

CITIC PACIFIC
MINING

SINO Iron Project

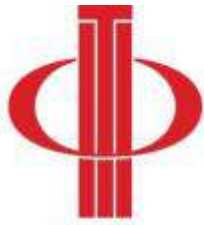
Operational Environmental Management Plan

APPENDIX B

Uncontrolled document when printed.
Printed copy expires one week from print date.
Refer to Server for current version

PRINT DATE: 3 October 2018

**Appendix B SINO Iron Project, Operational Noise
Management Plan, November 2012**



CITIC PACIFIC
MINING

SINO Iron project

Operational Noise Management Plan

November 2012

Uncontrolled document when printed.
Printed copy expires one-week from print date.
Refer to Server for current version
PRINT DATE: 20 November 2012

About this document

Author / Custodianship

Author:	Paul Daly	Custodian:	Bruce Watson
----------------	-----------	-------------------	--------------

Document details

Document No.	DR028097	Revision No.	02
IAP Classification	Proj	Doc. Status	Final

Document revision history

Revision	Date	Change By	Amendment
00			Initial draft for review
01	23/07/2012	HS / PLD	Comments from CPM
02	19/10/2012	HS / PLD	Comments from CPM

Distribution list

When this document is updated, the following people must receive a copy of the updated version:

Name	Position/title
CPM Environment Team	EnvironmentTeam@citicpacificmining.com

Related / referenced documents

Document title	Document ID

Document approval

	Name	Signature	Date
Written by	Paul Daly – Herring Storer Acoustics	PD	19/10/12
Reviewed by	Peter Westcott	PW	30/10/12
Reviewed by	Xander Lodiers	XL	08/11/12
Approved by	Bruce Watson	BW	09/11/12

Contents

Executive Summary	6
1 Introduction	8
1.1 Purpose	8
1.2 Scope.....	8
2 Environmental Management Framework	9
2.1 Project Background	9
2.1.1 Iron Ore Processing Agreement Act 2002	9
2.1.2 Part IV Environment Protection Act 1986	10
2.1.3 Part V Environment Protection Act 1986.....	11
2.2 Criteria.....	12
2.2.1 Mines Safety and Inspection Regulations 1995	12
2.2.2 Operational Noise Criteria	12
2.2.3 Blast Noise Criteria.....	13
2.2.4 Noise Receptors	13
3 Monitored Noise Levels	16
3.1 Methodology.....	16
3.2 Measured Noise Level Results	16
4 Predicted Noise Levels	20
4.1 Noise Modelling Methodology.....	20
4.2 Noise Modelling Results.....	21
5 Operational Noise Management	23
5.1 Objective and Targets	23
5.2 Monitoring Program.....	24
5.2.1 Continuous Monitoring.....	24
5.2.2 Complaints Based Monitoring.....	24
5.3 Management Actions and Control Measures	24
5.3.1 Mine Pit.....	25
5.3.2 Primary Crusher Area	25
5.3.3 Concentrator Process Plant.....	26
5.3.4 Tailings Storage Facility	26
5.3.5 Stockyard and Material Handling Facility.....	26
5.3.6 Barge Loading Facility	27
5.3.7 Desalination Plant	27
5.4 Contingency Action	27
6 Roles and Responsibilities	28
6.1 Staff and Contractors	28
6.2 Environmental Department	28

7 Reporting.....	29
Appendix A – Noise Modelling Contour Plots	30
Appendix B – Monitored Noise Levels	34

References

- *Environmental Protection (Noise) Regulations 1997*
- *AS/NZS 2107:2000 - Acoustics - Recommended design sound levels and reverberation times for building interiors*
- *Ministerial Statement 635 (20 October 2003)*
- *Maunsell / Aecom for Mineralogy Pty Ltd (September 2006) – Construction Phase Noise Management Plan, Iron Ore and Downstream Processing, Cape Preston, Western Australia*
- *Bassett Acoustics for Maunsell Pty Ltd (25 November 2008) - International Minerals (Balmoral South) Iron Ore Mine, Environmental Noise Assessment – Iron Ore Mine and Processing Plant*
- *CITIC Pacific Mining Memorandum (14 May 2008) – Construction of Environmental Management Phase 1 – Mine Terrestrial Activities*
- *AECOM Australia Pty Ltd for Mineralogy Pty Ltd (20 July 2009) – Cape Preston Master Plan – Cumulative Noise Assessment*
- *Lloyd Acoustics for Maunsell Australia Pty Ltd (January 2005) – Noise Impact Assessment, Mineralogy Pty Ltd Project, Iron Ore Mine and Processing Plant, Cape Preston, Western Australia*
- *Lloyd Acoustics for Maunsell Australia Pty Ltd (April 2005) – Noise Impact Assessment, Mineralogy Project, Iron Ore Mine and Processing Plant, Cape Preston, Western Australia – an assessment of the noise emissions during construction and various stages of operation of the proposed iron ore mine*

Executive Summary

A review has been undertaken of the Sino Iron project (the project) for the purpose of formulating an Operational Noise Management Plan, which has been developed to aid the operating management of noise emissions associated with the project and provide guidance as to ongoing procedures for monitoring, review of noise levels, reporting and complaints response.

The noise sensitive premise identified as a part of this study, the Mardie Station Homestead, results in noise levels of 14 dB(A) for a “worst case” operating scenario. This can be compared to the most stringent regulatory criteria of not to exceed 35 dB(A).

Other neighbouring premises have been considered as a part of this study as to the potential impact of noise emissions from the project, even though these premises are not considered noise sensitive as defined under the *Environmental Protection (Noise) Regulations 1997* (the Regulations). Locations such as the Fortescue River Mouth Camp site, which is considered as a non-conforming land use due to the Shire of Roebourne not approving it as a registered camping area result in noise levels of 28 dB(A) for a “worst case” operating scenario.

