

### Calculation of Construction Noise Levels (Demolition of existing buildings)

Job Title: Yau Tong Bay Reclamation  
Job No.: 21253  
Date: 08-11-99

#### Plant Schedule for demolition of existing buildings

Code	Description	Sound Power Level,	No.
		SPL (dB(A))	
CNP 081	Excavator/loader, wheeled tracked	112	3
CNP 023	Breakers	108	6
CNP 101	Generator	108	3
CNP 003	Air compressor	104	3
CNP 067	Dump truck	117	3
CNP 021	Bar bender and cutter	90	6

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## Definition of terms:

PL - the sound power level as per EPD's TM  
 n - the number of items of plant operating simultaneously  
 P on - the percentage of time with plant operating  
 r, Yr, Hr - the coordinates of the NSR, m  
 s, Ys, Hs - the coordinates of the source, m  
 sr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items  
 CLsr - the correction for slant distance between the source and the NSR, dB(A)  
 Catm - the air absorption using CONCAWE methodology for distance greater than 300m  
 Csr - the sound reduction provided by barrier/enclosure/building envelope  
 Cfac - the facade correction, dB(A)  
 CNL - the corrected noise level, dB(A)(30 minutes)

Area	Description	Sound Power Level, SPL (dB(A))	No.	Source location & distance				Corrections				CNL dB(A)	
Code				Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csr	Cfac	
SR RYTE1, Yau Tong Estate Redevelopment (Phase 1) Xr: 842590.6 Yr: 817630.0 Hr: 25													
Area 1													
NP 081	Excavator/loader, wheeled tracked	112	1	842139	817743	1.5	465.8	0	-53.4	-1.3	0.0	3	52.3
NP 023	Breakers	108	2	842139	817743	1.5	465.8	3	-53.4	-1.3	0.0	3	51.3
NP 101	Generator	108	1	842139	817743	1.5	465.8	0	-53.4	-1.3	0.0	3	48.3
NP 003	Air compressor	104	1	842139	817743	1.5	465.8	0	-53.4	-1.3	0.0	3	44.3
NP 067	Dump truck	117	1	842139	817743	1.5	465.8	0	-53.4	-1.3	0.0	3	57.3
NP 021	Bar bender and cutter	90	2	842139	817743	1.5	465.8	3	-53.4	-1.3	0.0	3	33.3
<b>Sub-total</b>													<b>59.8</b>
<b>Sub-Total SWL =</b>													<b>119</b>
Area 2													
NP 081	Excavator/loader, wheeled tracked	112	1	842410	817656	1.5	183.7	0	-45.2	0.0	0.0	3	61.8
NP 023	Breakers	108	2	842410	817656	1.5	183.7	3	-45.3	0.0	0.0	3	60.7
NP 101	Generator	108	1	842410	817656	1.5	183.7	0	-45.2	0.0	0.0	3	57.8
NP 003	Air compressor	104	1	842410	817656	1.5	183.7	0	-45.3	0.0	0.0	3	53.7
NP 067	Dump truck	117	1	842410	817656	1.5	183.7	0	-45.3	0.0	0.0	3	66.7
NP 021	Bar bender and cutter	90	2	842410	817656	1.5	183.7	3	-45.3	0.0	0.0	3	42.7
<b>Sub-total</b>													<b>69.2</b>
<b>Sub-Total SWL =</b>													<b>119</b>
Area 3													
NP 081	Excavator/loader, wheeled tracked	112	1	842348	817503	1.5	275.1	0	-48.8	0.0	0.0	3	58.2
NP 023	Breakers	108	2	842348	817503	1.5	275.1	3	-48.8	0.0	0.0	3	57.2
NP 101	Generator	108	1	842348	817503	1.5	275.1	0	-48.8	0.0	0.0	3	54.2
NP 003	Air compressor	104	1	842348	817503	1.5	275.1	0	-48.8	0.0	0.0	3	50.2
NP 067	Dump truck	117	1	842348	817503	1.5	275.1	0	-48.8	0.0	0.0	3	63.2
NP 021	Bar bender and cutter	90	2	842348	817503	1.5	275.1	3	-48.8	0.0	0.0	3	39.2
<b>Sub-total</b>													<b>65.6</b>
<b>Sub-Total SWL =</b>													<b>119</b>
<b>Total</b>													<b>71.1</b>
<b>Total SWL * =</b>													<b>124</b>

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any.

