

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

Annex B2-1 : Construction Plant Inventory - Unmitigated

No. Activities	Plant	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A) ^[2]
I) Existing Buildings							
1 Phase 1 & Site Wide Structure				Sub-total SWL for Phase 1 & Site Wide Structure = 121			
Demolition							
	Breaker, hand-held, mass < 10kg	CNP 023	4	50%	108	111	121
	Breaker, excavator mounted (pneumatic)	CNP 027	1	75%	122	121	
	Dump truck, 5.5 tonne < gross vehicle weight < 38 tonne	CNP 068	2	50%	105	105	
	Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	
Excavation and Lateral Support (ELS)							
	Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	118
	Drill rig, rotary type (diesel)	EPD/PME/12	2	75%	110	112	
	Air Compressor, air flow > 30m ³ /min	CNP 003	2	75%	104	106	
	Water pump (electric)	CNP 281	3	50%	88	90	
	Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	
	Compactor, vibratory	CNP 050	2	50%	105	105	
	Crane, mobile/barge mounted (diesel)	CNP 048	2	50%	112	112	
	Grout mixer	EPD/PME/14	1	75%	90	89	
	Grout pump	EPD/PME/15	1	75%	105	104	
II) New Building							
2 Foundation				Sub-total SWL for Foundation = 120			
Piling							
	Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	116
	Drill rig, rotary type (diesel)	EPD/PME/12	2	75%	110	112	
	Air Compressor, air flow > 30m ³ /min	CNP 003	2	75%	104	106	
	Grout mixer	EPD/PME/14	1	75%	90	89	
	Grout pump	EPD/PME/15	1	75%	105	104	
	Crane, mobile/barge mounted (diesel)	CNP 048	2	50%	112	112	
	Crane, tower (electric)	CNP 049	1	75%	95	94	
CAP							
	Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	120
	Saw, circular, wood	CNP 201	2	50%	108	108	
	Bar bender and cutter (electric)	CNP 021	2	75%	90	92	
	Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	1	50%	111	108	
	Concrete lorry mixer	CNP 044	2	50%	109	109	
	Concrete pump, stationary/lorry mounted	CNP 047	2	50%	109	109	
	Poker, vibratory, hand-held	CNP 170	4	50%	113	116	
	Compactor, vibratory	CNP 050	2	40%	105	104	
	Water pump (electric)	CNP 281	2	50%	88	88	
	Air Compressor, air flow > 30m ³ /min	CNP 003	1	75%	104	103	
	Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	
	Crane, tower (electric)	CNP 049	1	75%	95	94	
	Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
	Dump truck, 5.5 tonne < gross vehicle weight < 38 tonne	CNP 068	1	50%	105	102	

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

Annex B2-1 : Construction Plant Inventory - Unmitigated

No.	Activities	Plant	TM / EPD ^[1] / BS 5228 ref.	No. of PME	On- time %	Unit SWL, dB(A)	SWL, dB(A)	Total SWL, dB(A) ^[2]
3 Excavation and Lateral Support (ELS)							Sub-total SWL for ELS = 118	
		Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	118
		Drill rig, rotary type (diesel)	EPD/PME/12	2	75%	110	112	
		Air Compressor, air flow > 30m ³ /min	CNP 003	2	75%	104	106	
		Water pump (electric)	CNP 281	3	50%	88	90	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	
		Compactor, vibratory	CNP 050	2	50%	105	105	
		Crane, mobile/barge mounted (diesel)	CNP 048	2	50%	112	112	
		Grout mixer	EPD/PME/14	1	75%	90	89	
		Grout pump	EPD/PME/15	1	75%	105	104	
4 Basement / Superstructure Construction							Sub-total SWL for Basement / Superstructure Works = 120	
		Excavator/loader, wheeled/tracked	CNP 081	2	75%	112	114	120
		Saw, circular, wood	CNP 201	2	50%	108	108	
		Bar bender and cutter (electric)	CNP 021	2	75%	90	92	
		Breaker, hand-held, mass > 20kg and < 35kg	CNP 025	1	50%	111	108	
		Concrete lorry mixer	CNP 044	2	50%	109	109	
		Concrete pump, stationary/lorry mounted	CNP 047	2	50%	109	109	
		Poker, vibratory, hand-held	CNP 170	4	50%	113	116	
		Compactor, vibratory	CNP 050	2	40%	105	104	
		Water pump (electric)	CNP 281	2	50%	88	88	
		Air Compressor, air flow > 30m ³ /min	CNP 003	1	75%	104	103	
		Generator, super silenced, 70dB(A) at 7m	CNP 103	1	100%	95	95	
		Crane, tower (electric)	CNP 049	1	75%	95	94	
		Crane, mobile/barge mounted (diesel)	CNP 048	1	50%	112	109	
		Dump truck, 5.5 tonne < gross vehicle weight < 38 tonne	CNP 068	1	50%	105	102	

Notes:

- [1] SWLs of EPD/PME items refer to the document prepared by the Noise Control Authority (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)
BS - British Standard BS 5228:2009, Part 1 Noise and Vibration Control on Construction and Open Sites
- [2] The figures are rounded-up to a whole number.

