3	-44.1	3	-10	27
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	60.5	6	-43.6	3	-10	30
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	112.0	0	-49.0	3	-10	29
9		East louvre of Police Headquarters at lower courtyard	85	1	129.0	0	-50.2	3	-10	28
								Predicted Façade Noise Level (dB(A)) =		**43**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where
SPL   Sound Pressure Level, in dB(A)
Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
DC   Distance Attenuation, in dB(A)
FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4e   Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)

NSR: N5   Chancery House

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
						Corrections For				
Night-time Periods (between 2300 to 0700 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	33.0	3	-38.4	3	0	40
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	33.0	3	-38.4	3	0	40
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	42.5	3	-40.5	3	0	45
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	54.0	3	-42.6	3	-10	28
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	90.0	3	-47.1	3	-10	24
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	80.5	6	-46.1	3	-10	28
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	126.0	0	-50.0	3	-10	28
9		East louvre of Police Headquarters at lower courtyard	85	1	125.5	0	-50.0	3	-10	28
							Predicted Façade Noise Level (dB(A)) =			48

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = $-10*\log(2\pi(d2)^2)$

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where
SPL   Sound Pressure Level, in dB(A)
Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
DC   Distance Attenuation, in dB(A)
FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Conservation and Revitalization of the Central Police Station Compound (CPS)

Annex B3-4f   **Operational Noise Impact Assessment - Fixed Plant (During Night-time Period)**

NSR: N6   Chancery House

No.	Item	Location	Max. Allowable SWL, dB(A) [5]	Quantity	Distance from source to NSR (d2),m	Quantity dB(A) [1]	Distance dB(A) [2]	Façade dB(A)	Barrier dB(A) [3]	Predicted Noise Level (dB(A) L$_{eq, 30min}$) [4]
						Corrections For				
Night-time Periods (between 2300 to 0700 hours)										
1	Chilled Water Pumps	West louvre of chilled water pump room on the roof of Arbuthnot Wing	72	2	33.0	3	-38.4	3	0	40
2	Condenser Water Pump	West louvre of condenser water pump room on the roof of Arbuthnot Wing	72	2	33.0	3	-38.4	3	0	40
3	Cooling Tower	Cooling towers on the roof of Arbuthnot Wing	80	2	35.0	3	-38.9	3	0	47
4	Chiller	East louvre of chiller room on the roof of Arbuthnot Wing	75	2	40.0	3	-40.0	3	-10	31
5	Genset [6]	G/F plant room of Old Bailey Wing	-	-	-	-	-	-	-	-
6	Transformer	West louvre of transformer room of Ablution Block	75	2	109.0	3	-48.7	3	-10	22
7		South louvre of exhaust air duct for transformer room of Ablution Block	75	4	95.0	6	-47.5	3	-10	26
8	Fan	West louvre of Police Headquarters at lower courtyard	85	1	143.0	0	-51.1	3	-10	27
9		East louvre of Police Headquarters at lower courtyard	85	1	134.0	0	-50.5	3	-10	27
							Predicted Façade Noise Level (dB(A)) =			**49**

Notes:

[1]   Correction for quantity = 10*log(Quantity)

[2]   Distance attenuation for SWL = -10*log(2π(d2)^2)

[3]   Reference was made from IND-TM, a negative correction of 10dB(A) will be applied for noise source totally screened by barrier or building such that none will be visible when viewed from any window, door or other opening of the NSR.

[4]   Detailed design of the plant rooms is not yet available at this stage. Only 2 cooling towers, associated chillers, condensed water pumps and chilled water pumps are expected to be operated during the night-time period between 2300 and 0700 hours. Transformer and fan are expected to be operated for 24 hours daily.

The maximum allowable SWLs of the plant room louvers/equipment were determined by adopting standard acoustics principles. The following formula was used for calculating the maximum allowable

SPL = Max SWL – DC + FC - BC

where
SPL   Sound Pressure Level, in dB(A)
Max. SWL   Maximum Allowable Sound Power Level, in dB(A)
DC   Distance Attenuation, in dB(A)
FC   Facade Correction, in dB(A) (i.e. 3 dB(A))
BC   Barrier Correction, in dB(A)

[5]   The sound power level (SWL) of the equipment shall not exceed the specified Maximum Allowable SWL in order to archive the noise criteria. Acoustic treatment, such as

intake & discharge silencers, acoustic enclosure, acoustic louver and discharge cowl will be installed as appropriate to achieve the required SWL.