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Job Title: Yau Tong Bay Reclamation  
 Job No: 21253  
 Date: 08-11-99

## Definition of terms:

SPL	- the sound power level as per EPD's TM	Cno	- correction for no. of plant items
No.	- the number of items of plant operating simultaneously	CLsr	- the correction for slant distance between the source and the NSR, dB(A)
% on	- the percentage of time with plant operating	Catm	- the air absorption using CONCAWE methodology for distance greater than 300m
Xr, Yr, Hr	- the coordinates of the NSR, m	Csri	- the sound reduction provided by barrier/enclosure/building envelope
Xs, Ys, Hs	- the coordinates of the source, m	Cfac	- the facade correction, dB(A)
Lsr	- the slant distance between the source and NSR, m	CNL	- the corrected noise level, dB(A)(30 minutes)

NSR		RYTE2, Yau Tong Estate Redevelopment (Phase 2)		Xr: 842545.3 Yr: 817778.8 Hr: 25									
Area 1		Sound Power Level,	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842230	817763	1.5	316.3	0	-50.0	-0.9	0.0	3	56.1
CNP 023	Breakers	108	2	842230	817763	1.5	316.3	3	-50.0	-0.9	0.0	3	55.1
CNP 101	Generator	108	1	842230	817763	1.5	316.3	0	-50.0	-0.9	0.0	3	52.1
CNP 003	Air compressor	104	1	842230	817763	1.5	316.3	0	-50.0	-0.9	0.0	3	48.1
CNP 067	Dump truck	117	1	842230	817763	1.5	316.3	0	-50.0	-0.9	0.0	3	61.1
CNP 021	Bar bender and cutter	90	2	842230	817763	1.5	316.3	3	-50.0	-0.9	0.0	3	37.1
<b>Sub-total</b>												<b>63.5</b>	<b>Sub-Total SWL = 119</b>
Area 2		Sound Power Level,	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842400	817674	1.5	180.3	0	-45.0	0.0	0.0	3	62.0
CNP 023	Breakers	108	2	842400	817674	1.5	180.3	3	-45.1	0.0	0.0	3	60.9
CNP 101	Generator	108	1	842400	817674	1.5	180.3	0	-45.0	0.0	0.0	3	58.0
CNP 003	Air compressor	104	1	842400	817674	1.5	180.3	0	-45.1	0.0	0.0	3	53.9
CNP 067	Dump truck	117	1	842400	817674	1.5	180.3	0	-45.1	0.0	0.0	3	66.9
CNP 021	Bar bender and cutter	90	2	842400	817674	1.5	180.3	3	-45.1	0.0	0.0	3	42.9
<b>Sub-total</b>												<b>69.3</b>	<b>Sub-Total SWL = 119</b>
Area 3		Sound Power Level,	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842266	817487	1.5	404.5	0	-52.1	-1.1	0.0	3	53.7
CNP 023	Breakers	108	2	842266	817487	1.5	404.5	3	-52.1	-1.1	0.0	3	52.7
CNP 101	Generator	108	1	842266	817487	1.5	404.5	0	-52.1	-1.1	0.0	3	49.7
CNP 003	Air compressor	104	1	842266	817487	1.5	404.5	0	-52.1	-1.1	0.0	3	45.7
CNP 067	Dump truck	117	1	842266	817487	1.5	404.5	0	-52.1	-1.1	0.0	3	58.7
CNP 021	Bar bender and cutter	90	2	842266	817487	1.5	404.5	3	-52.1	-1.1	0.0	3	34.7
<b>Sub-total</b>												<b>61.2</b>	<b>Sub-Total SWL = 119</b>
<b>Total</b>												<b>70.8</b>	<b>Total SWL * = 124</b>

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any.

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## Definition of terms:

SPL - the sound power level as per EPD's TM

No - the number of items of plant operating simultaneously

% on - the percentage of time with plant operating

Xr, Yr, Hr - the coordinates of the NSR, m

Xs, Ys, Hs - the coordinates of the source, m

Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items

CLsr - the correction for slant distance between the source and the NSR, dB(A)

Calm - the air absorption using CONCAWE methodology for distance greater than 300m

Csri - the sound reduction provided by barrier/enclosure/building envelope

Cfac - the facade correction, dB(A)

CNL - the corrected noise level, dB(A)(30 minutes)