Annex B2-2 : Summary of Predicted Noise Levels during Daytime Period - Unmitigated

	NSR Location	EIAO-TM Noise Criteria, dB(A)	Predicted Construction Noise Level (dB(A))																		Max. CNL, dB(A)		
			2012												2013								
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		Jul	Aug
N1	Amber Lodge	75	86	86	86	86	86	86	86	85	85	85	79	79	79	81	81	81	81	81	81	81	86
N2	Ho Fook Building	75	87	87	87	87	87	87	87	86	86	86	80	80	80	82	82	82	82	82	82	82	87
N3	Old Bailey Street Police Married Quarters	75	86	86	86	86	86	86	86	85	85	85	81	81	81	83	83	83	83	83	83	83	86
N4	Cambridge Villa	75	87	87	87	87	87	87	87	86	86	86	84	84	84	86	86	86	86	86	86	86	87
N5	Chancery House	75	89	89	89	89	89	89	89	87	87	87	86	86	86	88	88	88	88	88	88	88	89
N6	Chancery Mansion	75	89	89	89	89	89	89	89	87	87	87	86	86	86	88	88	88	88	88	88	88	89

Note:

[1] **Bold** value indicates exceedance of noise criteria of 75 dB(A) for residential premises.

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

Annex B2-3a Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N1

Amber Lodge

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))																		Max. CNL dB(A)		
						2012												2013								
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		Jul	Aug
I	Existing Buildings																									
1	Phase 1 & Site Wide Structure	121	44	-41	3	84	84	84	84	84	84	84	84	84	84	84										
II	New Building																									
2	Foundation	120	50	-42	3	81	81	81	81	81	81	81														
3	Excavation and Lateral Support (ELS)	118	50	-42	3								79	79	79	79	79									
4	Basement / Superstructure Construction	120	50	-42	3														81	81	81	81	81	81		
Predicted Noise Level during Daytime Period, dB(A)						86	86	86	86	86	86	86	85	85	85	79	79	79	81	81	81	81	81	81	81	86

Notes:

[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$

[2] The figures are rounded-up to a whole number.

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

Annex B2-3b Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N2

Ho Fook Building

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))												Max. CNL dB(A)								
						2012						2013														
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
I	Existing Buildings																									
1	Phase 1 & Site Wide Structure	121	38	-40	3	85	85	85	85	85	85	85	85	85												
II	New Building																									
2	Foundation	120	46	-41	3	82	82	82	82	82	82															
3	Excavation and Lateral Support (ELS)	118	46	-41	3								80	80	80	80	80	80								
4	Basement / Superstructure Construction	120	46	-41	3														82	82	82	82	82	82		
Predicted Noise Level during Daytime Period, dB(A)						87	87	87	87	87	87	87	86	86	86	80	80	80	82	82	82	82	82	82	82	87

Notes:

[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$

[2] The figures are rounded-up to a whole number.

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

Annex B2-3c Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N3

Old Bailey Street Police Married Quarters

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))												Max. CNL dB(A)							
						2012						2013													
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul
I	Existing Buildings																								
1	Phase 1 & Site Wide Structure	121	52	-42	3	82	82	82	82	82	82	82	82	82	82										
II	New Building																								
2	Foundation	120	40	-40	3	83	83	83	83	83	83	83													
3	Excavation and Lateral Support (ELS)	118	40	-40	3								81	81	81	81	81	81							
4	Basement / Superstructure Construction	120	40	-40	3														83	83	83	83	83	83	
Predicted Noise Level during Daytime Period, dB(A)						86	86	86	86	86	86	86	85	85	85	81	81	81	83	83	83	83	83	83	83

Notes:

[1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$

[2] The figures are rounded-up to a whole number.

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

Annex B2-3d Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N4

Cambridge Villa

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))												Max. CNL dB(A)							
						2012						2013													
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul
I	Existing Buildings																								
1	Phase 1 & Site Wide Structure	121	57	-43	3	81	81	81	81	81	81	81	81	81	81										
II	New Building																								
2	Foundation	120	30	-37	3	86	86	86	86	86	86	86													
3	Excavation and Lateral Support (ELS)	118	30	-37	3								84	84	84	84	84	84							
4	Basement / Superstructure Construction	120	30	-37	3														86	86	86	86	86	86	
Predicted Noise Level during Daytime Period, dB(A)						87	87	87	87	87	87	87	86	86	86	84	84	84	86	86	86	86	86	86	86

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.

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

Annex B2-3e Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N5

Chancery House

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))												Max. CNL dB(A)							
						2012						2013													
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul
I	Existing Buildings																								
1	Phase 1 & Site Wide Structure	121	57	-43	3	81	81	81	81	81	81	81	81	81	81										
II	New Building																								
2	Foundation	120	23	-35	3	88	88	88	88	88	88	88													
3	Excavation and Lateral Support (ELS)	118	23	-35	3								86	86	86	86	86	86							
4	Basement / Superstructure Construction	120	23	-35	3														88	88	88	88	88	88	
Predicted Noise Level during Daytime Period, dB(A)						89	89	89	89	89	89	89	87	87	87	86	86	86	88	88	88	88	88	88	88

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.

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

Annex B2-3f Construction Airborne Noise Impact Assessment - Unmitigated

NSR: N6

Chancery House

No.	Activity Description	SWL dB(A) ^[2]	Distance m	Corr. for distance dB(A) ^{[1][2]}	Corr. for façade dB(A)	Predicted Construction Noise Level (dB(A))												Max. CNL dB(A)								
						2012						2013														
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
I	Existing Buildings																									
1	Phase 1 & Site Wide Structure	121	57	-43	3	81	81	81	81	81	81	81	81	81	81											
II	New Building																									
2	Foundation	120	23	-35	3	88	88	88	88	88	88	88														
3	Excavation and Lateral Support (ELS)	118	23	-35	3								86	86	86	86	86									
4	Basement / Superstructure Construction	120	23	-35	3										88	88	88	88	88	88	88	88				
Predicted Noise Level during Daytime Period, dB(A)						89	89	89	89	89	89	89	87	87	87	86	86	86	88	88	88	88	88	88	88	89

Notes:

- [1] Distance Correction for PMEs = $10 \cdot \log(2 \cdot \pi \cdot r^2)$
- [2] The figures are rounded-up to a whole number.