An assessment of measured noise levels from the continuous monitoring conducted at these two locations around the site have been carried out. These noise levels are based on the project under construction phase, although have been used to relate to expected operational noise levels. No noise complaints have been received to date for any part of the activities conducted at the project.

Generally, noise levels from both the calculated “worst case” operating scenarios and the measured noise levels under the construction phase pose minimal risk at the neighbouring noise sensitive premise and non-conforming land uses. Additionally, studies conducted into the cumulative noise emissions from existing and proposed mining developments in the Cape Preston area have resulted in noise levels of 35 dB(A) at the non-conforming land use (Fortescue River Mouth Camp site) for a worst case operating scenario of four separate mine pits and associated ore processing, transportation and electricity generation facilities.

Generally, given the low noise level and the distance of the noise sensitive premise to the mining operation, noise monitoring is not recommended.

Definitions / Acronym's

Term	Definition
dB	Decibel, the unit used to measure sound pressure levels. It is based on a logarithmic scale hence simple addition and subtraction does not apply.
dB(A)	Decibel measurement according to the "A" weighted scale. The human ear does not respond equally to the same sound pressure at different frequencies. The "A" weighting has predetermined adjustments made at certain frequencies to make the measured sound level approximate to the response of the ear
dB((lin)	Decibel measurement without any adjustment
dB(C)	Decibel measurement according to the "C" weighted scale. Used in the selection of hearing protection
Peak	Sound waves are usually of complex form, normally a mathematical averaging of maximum values is used to measure the effective sound pressure. Where Peak Lin is specified, the maximum value reached in the noise cycle is read on the linear scale. This will always be considerably higher than the usual "slow" dB(A) reading
Leq	Equivalent Continuous Sound Level. During a working day and even a single work cycle the level of noise fluctuates. The Leq measurement integrates these fluctuations to give the equivalent continuous level containing an equal amount of energy over the time of measurement.
LAeq8hr	Suffix "A" denotes measurement to the "A" scale and suffix 8h denotes that the value relates to an eight hour period. This is an expression of noise exposure which may be measured or calculated.
Slow Response	A weighting applied in electronic instruments to an incoming signal which effectively averages the signal over a period of 1sec
Max dB(A)	The highest dB(A) noise level recorded during measurement of a typical work operation. This is not a PEAK measurement.
SPL	Sound pressure level, the physical property measured with a sound level meter expressed as dB . Commonly referred to as noise level and sound level.
Noise Sensitive Premise	Premise referred to in Part C of Schedule 1 of the Environmental Protection Noise Regulations 1997. Example, Mardie Station Homestead.
Non-Conforming Land Use	the existing use (residential, commercial, agricultural, light industrial, etc.) of a parcel of real property which is zoned for a more limited or other use in the city or county's general plan. Example, Fortescue River Mouth Camp.
Neighbouring Residence	General term to describe either conforming or non-conforming premises around the study area Example, Construction Accommodation Camp.

1 Introduction

1.1 Purpose

CITIC Pacific Mining Management Pty Ltd (CPM) is developing an iron ore mining, processing and export facility near Cape Preston, approximately 80 km south-west of Karratha (the Sino Iron project (the project)). The development of the project will result in the creation of a large-scale mining, processing and export operation.

Herring Storer Acoustics have been commissioned by CMP to develop an operational noise management plan for the above project. The purpose of this operational management plan is to correlate measured noise levels in order to provide more accurate noise impact predictions onto surrounding locales during operations. With this updated model, operational objectives and targets will be identified with monitoring and management strategies as outlined in this plan.

1.2 Scope

This Operational Noise Management Plan applies to terrestrial project activities that may generate noise including mining, beneficiation, stockpiling, reclamation, desalination and the Cape bulk loading export phases of operation. Under Part V of the *Environmental Protection Act 1986*, there are three distinct management areas, these being:

- Mining and Processing on tenements M08/123-125 and M08/264-266;
- Cape Operations on tenement G08/52; and
- Port Operations on tenements G08/51-52.

All project personnel, including operational contractors, will operate within this Operational Noise Management Plan.

This plan has been developed to address:

- Part IV – *Environment Protection Act 1986* commitment 2 of Ministerial Statement 635, which requires an operational environment management programme and a noise management plan to be developed for the Project;
- Replace the Noise Management Plan required under Condition 12 of Ministerial Statement 635;
- Part V, *Environment Protection Act 1986* requirements for an operational Noise Management Plan requested under condition 7 of Works Approval WA5505/2011/1; and
- Compliment Noise Management Plans required under the *Mines Safety and Inspection Regulations 1995*.

2 Environmental Management Framework

2.1 Project Background

Mining at the project site will focus on mining iron ore in the form of magnetite at the George Palmer Ore body located at Cape Preston, located approximately 80 km south-west of Karratha in the Pilbara Region of Western Australia. At peak production, mining of ore and waste will be at a rate of around 95Mtpa (consisting of 10.6Mtpa waste and 84.4Mtpa ore feed).

At its maximum extent the open pit will be 2.5 km long and up to 1 km wide with 12 m benches to a depth of around 220 m. Ore will be mined using conventional blast and haul methods and waste rock will be deposited external to the pit in allocated waste dump areas. Ore will be crushed in-pit using a semi-mobile crushing plant. Crushed ore will be transferred to the concentrator on an inclined conveyor. The concentrator process is a single stage of open-circuit crushing, two stages of closed-circuit grinding and magnetic separation, concentrate and tailings thickening, concentrate dewatering and tailings disposal.

The concentrator will produce 21.6Mtpa of magnetite concentrate, 6Mtpa of magnetite pellets and 57.8Mtpa of tailings that will be deposited to a conventional paddock style tailings storage facility (TSF). The concentrate, as slurry, will be transferred to the port facilities via a 29 km pipeline (partly underground) where it will be dewatered and either stockpiled as concentrate or processed into pellets. Up to 1 Mt of material can be stored at the port prior to shipping.

Additional infrastructures include a 450 MW natural gas fired power station, access and haul roads, mining workshop, construction, accommodation village 123, and power and water distribution networks.