NSR		RYCT, Yau Tong Centre											Xr : 842580 Yr : 817320 Hr : 25	
Area 1		Sound Power Level		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842085	817740	1.5	649.6	0	-56.2	-1.8	-10.0	3	38.9	
CNP 023	Breakers	108	2	842085	817740	1.5	649.6	3	-56.3	-1.8	-10.0	3	37.9	
CNP 101	Generator	108	1	842085	817740	1.5	649.6	0	-56.2	-1.8	-10.0	3	34.9	
CNP 003	Air compressor	104	1	842085	817740	1.5	649.6	0	-56.3	-1.8	-10.0	3	30.9	
CNP 067	Dump truck	117	1	842085	817740	1.5	649.6	0	-56.3	-1.8	-10.0	3	43.9	
CNP 021	Bar bender and cutter	90	2	842085	817740	1.5	649.6	3	-56.3	-1.8	-10.0	3	19.9	
<b>Sub-total</b>													<b>46.4</b>	<b>Sub-Total SWL = 119</b>
Area 2		Sound Power Level		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842440	817565	1.5	283.2	0	-49.0	0.0	-10.0	3	48.0	
CNP 023	Breakers	108	2	842440	817565	1.5	283.2	3	-49.0	0.0	-10.0	3	47.0	
CNP 101	Generator	108	1	842440	817565	1.5	283.2	0	-49.0	0.0	-10.0	3	44.0	
CNP 003	Air compressor	104	1	842440	817565	1.5	283.2	0	-49.0	0.0	-10.0	3	40.0	
CNP 067	Dump truck	117	1	842440	817565	1.5	283.2	0	-49.0	0.0	-10.0	3	53.0	
CNP 021	Bar bender and cutter	90	2	842440	817565	1.5	283.2	3	-49.0	0.0	-10.0	3	29.0	
<b>Sub-total</b>													<b>55.4</b>	<b>Sub-Total SWL = 119</b>
Area 3		Sound Power Level		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842240	817426	1.5	356.9	0	-51.0	-1.0	-10.0	3	45.0	
CNP 023	Breakers	108	2	842240	817426	1.5	356.9	3	-51.1	-1.0	-10.0	3	44.0	
CNP 101	Generator	108	1	842240	817426	1.5	356.9	0	-51.0	-1.0	-10.0	3	41.0	
CNP 003	Air compressor	104	1	842240	817426	1.5	356.9	0	-51.1	-1.0	-10.0	3	37.0	
CNP 067	Dump truck	117	1	842240	817426	1.5	356.9	0	-51.1	-1.0	-10.0	3	50.0	
CNP 021	Bar bender and cutter	90	2	842240	817426	1.5	356.9	3	-51.1	-1.0	-10.0	3	26.0	
<b>Sub-total</b>													<b>52.4</b>	<b>Sub-Total SWL = 119</b>
<b>Total</b>											<b>57.5</b>	<b>Total SWL * = 124</b>		

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## Definition of terms:

SPL	- the sound power level as per EPD's TM	Cno	- correction for no. of plant items
No.	- the number of items of plant operating simultaneously	CLsr	- the correction for slant distance between the source and the NSR, dB(A)
% on	- the percentage of time with plant operating	Catm	- the air absorption using CONCAWE methodology for distance greater than 300m
Xr, Yr, Hr	- the coordinates of the NSR, m	Csri	- the sound reduction provided by barrier/enclosure/building envelope
Xs, Ys, Hs	- the coordinates of the source, m	Cfac	- the facade correction, dB(A)
Lsr	- the slant distance between the source and NSR, m	CNL	- the corrected noise level, dB(A)(30 minutes)