[6]   Genset will be only operated during the day-time and evening time period.

Key

● Representative Noise Sensitive Receiver

▢ Project Site

— Louvres of Plant Rooms

● PA System

◎ Cooling Towers

NSR	Description
N1	Amber Lodge
N2	Ho Fook Building
N3	Old Bailey Street Police Married Quarters
N4	Cambridge Villa
N5	Chancery House
N6	Chancery Mansion

Building Index

01	Police Headquarters
02	Armoury
03	Barrack Block
04	Married Inspector's Quarters and Deputy Superin Tendents House
06	Married Sergeants' Quarters
07	Single Inspectors' Quarters
08	Ablutions Block
09	Central Magistracy
10	Superintendent's House
11	A Hall
12	B Hall
13	C Hall
14	D Hall
15	E Hall
17	F Hall
19	Bauhinia House
OBW	Old Bailey Wing
AW	Arbuthnot Wing
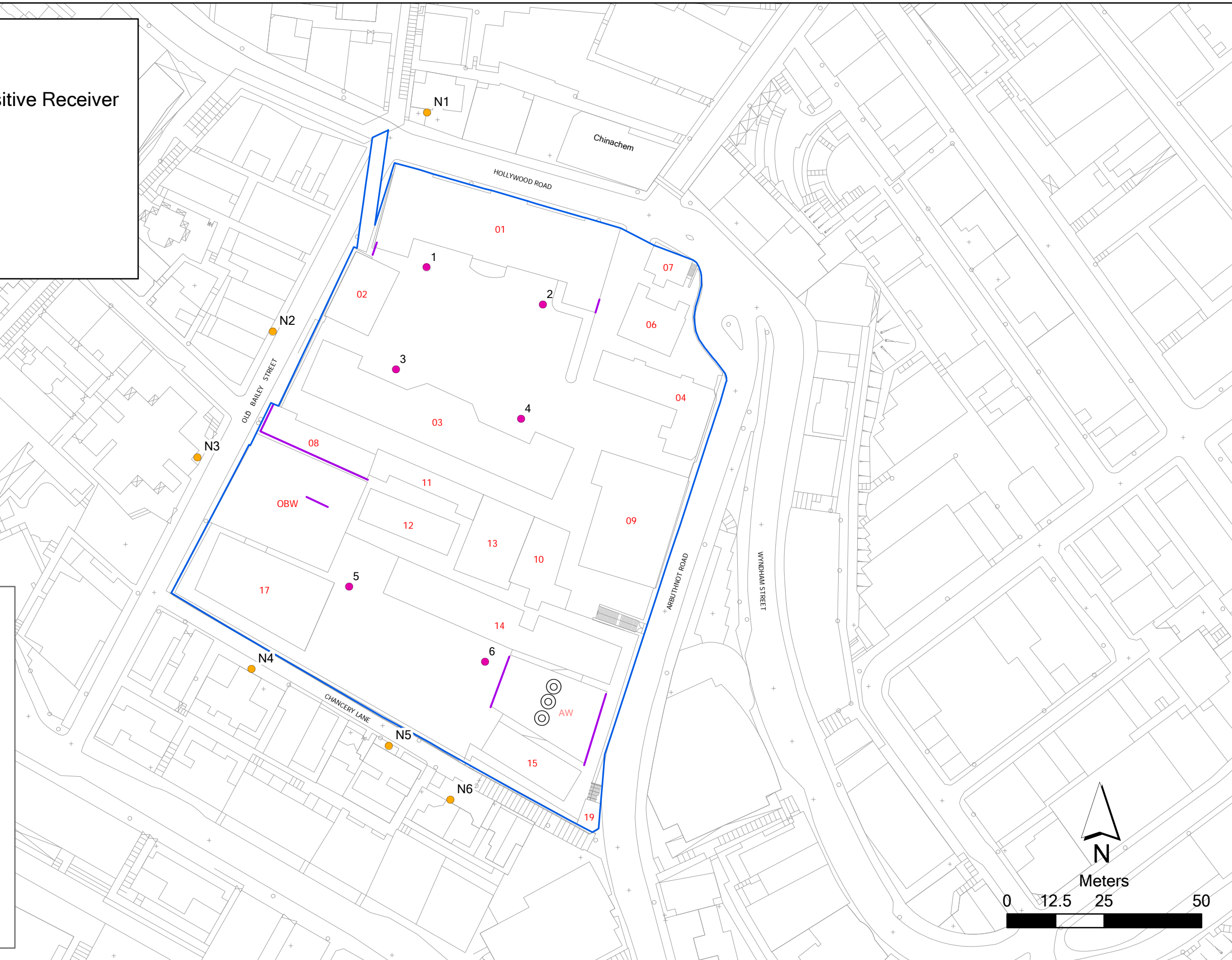
Figure B3-1