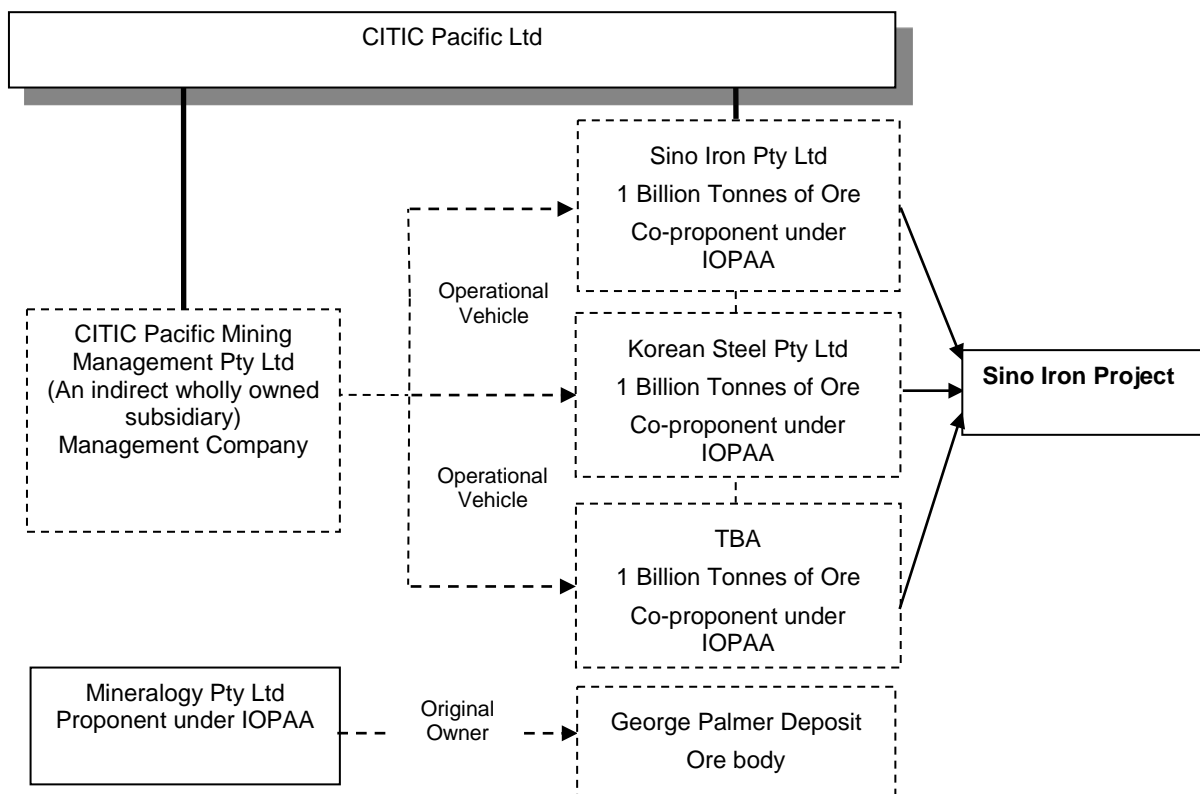
The port facilities will comprise a jetty head, 1.1 km breakwater, conveyor, ship-loader and small craft harbour to accommodate tugs and other support vessels. Other facilities operated by CPM at Cape Preston will include a dewatering plant, pellet plant, 44 GLpa desalination plant, stockyard and laydown areas and various administration buildings and workshops.

2.1.1 Iron Ore Processing Agreement Act 2002

The *Iron Ore Processing (Mineralogy Pty Ltd) Agreement Act 2002* (IOPAA) is an agreement between the Western Australian government, Mineralogy and six subsidiary companies. CITIC Pacific Limited purchased the mining rights for the George Palmer Orebody at Cape Preston from Mineralogy in March 2006, thereby becoming a co-proponent to the IOPAA. The mining rights purchased are for 3 billion tonne contained entirely within Mining Leases M08/123, M08/124 and M08/125.

CPM is an Australian company that is wholly owned by CITIC Pacific Limited. CPM was established to manage the development of the George Palmer Deposit, associated processing, and export infrastructure. However, as the owner of the tenements and main proponent of the IOPAA, Mineralogy retains the ultimate liability for the leases. CPM also has access to Mining Leases M08/264 – M08/266 and General Purposes Leases G08/52-

G08/54 and Miscellaneous Lease L08/20. Despite this, CPM is responsible for all aspects of implementation of the project. The chart below details the ownership structure.



2.1.2 Part IV Environment Protection Act 1986

As part of the IOPPA agreement with Mineralogy, CPM has also accepted co-responsibility for compliance with the environmental conditions and commitments listed in Ministerial Statement 635.

The project was approved by the Minister for the Environment under Statement 635 in October 2003 subject to Conditions and Commitments. The pertinent condition relating to noise is contained under Condition 12 – *Noise Management Plan*, which states:

12-1 Prior to the commencement of ground-disturbing activities, the proponent shall prepare a Noise Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This Plan shall include:

- 1. modelling of cumulative noise levels associated with components of the expanded project at personnel accommodation sites, the project boundary and at the public campsite near the mouth of the Fortescue River; and*
- 2. a strategy to protect popular "visitor locations" from undue noise levels associated with the project.*

12-2 The proponent shall implement the Noise Management Plan required by Condition 12-1.

12-3 The proponent shall make the Noise Management Plan required by Condition 12-1 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

A Noise Management Plan to address the above-mentioned condition was prepared by Maunsell Australia Pty Ltd to the satisfaction of the Department of Environment and Conservation (DEC) (approved 13 October 2006).

Furthermore, an assessment of cumulative noise emissions from existing and proposed mining developments in the Cape Preston area was previously completed. This assessment incorporated the four separate mine pits and associated ore processing, transportation and electricity generation facilities (Aecom 2009). Whilst this assessment provided general advice and predicted noise levels, the purpose of the Operational Noise Management Plan (this document) is to correlate measured noise levels and provide guidance to operational noise from the project only.