NSR		RCKL Houses at Cha Kwo Ling		Xr: 841685 Yr: 817860 Hr: 20										
Area 1		Sound Power Level,		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842015	817770	1.5	342.6	0	-50.7	-1.0	-10.0	3	45.4	
CNP 023	Breakers	108	2	842015	817770	1.5	342.6	3	-50.7	-1.0	-10.0	3	44.4	
CNP 101	Generator	108	1	842015	817770	1.5	342.6	0	-50.7	-1.0	-10.0	3	41.4	
CNP 003	Air compressor	104	1	842015	817770	1.5	342.6	0	-50.7	-1.0	-10.0	3	37.3	
CNP 067	Dump truck	117	1	842015	817770	1.5	342.6	0	-50.7	-1.0	-10.0	3	50.3	
CNP 021	Bar bender and cutter	90	2	842015	817770	1.5	342.6	3	-50.7	-1.0	-10.0	3	26.4	
<b>Sub-total</b>												<b>52.8</b>	<b>Sub-Total SWL = 119</b>	
Area 2		Sound Power Level,		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842350	817670	1.5	691.9	0	-56.8	-1.9	-10.0	3	38.3	
CNP 023	Breakers	108	2	842350	817670	1.5	691.9	3	-56.8	-1.9	-10.0	3	37.3	
CNP 101	Generator	108	1	842350	817670	1.5	691.9	0	-56.8	-1.9	-10.0	3	34.3	
CNP 003	Air compressor	104	1	842350	817670	1.5	691.9	0	-56.8	-1.9	-10.0	3	30.3	
CNP 067	Dump truck	117	1	842350	817670	1.5	691.9	0	-56.8	-1.9	-10.0	3	43.3	
CNP 021	Bar bender and cutter	90	2	842350	817670	1.5	691.9	3	-56.8	-1.9	-10.0	3	19.3	
<b>Sub-total</b>												<b>45.7</b>	<b>Sub-Total SWL = 119</b>	
Area 3		Sound Power Level,		Source location & distance				Corrections					CNL	
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842200	817450	1.5	658.5	0	-56.4	-1.8	0.0	3	48.8	
CNP 023	Breakers	108	2	842200	817450	1.5	658.5	3	-56.4	-1.8	0.0	3	47.8	
CNP 101	Generator	108	1	842200	817450	1.5	658.5	0	-56.4	-1.8	0.0	3	44.8	
CNP 003	Air compressor	104	1	842200	817450	1.5	658.5	0	-56.4	-1.8	0.0	3	40.8	
CNP 067	Dump truck	117	1	842200	817450	1.5	658.5	0	-56.4	-1.8	0.0	3	53.8	
CNP 021	Bar bender and cutter	90	2	842200	817450	1.5	658.5	3	-56.4	-1.8	0.0	3	29.8	
<b>Sub-total</b>												<b>56.2</b>	<b>Sub-Total SWL = 119</b>	
<b>Total</b>												<b>58.1</b>	<b>Total SWL * = 124</b>	

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% on - the percentage of time with plant operating

Xr, Yr, Hr - the coordinates of the NSR, m

Xs, Ys, Hs - the coordinates of the source, m

Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items

CLsr - the correction for slant distance between the source and the NSR, dB(A)

Calm - the air absorption using CONCAWE methodology for distance greater than 300m

Csri - the sound reduction provided by barrier/enclosure/building envelope

Cfac - the facade correction, dB(A)

CNL - the corrected noise level, dB(A)(30 minutes)

NSR	REHC1, Eastern Harbour Crossing (Phase 1)		Xr: 842357.7 Yr: 817990.8 Hr: 30										
Area 1	Sound Power Level		No.	Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842116	817782	1.5	320.5	0	-50.1	-0.9	0.0	3	56.0
CNP 023	Breakers	108	2	842116	817782	1.5	320.5	3	-50.1	-0.9	0.0	3	55.0
CNP 101	Generator	108	1	842116	817782	1.5	320.5	0	-50.1	-0.9	0.0	3	52.0
CNP 003	Air compressor	104	1	842116	817782	1.5	320.5	0	-50.1	-0.9	0.0	3	48.0
CNP 067	Dump truck	117	1	842116	817782	1.5	320.5	0	-50.1	-0.9	0.0	3	61.0
CNP 021	Bar bender and cutter	90	2	842116	817782	1.5	320.5	3	-50.1	-0.9	0.0	3	37.0
												<b>Sub-total</b>	<b>63.4</b>
												<b>Sub-Total</b>	<b>SWL = 119</b>
Area 2	Sound Power Level		No.	Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842379	817707	1.5	286.4	0	-49.1	0.0	0.0	3	57.9
CNP 023	Breakers	108	2	842379	817707	1.5	286.4	3	-49.1	0.0	0.0	3	56.9
CNP 101	Generator	108	1	842379	817707	1.5	286.4	0	-49.1	0.0	0.0	3	53.9
CNP 003	Air compressor	104	1	842379	817707	1.5	286.4	0	-49.1	0.0	0.0	3	49.9
CNP 067	Dump truck	117	1	842379	817707	1.5	286.4	0	-49.1	0.0	0.0	3	62.9
CNP 021	Bar bender and cutter	90	2	842379	817707	1.5	286.4	3	-49.1	0.0	0.0	3	38.9
												<b>Sub-total</b>	<b>65.3</b>
												<b>Sub-Total</b>	<b>SWL = 119</b>
Area 3	Sound Power Level		No.	Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))		Xs	Ys	Hs	Lsr	Cno	CLsr	Calm	Csri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842223	817461	1.5	547.1	0	-54.7	-1.5	0.0	3	50.7
CNP 023	Breakers	108	2	842223	817461	1.5	547.1	3	-54.8	-1.5	0.0	3	49.7
CNP 101	Generator	108	1	842223	817461	1.5	547.1	0	-54.7	-1.5	0.0	3	46.7
CNP 003	Air compressor	104	1	842223	817461	1.5	547.1	0	-54.8	-1.5	0.0	3	42.7
CNP 067	Dump truck	117	1	842223	817461	1.5	547.1	0	-54.8	-1.5	0.0	3	55.7
CNP 021	Bar bender and cutter	90	2	842223	817461	1.5	547.1	3	-54.8	-1.5	0.0	3	31.7
												<b>Sub-total</b>	<b>58.1</b>
												<b>Sub-Total</b>	<b>SWL = 119</b>
												<b>Total</b>	<b>67.9</b>
												<b>Total SWL * =</b>	<b>124</b>