Locations of Fixed Plant Noise Sources

Environmental Resources Management
ERM

賽馬會文物保育有限公司
The Jockey Club CPS Limited

File: 0095646_fixed plant noise sources.mxd
Date: 19/11/210

HOLLYWOOD ROAD

Chinachem

OLD BAILEY STREET

ARBUTHNOT ROAD

WYNDHAM STREET

CHANCERY LANE

N

Meters

0   12.5   25   50

INTAKE LOUVRES &
C/W SILENCERS

CONDEN.
WATER
PUMPS

CHILLED
WATER
PUMPS

COOLING
TOWERS

CHILLERS

PLANT ROOM

MOTOR
CONTROL
ROOM

FIRE
LOBBY

INTAKE LOUVRES &
C/W SILENCERS

X

X

INTAKE LOUVER
C/W SILENCER

SILENCER

EA

SILENCER

COOLING TOWER

CHILLER

SILENCER

INTAKE LOUVER
C/W SILENCER

FA

FA

1.20

3.77

8.70

2.30

1.20

0.25

0.25

800TONS CHILLER

PUMP WITH STAINLESS
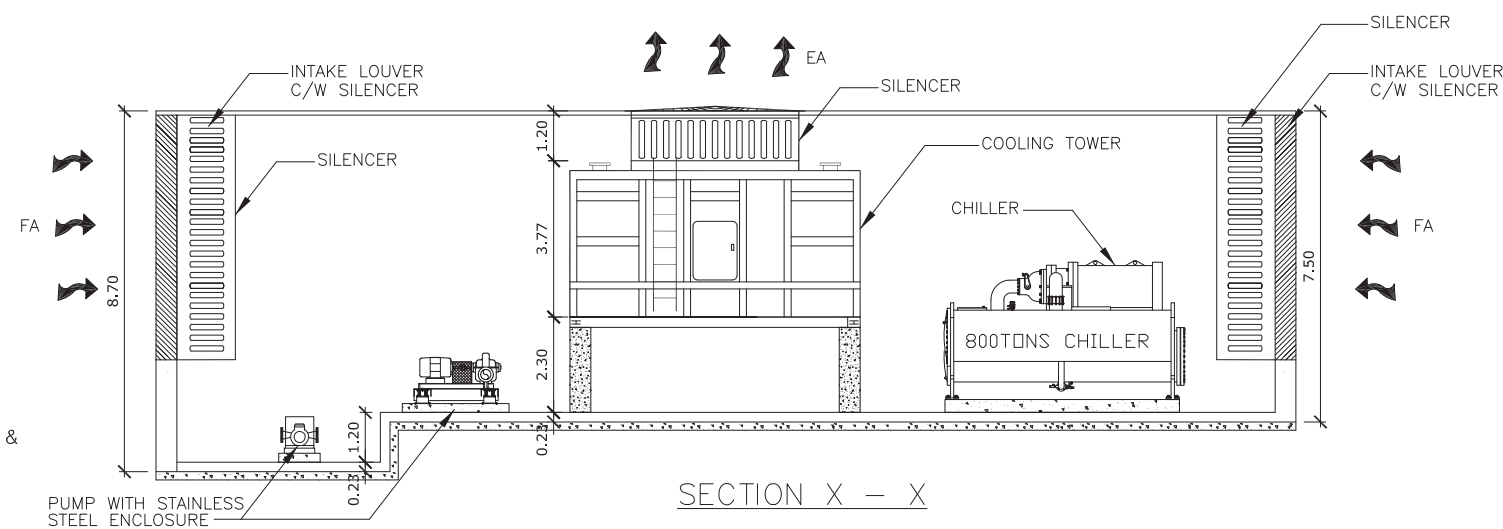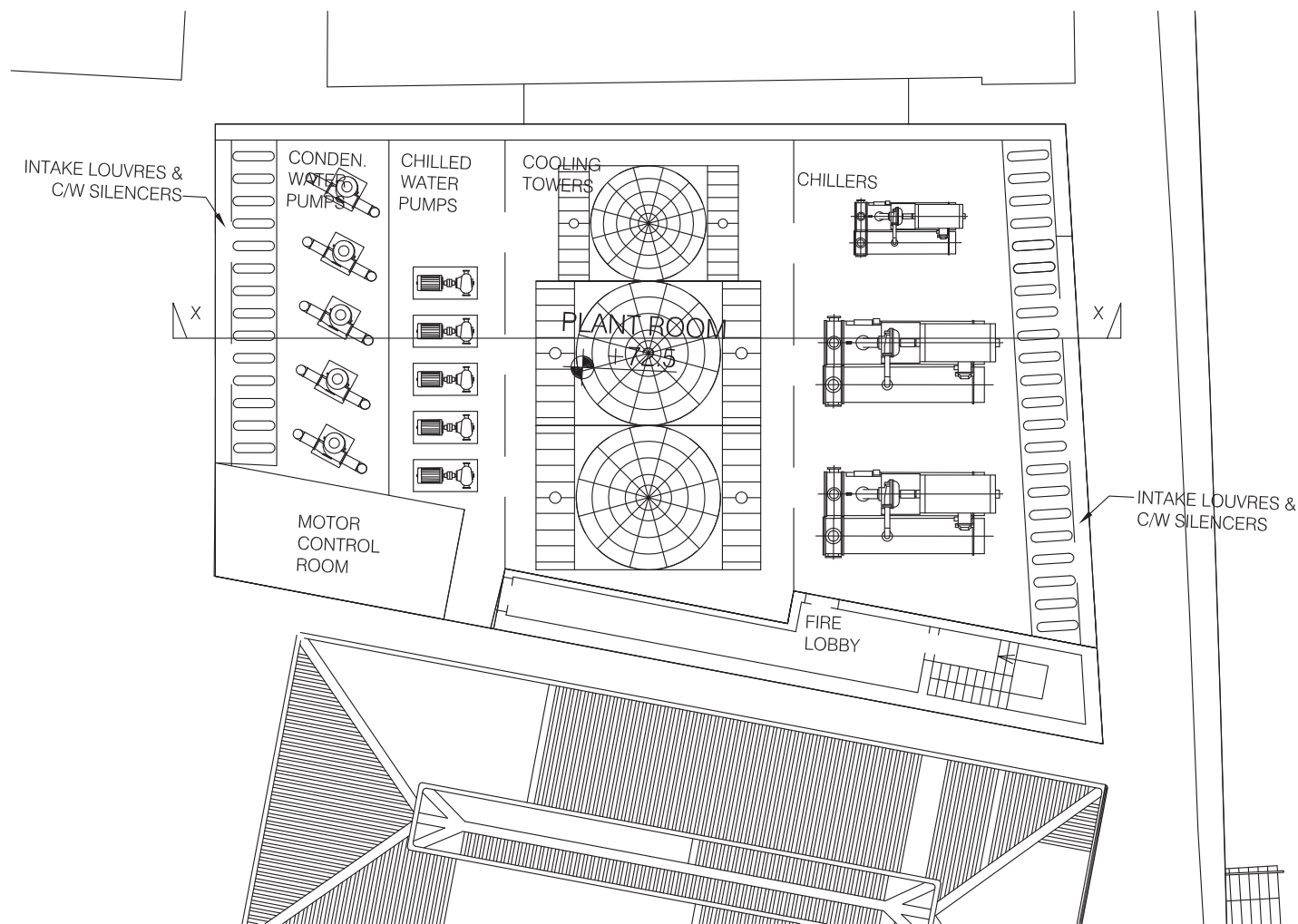STEEL ENCLOSURE

7.50

SECTION X — X

Figure B3-2

Roof Layout Plan of Arbuttnot Wing

FILE: 0095646I
DATE: 19/11/2010

Environmental
Resources
Management

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The Jockey Club CPS Limited