2.1.3 Part V Environment Protection Act 1986

A license to operate L8308/2008/1 is issued for the project at the prescribed premises boundary, currently defined as tenements M08/123-125, for the following prescribed categories:

- 56 - Sewage Facility;
- 64 - Class II Landfill; and
- 73 - Bulk Storage of Chemicals

In addition to this there are currently five separate Works Approvals applicable to the project under Part V of the *Environmental Protection Act 1986*. These permit the following construction and commissioning of activities to occur:

- Electric Power Generation, prescribed premises category 52, on M08/124;
- Primary Crushing Facility, prescribed premises category 5, on M08/125 and Class III Landfill Facility, prescribed premises category 64 on M08/123;
- Tailings Storage Facility and Concentrator, prescribed premises category 5, on M08/123-125, G08/52 and G08/264-266;
- Desalination Plant, prescribed premises category 54A and a Bulk Loading Facility, prescribed premises category 58, on G08/52;
- Modification of Wastewater Treatment Plant, prescribed premises category 54, on M08/123.

Three commissioning plans were submitted to the DEC related to the primary crushing facility, desalination plant and concentrator/tailings storage facility. These commissioning plans outline the monitoring that will be undertaken during the phased commissioning sequence for relevant major components of each works approval.

Due to the large number of works approvals and the extended timeframe required for commissioning of plant infrastructure a phased approach to transferring works approvals to operational licences was negotiated with the DEC.

Due to the size of the project and the DEC's requirement for contiguous premises boundaries, three separate Operational Licenses will be required to cover all prescribed activities associated with these works approvals. Of these only two will be applicable to terrestrial activities. Currently these are believed to be:

- L8308 with the premises boundary expanded to encompass M08/123-125 and M08/264-266; and
- A second licence for terrestrial Cape Preston activities on G08/52.

A licence application for the Transshipper was submitted to the DEC in June 2012.

2.2 Criteria

2.2.1 Mines Safety and Inspection Regulations 1995

Monitoring for the potential noise impacts on the workforce is also undertaken within the DEC premises boundary. This monitoring is governed by the *Mines Safety and Inspection Regulations 1995* and results can be an early trigger for adopting management measures. However, as the objective of this management plan is around environmental noise impacts and not health, it is not discussed further within this document.

2.2.2 Operational Noise Criteria

The *Environmental Protection (Noise) Regulations 1997* stipulate the allowable noise levels at any noise sensitive premises from other premises. The allowable noise level is determined by the calculation of an influencing factor, which is added to the baseline criteria as set out in Table 1 of the Regulations. At noise sensitive premises of concern, located around the site, the influencing factor would be 0. Therefore, the assigned noise level at the various times of the day would be as listed in Table 2.2.1.1 below.

Table 2.2.1.1 - Assigned Noise Levels at Residence

Premise Receiving Noise	Time of Day	Assigned Noise Level		
		L _{A10}	L _{A1}	L _{max}
Noise Sensitive Premises	0700 - 1900 hours - Monday to Saturday	45	55	65
	0900 - 1900 hours - Sunday & Public Holidays	40	50	65
	1900 - 2200 hours - All Days	40	50	55
	2200 - 0700 hours - Monday to Saturday	35	45	55
	2200 - 0900 hours - Sunday & Public Holidays	35	45	55
Industrial and Utility Premises	All Hours	65	80	90

Note: The L_{A10} noise level is the noise that is exceeded for 10% of the time.
The L_{A1} noise level is the noise that is exceeded for 1% of the time.
The L_{Amax} noise level is the maximum noise level recorded.

It is a requirement that noise from the site be free of annoying characteristics (tonality, modulation and impulsiveness) at other premises, defined below as per Regulation 9.

- “**impulsiveness**” means a variation in the emission of a noise where the difference between L_{Apeak} and L_{Amax Slow} is more than 15dB when determined for a single representative event;
- “**modulation**” means a variation in the emission of noise that –
- (a) is more than 3dB L_{A Fast} or is more than 3dB L_{A Fast} in any one-third octave band;

- “tonality”**
- (b) is present for more at least 10% of the representative assessment period; and
 - (c) is regular, cyclic and audible;
- means the presence in the noise emission of tonal characteristics where the difference between –
- (a) the A-weighted sound pressure level in any one-third octave band; and
 - (b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands, is greater than 3 dB when the sound pressure levels are determined as $L_{Aeq,T}$ levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as $L_{A\ Slow}$ levels.

Where the above characteristics are present and cannot be practicably removed, the following adjustments are made to the measured or predicted level at other premises.

Table 2.2.1.2 – Adjustments for Annoying Characteristics

Where tonality is present	Where modulation is present	Where impulsiveness is present
+ 5 dB	+ 5 dB	+ 10 dB

2.2.3 Blast Noise Criteria

Blasting levels are covered by Regulation 11, which provides the following criteria:

- (3) No air blast level resulting from blasting on any premises or public place, when received at any other premises, may exceed –
 - (a) 125dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on Monday to Saturday inclusive; or
 - (b) 120dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on a Sunday or public holiday.
- (4) Notwithstanding sub-regulation (3), air blast levels for 9 in any 10 consecutive blasts (regardless of the interval between each blast), when received at any other premises, must not exceed –
 - (a) 120dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on Monday to Saturday inclusive; or
 - (b) 115dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on a Sunday or public holiday.

2.2.4 Noise Receptors

Noise emissions from the project have been considered at the surrounding locale as well as at the following specific locations:

1. Mardie Station Homestead;
2. Fortescue River Mouth Camp; and
3. Construction Accommodation Village.

For location 1, the applicable assigned noise levels have been assessed as “Noise Sensitive Premises” in accordance with the Regulations, Schedule 1, Part C. Therefore, the applicable noise levels for different times of the day are shown in Table 2.2.1.1.