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any

## Calculation of Construction Noise Levels (Demolition of existing buildings)

Job Title: Yau Tong Bay Reclamation

Job No.: 21253

Date: 08-11-99

## Definition of terms:

SPL - the sound power level as per EPD's TM

No. - the number of items of plant operating simultaneously

% on - the percentage of time with plant operating

Xr, Yr, Hr - the coordinates of the NSR, m

Xs, Ys, Hs - the coordinates of the source, m

Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items

CLsr - the correction for slant distance between the source and the NSR, dB(A)

Catm - the air absorption using CONCAWE methodology for distance greater than 300m

Cari - the sound reduction provided by barrier/enclosure/building envelope

Cfac - the facade correction, dB(A)

CNL - the corrected noise level, dB(A)/30 minutes

NSR	REHC2, Eastern Harbour Crossing (Phase 2)		Xr: 842187.1 Yr: 817927.0 Hr: 32											
Area 1			Sound Power Level	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))	Xs		Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842099	817776	1.5	177.5	0	-44.9	0.0	0.0	3	62.1	
CNP 023	Breakers	108	2	842099	817776	1.5	177.5	3	-45.0	0.0	0.0	3	61.0	
CNP 101	Generator	108	1	842099	817776	1.5	177.5	0	-44.9	0.0	0.0	3	58.1	
CNP 003	Air compressor	104	1	842099	817776	1.5	177.5	0	-45.0	0.0	0.0	3	54.0	
CNP 067	Dump truck	117	1	842099	817776	1.5	177.5	0	-45.0	0.0	0.0	3	67.0	
CNP 021	Bar bender and cutter	90	2	842099	817776	1.5	177.5	3	-45.0	0.0	0.0	3	43.0	
												<b>Sub-total</b>	<b>69.5</b>	<b>Sub-Total SWL = 119</b>
Area 2			Sound Power Level	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))	Xs		Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842299	817774	1.5	191.7	0	-45.5	0.0	0.0	3	61.5	
CNP 023	Breakers	108	2	842299	817774	1.5	191.7	3	-45.7	0.0	0.0	3	60.4	
CNP 101	Generator	108	1	842299	817774	1.5	191.7	0	-45.5	0.0	0.0	3	57.5	
CNP 003	Air compressor	104	1	842299	817774	1.5	191.7	0	-45.7	0.0	0.0	3	53.3	
CNP 067	Dump truck	117	1	842299	817774	1.5	191.7	0	-45.7	0.0	0.0	3	66.3	
CNP 021	Bar bender and cutter	90	2	842299	817774	1.5	191.7	3	-45.7	0.0	0.0	3	42.4	
												<b>Sub-total</b>	<b>68.8</b>	<b>Sub-Total SWL = 119</b>
Area 3			Sound Power Level	No.	Source location & distance				Corrections				CNL	
Code	Description	SPL (dB(A))	Xs		Ys	Hs	Lsr	Cno	CLsr	Catm	Csri	Cfac	dB(A)	
CNP 081	Excavator/loader, wheeled tracked	112	1	842215	817459	1.5	470.1	0	-53.4	-1.3	0.0	3	52.3	
CNP 023	Breakers	108	2	842215	817459	1.5	470.1	3	-53.4	-1.3	0.0	3	51.3	
CNP 101	Generator	106	1	842215	817459	1.5	470.1	0	-53.4	-1.3	0.0	3	48.3	
CNP 003	Air compressor	104	1	842215	817459	1.5	470.1	0	-53.4	-1.3	0.0	3	44.2	
CNP 067	Dump truck	117	1	842215	817459	1.5	470.1	0	-53.4	-1.3	0.0	3	57.2	
CNP 021	Bar bender and cutter	90	2	842215	817459	1.5	470.1	3	-53.4	-1.3	0.0	3	33.3	
												<b>Sub-total</b>	<b>59.7</b>	<b>Sub-Total SWL = 119</b>
												<b>Total</b>	<b>72.4</b>	<b>Total SWL * = 124</b>

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any.