Upon investigation through the local government authorities (Shire of Roebourne) location 2 (Fortescue River Mouth Camp), is an unofficial camping area, not approved for use by the Shire of Roebourne. Therefore, for the purpose of this study, the camping grounds have been treated as a non-conforming land use and not considered as a noise sensitive premise. To provide a complete assessment, this location has been included in the assessable noise levels, with criterion noise levels used from the Regulations.

Location 3 is the accommodation camp for the project construction workforce, hence is associated with the “emitter” of the noise. The applicable assigned noise level for this camp has been assessed as “Industrial and Utility” with the allowable noise level of 65 dB(A) for all hours. In saying this, the camp is likely constructed of transportable buildings, which tend to have a more lightweight building construction. Although the allowable level is dictated by the Regulations, internal stipulations from CPM should consider an undertaking to reduce noise as far as practical to afford the amenity of the employees. Additionally, the accommodation camp is required for the construction phase of the project with the intention for this camp to be decommissioned once the mine progresses. Approximation for the decommissioning has been set for 2014.

Locations of the various receptors are included in Figure 1.

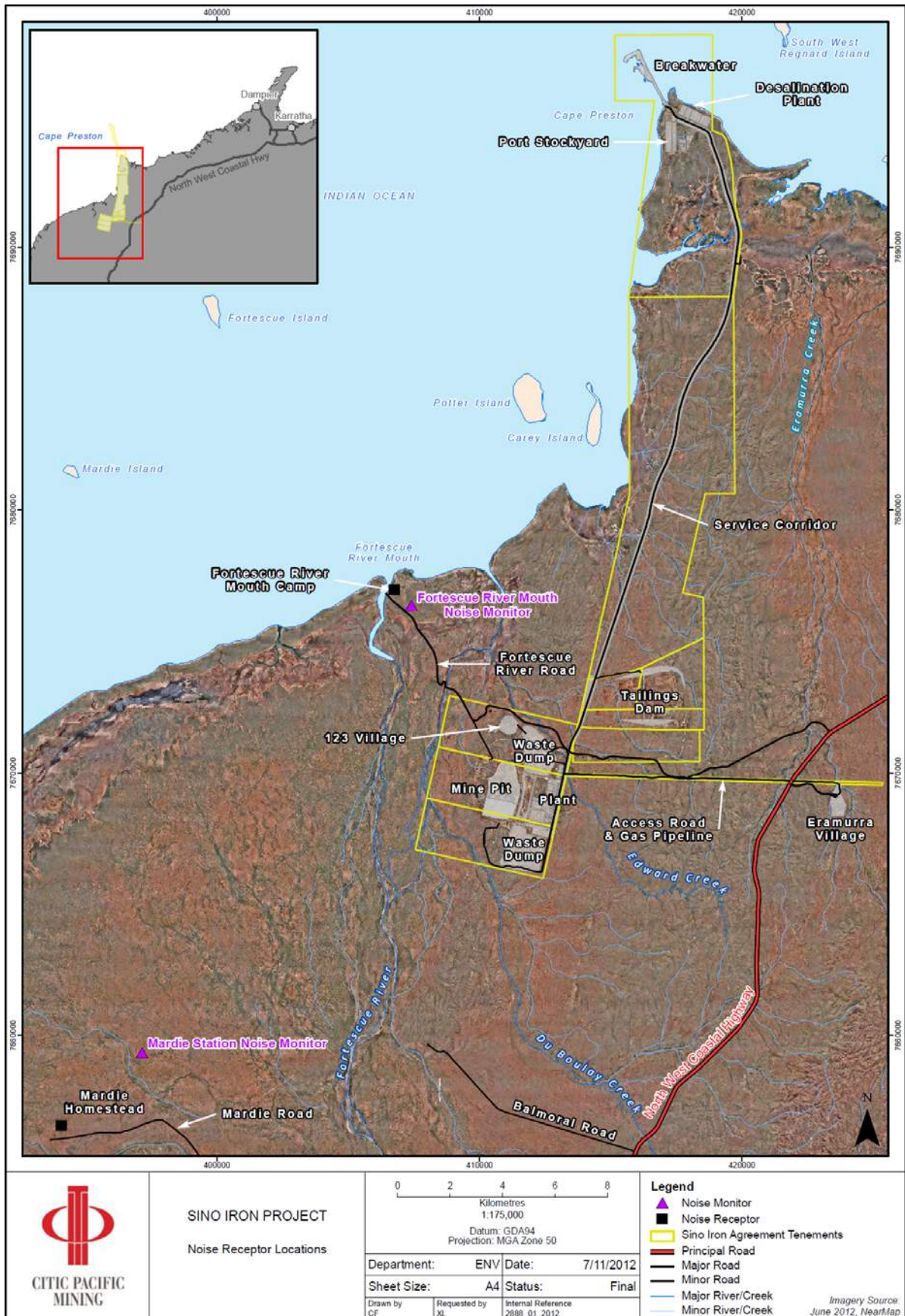


Figure 1 – Noise Receptor Locations

Uncontrolled When Printed

3 Monitored Noise Levels

3.1 Methodology

Due to the remote location of the project, there is a lack of premises that may be affected by noise from the operation of the project outside of the prescribed boundaries. During the construction phase, Fortescue River Mouth Camp and Mardie Station Homestead were identified as potential noise sensitive premises.

The acoustic environment and noise emissions from the project (construction) operations were continuously monitored at the locations illustrated on Figure 1. Noise monitoring near the Fortescue River Mouth Camp commenced on 2 October 2008. The Fortescue River Mouth monitor is positioned approximately 830m from the Fortescue River Mouth Camp grounds, between the project and the camp grounds.

Noise monitoring near the Mardie Station Homestead was suspended in November 2010 once three months of data was recorded. The Mardie Station noise monitor was located approximately 4km east-northeast from the actual homestead, positioned strategically between the project and the residence. The site was selected to be some distance away from the homestead and off frequently travelled station roads to reduce potential effects from other noise sources.