## Calculation of Construction Noise Levels (Demolition of existing buildings)

Job Title.: Yau Tong Bay Reclamation

Job No.: 21253

Date: 08-11-99

## Definition of terms:

SPL - the sound power level as per EPD's TM  
 No. - the number of items of plant operating simultaneously  
 % on - the percentage of time with plant operating  
 Xr, Yr, Hr - the coordinates of the NSR, m  
 Xs, Ys, Hs - the coordinates of the source, m  
 Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items  
 CLsr - the correction for slant distance between the source and the NSR, dB(A)  
 Catm - the air absorption using CONCAWE methodology for distance greater than 300m.  
 Cstri - the sound reduction provided by barrier/enclosure/building envelope.  
 Cfac - the facade correction, dB(A)  
 CNL - the corrected noise level, dB(A)(30 minutes)

NSR		RSCH1, School to the N-E (9/1999)		Xr : 842494.6 Yr : 817896.5 Hr : 25									
Area 1		Sound Power Level,		Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Cstri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842211	817799	1.5	300.5	0	-49.5	-0.8	0.0	3	58.8
CNP 023	Breakers	108	2	842211	817799	1.5	300.5	3	-49.6	-0.8	0.0	3	55.6
CNP 101	Generator	108	1	842211	817799	1.5	300.5	0	-49.5	-0.8	0.0	3	52.6
CNP 003	Air compressor	104	1	842211	817799	1.5	300.5	0	-49.6	-0.8	0.0	3	48.6
CNP 067	Dump truck	117	1	842211	817799	1.5	300.5	0	-49.6	-0.8	0.0	3	61.6
CNP 021	Bar bender and cutter	90	2	842211	817799	1.5	300.5	3	-49.6	-0.8	0.0	3	37.6
<b>Sub-total</b>												<b>64.0</b>	<b>Sub-Total SWL = 119</b>
Area 2		Sound Power Level,		Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Cstri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842393	817683	1.5	237.5	0	-47.5	0.0	0.0	3	59.5
CNP 023	Breakers	108	2	842393	817683	1.5	237.5	3	-47.5	0.0	0.0	3	58.5
CNP 101	Generator	108	1	842393	817683	1.5	237.5	0	-47.5	0.0	0.0	3	55.5
CNP 003	Air compressor	104	1	842393	817683	1.5	237.5	0	-47.5	0.0	0.0	3	51.5
CNP 067	Dump truck	117	1	842393	817683	1.5	237.5	0	-47.5	0.0	0.0	3	64.5
CNP 021	Bar bender and cutter	90	2	842393	817683	1.5	237.5	3	-47.5	0.0	0.0	3	40.5
<b>Sub-total</b>												<b>66.9</b>	<b>Sub-Total SWL = 119</b>
Area 3		Sound Power Level,		Source location & distance				Corrections					CNL
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Cstri	Cfac	dB(A)
CNP 081	Excavator/loader, wheeled tracked	112	1	842237	817470	1.5	499.2	0	-54.0	-1.4	0.0	3	51.6
CNP 023	Breakers	108	2	842237	817470	1.5	499.2	3	-54.0	-1.4	0.0	3	50.6
CNP 101	Generator	108	1	842237	817470	1.5	499.2	0	-54.0	-1.4	0.0	3	47.6
CNP 003	Air compressor	104	1	842237	817470	1.5	499.2	0	-54.0	-1.4	0.0	3	43.6
CNP 067	Dump truck	117	1	842237	817470	1.5	499.2	0	-54.0	-1.4	0.0	3	56.6
CNP 021	Bar bender and cutter	90	2	842237	817470	1.5	499.2	3	-54.0	-1.4	0.0	3	32.6
<b>Sub-total</b>												<b>59.1</b>	<b>Sub-Total SWL = 119</b>

**Total 69.2    Total SWL \* = 124**

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any.