The monitoring was carried out using Acoustic Research Laboratories EL-316 environmental noise monitors. At the measurement location, an automatic noise data logger was utilised to measure 15 minute intervals in accordance with the EPA’s “Draft Guidance for Assessment of Environmental Factors No.8 - Environmental Noise”. The logger records statistical noise level data of which the L_{A1} , L_{A10} , and L_{A90} levels are reported.

Meteorological conditions for the monitoring period were provided by CPM from data collected at the project. The weather data has been correlated against monitored noise levels to allow for exclusion of noise which may be the result of weather influence (i.e. high winds or rainfall).

3.2 Measured Noise Level Results

Day, evening and night L_{A10} values for the two monitoring locations are summarised for a three month period in Table 3.2.1. The time-periods are the regulatory criteria periods of Day, Evening and Night. The times and the assigned levels for each weekday period are shown in the header row of Table 3.2.1. The individual 15-minute L_{A10} values have been acoustically assessed for each period. The entire data collection is contained in Appendix B.

Table 3.2.1 – Summarised Noise Levels Mardie Noise Monitor

Date	Fortescue River Mouth Noise Monitor Noise Level L_{A10} dB(A)			Mardie Noise Monitor Noise Level L_{A10} dB(A)		
	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)
11/08/2010	47	31	32	44	26	26
12/08/2010	34	29	33	36	26	31
13/08/2010	43	28	29	45	27	26



Date	Fortescue River Month Noise Monitor Noise Level L_{A10} dB(A)			Mardie Noise Monitor Noise Level L_{A10} dB(A)		
	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)
14/08/2010	33	28	29	31	26	26
15/08/2010	38	28	29	36	26	26
16/08/2010	32	27	28	35	27	28
17/08/2010	39	34	29	37	32	28
18/08/2010	37	30	30	35	27	26
19/08/2010	35	29	29	33	27	27
20/08/2010	40	29	29	39	27	27
21/08/2010	38	31	32	36	29	30
22/08/2010	33	31	31	32	29	29
23/08/2010	33	30	29	31	27	27
24/08/2010	34	35	34	31	39	35
25/08/2010	34	30	32	33	28	27
26/08/2010	41	33	28	37	28	26
27/08/2010	39	28	27	37	29	26
28/08/2010	39	30	28	39	28	26
29/08/2010	31	28	26	31	28	26
30/08/2010	33	27	27	31	27	26
31/08/2010	35	31	32	35	27	29
1/09/2010	46	31	31	43	32	26
2/09/2010	43	28	28	42	30	26
3/09/2010	37	33	29	33	26	27
4/09/2010	38	26	27	37	27	27
5/09/2010	41	27	28	38	26	27
6/09/2010	37	30	29	35	27	26
7/09/2010	41	28	29	38	27	26
8/09/2010	41	39	29	38	37	27
9/09/2010	34	28	27	31	27	26
10/09/2010	32	29	28	28	28	30
11/09/2010	32	32	31	31	28	26
12/09/2010	37	32	29	34	27	26
13/09/2010	37	27	27	34	29	29
14/09/2010	40	34	36	35	35	31
15/09/2010	38	36	31	35	28	27
16/09/2010	38	27	28	33	26	26
17/09/2010	39	29	28	36	28	27
18/09/2010	40	29	37	43	29	34
19/09/2010	45	32	30	43	29	33
20/09/2010	46	34	29	44	29	29
21/09/2010	44	35	29	41	28	29
22/09/2010	41	33	29	38	29	29
23/09/2010	42	33	29	40	29	28
24/09/2010	39	30	27	38	29	28
25/09/2010	39	30	28	41	29	28
26/09/2010	35	30	30	35	31	28

Uncontrolled When Printed



Date	Fortescue River Month Noise Monitor Noise Level L _{A10} dB(A)			Mardie Noise Monitor Noise Level L _{A10} dB(A)		
	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)
27/09/2010	35	27	28	33	30	28
28/09/2010	34	27	30	34	29	28
29/09/2010	34	27	29	35	30	28
30/09/2010	39	34	31	38	31	28
1/10/2010	36	29	30	34	30	29
2/10/2010	35	26	29	34	31	29
3/10/2010	35	30	28	35	31	28
4/10/2010	40	39	34	40	41	32
5/10/2010	35	32	30	36	34	29
6/10/2010	45	28	27	42	31	29
7/10/2010	43	29	27	41	30	29
8/10/2010	43	26	27	42	30	29
9/10/2010	35	26	28	37	30	28
10/10/2010	41	32	31	39	33	29
11/10/2010	43	34	31	40	39	30
12/10/2010	38	26	29	39	32	29
13/10/2010	33	27	28	36	30	29
14/10/2010	38	29	29	36	32	29
15/10/2010	47	27	28	44	30	28
16/10/2010	47	29	29	42	30	29
17/10/2010	44	28	27	40	30	28
18/10/2010	37	28	28	43	32	31
19/10/2010	35	28	28	N/A	N/A	N/A
20/10/2010	37	31	29	N/A	N/A	N/A
21/10/2010	37	33	29	N/A	N/A	N/A
22/10/2010	37	30	29	N/A	N/A	N/A
23/10/2010	36	29	26	N/A	N/A	N/A
24/10/2010	35	35	32	N/A	N/A	N/A
25/10/2010	37	31	30	N/A	N/A	N/A
26/10/2010	39	33	30	N/A	N/A	N/A
27/10/2010	44	41	35	N/A	N/A	N/A
28/10/2010	48	34	30	N/A	N/A	N/A
29/10/2010	39	35	33	N/A	N/A	N/A
30/10/2010	48	32	26	47	37	30
31/10/2010	45	31	26	43	30	29
1/11/2010	42	31	26	41	31	29
2/11/2010	46	32	26	48	38	30
3/11/2010	35	31	27	35	31	30
4/11/2010	38	33	30	37	31	29
5/11/2010	45	45	34	46	43	31
6/11/2010	42	36	31	42	34	29
7/11/2010	40	33	31	42	31	29
8/11/2010	37	30	28	35	31	29
9/11/2010	38	35	28	37	33	29

Uncontrolled When Printed



Date	Fortescue River Month Noise Monitor Noise Level L_{A10} dB(A)			Mardie Noise Monitor Noise Level L_{A10} dB(A)		
	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)	Day 0700 to 1900 Assigned Noise Level 45 dB(A)	Evening 1900 to 2200 Assigned Noise Level 40 dB(A)	Night 2200 to 0700 Assigned Noise Level 35 dB(A)
10/11/2010	44	44	32	45	45	30
11/11/2010	47	46	35	49	46	33
12/11/2010	45	42	35	43	41	32
13/11/2010	45	39	33	42	34	30
14/11/2010	46	40	32	42	36	30
15/11/2010	42	38	27	42	33	29
16/11/2010	38	38	28	34	35	31
17/11/2010	40	43	33	37	34	30
18/11/2010	39	42	34	34	33	30
19/11/2010	37	42	34	36	32	31
20/11/2010	39	45	31	35	31	29
21/11/2010	45	46	37	42	36	30
22/11/2010	47	44	36	46	40	32
23/11/2010	43	45	34	42	38	29
24/11/2010	41	41	35	38	33	29
25/11/2010	43	42	37	37	34	31
26/11/2010	44	43	37	38	32	29
27/11/2010	41	40	29	37	32	30
28/11/2010	39	40	38	37	32	34
29/11/2010	38	34	28	36	33	30
30/11/2010	38	38	30	30	-	-

4 Predicted Noise Levels

4.1 Noise Modelling Methodology

Noise modelling of the noise propagation from the project was carried out using an environmental noise modelling computer program, “SoundPlan” Version 7.1. Both overall noise level contour plots and single point calculations were performed. Noise contours show the overall noise level in the study area due to the project operations, whereas single point calculations show the same overall level at a selected location, but indicate the contribution (ranking) of individual sources within the operation.

Input data for computer modelling included:

- EPA standard weather condition for the day and night period as listed in Table 4.1.1; and
- Octave band sound power levels. Note, sound power level data has been based on previous assessments for the project (*Noise Impact Assessment ref; 405208-01a and 502313-01 by Lloyd Acoustics*), with confirmation of the overall noise level been made from file data and other similar projects.

Table 4.1.1 – Weather Conditions

Condition	Day Period	Night Period
Temperature	20 °C	15 °C
Relative humidity	50%	50%
Pasquil Stability Class	E	F
Wind speed*	4 m/s	3 m/s

* Winds from source to receiver.

Weather conditions for the modelling were generally in accordance with the EPA’s “*Draft Guidance for Assessment of Environmental Factors No.8 - Environmental Noise*”.

Table 4.1.2 – Source Sound Power Levels

No.	Element name	Unit of Measure	Octave Band Centre Frequency (Hz)								Sum
			31.5	63	125	250	500	1000	2000	4000	
1	Grinding Mills	dB(A)/unit	79	96	107	110	118	113	112	104	121
2	Fans / Pumps	dB(A)/unit	45	64	77	93	106	99	93	99	108
3	Crushers	dB(A)/unit	61	94	101	104	111	113	112	108	118
4	Fans / Pumps V2	dB(A)/unit	42	61	74	90	103	96	90	96	105
5	Power Station	dB(A)/unit	47	72	87	97	105	111	106	103	114
6	Shiploader	dB(A)/unit	75	85	92	99	106	110	105	101	113
7	Wheeled FEL	dB(A)/unit	68	80	96	100	107	107	107	99	112
8	Conveyors (per metre)	dB(A)/metre		58	73	73	83	83	80	75	88
9	Desal Plant	dB(A)/unit	42	61	74	90	103	96	90	96	105
10	Excavator	dB(A)/unit	82	92	101	105	109	110	107	103	115
11	Haul Truck	dB(A)/unit	71	86	105	109	112	109	107	102	116
12	Production Drill	dB(A)/unit	51	83	95	109	113	112	109	104	117
13	Large FEL	dB(A)/unit	67	85	101	101	107	107	106	99	112
14	Water-cart	dB(A)/unit	71	85	100	97	99	104	106	100	110
15	Grader	dB(A)/unit	67	78	89	94	103	106	105	99	110
16	Wheeled Dozer	dB(A)/unit	68	80	96	100	107	107	107	99	112
17	Tracked Dozer	dB(A)/unit	68	85	104	113	107	110	105	103	117
18	Face Shovel	dB(A)/unit	86	96	106	110	114	115	112	108	120

Given the operations, noise modelling was undertaken for the following operating scenarios:

S1 Fixed Plant only (by area) including:

<u>M08/123-125</u>	<u>Cape Preston G08/52</u>
Mills	Pellet Plant
Fans and Pumps	Desalination Plant
Crusher	Ship-loader
Power Station	Conveyor System
Conveyor System	

The “Fixed plant” Scenario considers all plant operating at maximum capacity at the same time.

S2 Mobile Equipment Operations only M08/123-125

Haul Trucks (12 off)
Excavators (3 off)
Production Drills (3 off)
Track Dozers (3 off)
Wheel Dozer (1 off)
Mobile Crusher (1 off)

The above equipment has been considered to be all operating at the same instance. Positioning varies within the mine parameters, with the largest concentration located at the pit and waste dump areas. Mobile equipment sources are located on the surface to emulate the “start of mining”. Whilst this is an unlikely situation, as the construction phase of the operations would have removed the overburden, it provides a worst case scenario. The expectation is that noise levels will be less than those stated in this assessment as the depth of the pit progresses and the mobile equipment is attenuated by the operating depth.