## Calculation of Construction Noise Levels (Demolition of existing buildings)

Job Title: Yau Tong Bay Reclamation

Job No.: 21253

Date: 08-11-99

## Definition of terms:

SPL	- the sound power level as per EPD's TM	Cno	- correction for no. of plant items
No.	- the number of items of plant operating simultaneously	CLsr	- the correction for slant distance between the source and the NSR, dB(A)
% on	- the percentage of time with plant operating	Ca <sub>tm</sub>	- the air absorption using CONCAWE methodology for distance greater than 300m
Xr, Yr, Hr	- the coordinates of the NSR, m	Csri	- the sound reduction provided by barrier/enclosure/building envelope
Xs, Ys, Hs	- the coordinates of the source, m	C <sub>fac</sub>	- the facade correction, dB(A)
Lsr	- the slant distance between the source and NSR, m	CNL	- the corrected noise level, dB(A)(30 minutes)

NSR		RSCH2, School to the S-E (9/1999)		Xr : 842560.0 Yr : 817706.3 Hr : 25												
Area 1		Sound Power Level		Source location & distance				Corrections					CNL	dB(A)		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Ca <sub>tm</sub>	Csri	C <sub>fac</sub>				
CNP 081	Excavator/loader, wheeled tracked	112	1	842210	817744	1.5	353.1	0	-50.9	-1.0	0.0	3	55.1			
CNP 023	Breakers	108	2	842210	817744	1.5	353.1	3	-51.0	-1.0	0.0	3	54.1			
CNP 101	Generator	108	1	842210	817744	1.5	353.1	0	-50.9	-1.0	0.0	3	51.1			
CNP 003	Air compressor	104	1	842210	817744	1.5	353.1	0	-51.0	-1.0	0.0	3	47.1			
CNP 067	Dump truck	117	1	842210	817744	1.5	353.1	0	-51.0	-1.0	0.0	3	60.1			
CNP 021	Bar bender and cutter	90	2	842210	817744	1.5	353.1	3	-51.0	-1.0	0.0	3	36.1			
<b>Sub-total</b>												<b>62.5</b>				
<b>Sub-Total SWL =</b>												<b>119</b>				
Area 2		Sound Power Level		Source location & distance				Corrections					CNL	dB(A)		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Ca <sub>tm</sub>	Csri	C <sub>fac</sub>				
CNP 081	Excavator/loader, wheeled tracked	112	1	842404	817666	1.5	162.4	0	-44.1	0.0	0.0	3	62.9			
CNP 023	Breakers	108	2	842404	817666	1.5	162.4	3	-44.2	0.0	0.0	3	61.8			
CNP 101	Generator	108	1	842404	817666	1.5	162.4	0	-44.1	0.0	0.0	3	58.9			
CNP 003	Air compressor	104	1	842404	817666	1.5	162.4	0	-44.2	0.0	0.0	3	54.6			
CNP 067	Dump truck	117	1	842404	817666	1.5	162.4	0	-44.2	0.0	0.0	3	67.8			
CNP 021	Bar bender and cutter	90	2	842404	817666	1.5	162.4	3	-44.2	0.0	0.0	3	43.6			
<b>Sub-total</b>												<b>70.2</b>				
<b>Sub-Total SWL =</b>												<b>119</b>				
Area 3		Sound Power Level		Source location & distance				Corrections					CNL	dB(A)		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Ca <sub>tm</sub>	Csri	C <sub>fac</sub>				
CNP 081	Excavator/loader, wheeled tracked	112	1	842336	817529	1.5	287.1	0	-49.1	0.0	0.0	3	57.9			
CNP 023	Breakers	108	2	842336	817529	1.5	287.1	3	-49.2	0.0	0.0	3	56.9			
CNP 101	Generator	108	1	842336	817529	1.5	287.1	0	-49.1	0.0	0.0	3	53.9			
CNP 003	Air compressor	104	1	842336	817529	1.5	287.1	0	-49.2	0.0	0.0	3	49.8			
CNP 067	Dump truck	117	1	842336	817529	1.5	287.1	0	-49.2	0.0	0.0	3	62.6			
CNP 021	Bar bender and cutter	90	2	842336	817529	1.5	287.1	3	-49.2	0.0	0.0	3	38.9			
<b>Sub-total</b>												<b>65.3</b>				
<b>Sub-Total SWL =</b>												<b>119</b>				
<b>Total</b>												<b>72.0</b>				
<b>Total SWL * =</b>												<b>124</b>				

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any

## Calculation of Construction Noise Levels (Demolition of existing buildings)

Job Title.: Yau Tong Bay Reclamation

Job No.: 21253

Date: 08-11-99

## Definition of terms:

SPL - the sound power level as per EPD's TM  
 No. - the number of items of plant operating simultaneously  
 % on - the percentage of time with plant operating  
 Cr, Yr, Hr - the coordinates of the NSR, m  
 Cs, Ys, Hs - the coordinates of the source, m  
 Lsr - the slant distance between the source and NSR, m

Cno - correction for no. of plant items  
 CLsr - the correction for slant distance between the source and the NSR, dB(A)  
 Catm - the air absorption using CONCAWE methodology for distance greater than 300m  
 Csr1 - the sound reduction provided by barrier/enclosure/building envelope  
 Cfac - the facade correction, dB(A)  
 CNL - the corrected noise level, dB(A)(30 minutes)

NSR		RSCH3, Schools at ASD site (9/2004)		Xr : 842210.7 Yr : 817839.9 Hr : 10											
Area 1		Sound Power Level		Source location & distance				Corrections					CNL		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csr1	Cfac	dB(A)		
DNP 081	Excavator/loader, wheeled tracked	112	1	842121	817780	1.5	107.6	0	-40.6	0.0	0.0	3	66.4		
DNP 023	Breakers	108	2	842121	817780	1.5	107.6	3	-40.6	0.0	0.0	3	65.4		
DNP 101	Generator	108	1	842121	817780	1.5	107.6	0	-40.6	0.0	0.0	3	62.4		
DNP 003	Air compressor	104	1	842121	817780	1.5	107.6	0	-40.6	0.0	0.0	3	58.4		
DNP 067	Dump truck	117	1	842121	817780	1.5	107.6	0	-40.6	0.0	0.0	3	71.4		
DNP 021	Bar bender and cutter	90	2	842121	817780	1.5	107.6	3	-40.6	0.0	0.0	3	47.4		
<b>Sub-total</b>													<b>73.8</b>	<b>Sub-Total SWL =</b>	<b>119</b>
Area 2		Sound Power Level		Source location & distance				Corrections					CNL		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csr1	Cfac	dB(A)		
DNP 081	Excavator/loader, wheeled tracked	112	1	842314	817731	1.5	150.1	0	-43.5	0.0	0.0	3	63.5		
DNP 023	Breakers	108	2	842314	817731	1.5	150.1	3	-43.5	0.0	0.0	3	62.5		
DNP 101	Generator	108	1	842314	817731	1.5	150.1	0	-43.5	0.0	0.0	3	59.5		
DNP 003	Air compressor	104	1	842314	817731	1.5	150.1	0	-43.5	0.0	0.0	3	55.5		
DNP 067	Dump truck	117	1	842314	817731	1.5	150.1	0	-43.5	0.0	0.0	3	68.5		
DNP 021	Bar bender and cutter	90	2	842314	817731	1.5	150.1	3	-43.5	0.0	0.0	3	44.5		
<b>Sub-total</b>													<b>70.9</b>	<b>Sub-Total SWL =</b>	<b>119</b>
Area 3		Sound Power Level		Source location & distance				Corrections					CNL		
Code	Description	SPL (dB(A))	No.	Xs	Ys	Hs	Lsr	Cno	CLsr	Catm	Csr1	Cfac	dB(A)		
DNP 081	Excavator/loader, wheeled tracked	112	1	842217	817460	1.5	379.9	0	-51.8	-1.1	0.0	3	54.3		
DNP 023	Breakers	108	2	842217	817460	1.5	379.9	3	-51.8	-1.1	0.0	3	53.4		
DNP 101	Generator	108	1	842217	817460	1.5	379.9	0	-51.8	-1.1	0.0	3	50.3		
DNP 003	Air compressor	104	1	842217	817460	1.5	379.9	0	-51.8	-1.1	0.0	3	46.3		
DNP 067	Dump truck	117	1	842217	817460	1.5	379.9	0	-51.8	-1.1	0.0	3	59.3		
DNP 021	Bar bender and cutter	90	2	842217	817460	1.5	379.9	3	-51.8	-1.1	0.0	3	35.4		
<b>Sub-total</b>													<b>61.8</b>	<b>Sub-Total SWL =</b>	<b>119</b>
<b>Total</b>													<b>75.8</b>	<b>Total SWL * =</b>	<b>124</b>

\* - Sound Power Level with the corrections of plant number and reduction of operating time, if any.