S3 Combined Operations

Cumulative noise emissions from both S1 and S2

Note: Modelling has been conducted for night time conditions only, as this is the worst case and can be compared to the most stringent regulatory time period.

4.2 Noise Modelling Results

Both single point and noise contour plot calculations were undertaken for each of the operating scenarios. The locations of the neighbouring residence used for the single point calculation are as per Section 2.2.4. The resultant noise level for each operating scenario is shown in Table 4.2.1 with the overall noise contours shown in Appendix A.

Additional receiver locations for the Mardie and River Mouth noise monitors have been included in the modelling results for informational purposes.

Table 4.2.1 – Calculated Noise Levels at Nearest Noise Receptors

Receiver Location	Scenario/Calculated Noise Level dB(A)		
	S1	S2	S3
Mardie Station Homestead	9	12	14
Fortescue River Mouth Camp	24	26	28
Construction Accommodation Camp (123 Village)	40	46	47
Noise Monitor Fortescue River Mouth	25	28	30
Noise Monitor Mardie Station	11	15	17

5 Operational Noise Management

Based on the calculated results as presented in Section 4.2, noise level emissions from project operations are highly unlikely to exceed criterion levels set out in the Regulations at neighbouring premises. This being the case, it is still a requirement for noise levels to be managed to ensure continuing compliance and to minimise impact to public receptors. Therefore, this section outlines the procedures for ongoing management of noise at the project.

5.1 Objective and Targets

The overarching project objective for noise management is outlined within CPM's Operational Environment Management System. The objective is to minimise project related noise impacts to public receptors.

The specific targets and performance indicator for each objective are given in Table 5.1.1.

Table 5.1.1 – Objectives and targets

Objective	Location	Worst Case Predicted Noise Levels	Target	Control/ Action	Performance Indicator
Minimise project related noise impacts to public receptors	Fortescue River Mouth Camp	Under downwind conditions, noise levels from the cumulative noise emissions of project operations should not exceed 28 dB(A)	Noise levels not to exceed 30 dB(A) ¹ at the River Mouth Noise Monitoring location. Note, the 2 dB(A) variation from the camp to the monitoring point.	No Action Required	Number of complaints per year
	Mardie Homestead	Under downwind conditions, noise levels from the cumulative noise emissions of project operations should not exceed 14 dB(A) .	Noise levels not to exceed 30 dB(A) ¹ at the Mardie Noise Monitoring location. Note, the 3 dB(A) variation from the residence to the monitoring point.	No Action Required	Number of complaints per year
Minimise project related noise impacts to construction accommodation camp	Project construction Accommodation Camp	Under downwind conditions, noise levels from the cumulative noise	Monitored noise levels not to exceed 50 dB(A) at the camp. Reference	No Action Required	Internal considerations - Number of complaints per year

¹ This allows for tonal characteristics and therefore relates to a regulatory noise level of 35 dB(A)

		emissions of the Sino Iron Operations should not exceed 47 dB(A) .	AS/NZS 2107:2000 for internal acceptable noise levels		
--	--	---	---	--	--

5.2 Monitoring Program

Noise level monitoring has been conducted during the construction phase of the project at two locations, which reference the most critical noise receptors. Review of the noise levels recorded for a period of approximately four years results in no exceedance related to noise emissions associated with the project. Furthermore, calculated noise levels at the two noise receivers, for the worst case operating scenario of the project, results in levels that would not be audible at the Mardie Homestead (14 dB(A)) and near to background levels at the Fortescue River Mouth Camp (28 dB(A)). Therefore, given the low noise levels, during maximum propagation, the following sections provide recommendations in relation to noise management.

5.2.1 Continuous Monitoring

After a review of all historical noise data from the monitoring of construction activities at these locations, results show that the higher noise levels registered are from localised events and are not related to project noise emissions. Therefore, continuous monitoring serves little purpose in quantifying noise emissions from the project and the use of continuous monitors is recommended to be discontinued.

5.2.2 Complaints Based Monitoring

Based on the operational noise model, it is unlikely that noise will be at a level to result in complaints. However, in the event that a member of the community lodges a noise complaint, CPM's Corporate Affairs Department must be notified. CPM will then undertake an internal investigation to identify causes, the appropriate action(s) and document the response to the community member.

To assist with the investigation and verify that the complaint is related to CPM operations, it is recommended that the following details be obtained from the community member:

- Time and location of noise resulting in complaint;
- Community member(s) concerns; and
- Description of the noise.

As part of the internal investigation process compliance based monitoring in accordance with the regulatory criteria (i.e. the assigned noise level), may be initiated to assess the validity of the complaint lodged.

5.3 Management Actions and Control Measures

This section of the operational noise management plan outlines the noise attenuation measures employed within the project to ensure its operation does not exceed the *Environment Protection Act 1986* at the premises boundary, nor do they detrimentally affect the reasonable enjoyment of the nearby public land uses.

5.3.1 Mine Pit

Sources of noise emissions within the mine pit are associated with the following operational activities:

- Drilling and Blasting;
- Loading and unloading haul trucks;
- Track Dozers; and
- Diggers / Face Shovels / Excavators

Management and control actions to minimise noise emissions from these activities are summarised in Table 5.3.1.1 below.

Table 5.3.1.1: Mine Pit Management Actions and Control Measures

Reference	Action or Control Measure	Role / Responsibility
Drilling and Blasting	<ul style="list-style-type: none"> • Drill rigs, where possible, not to be located on the surface and operated during the night time periods. • Blasting not to exceed; <ul style="list-style-type: none"> (a) 125dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on Monday to Saturday inclusive; or (b) 120dB $L_{Linear\ peak}$ between 0700 hours and 1800 hours on a Sunday or public holiday. 	Manager Mining
Haul Trucks	<ul style="list-style-type: none"> • Haul Trucks to be purchased under a “buy quiet” policy, where practicable. • Regular maintenance and replacement of any noise control options fitted (i.e. exhaust lagging, cowling on fans etc.) 	Manager Procurement Manager Maintenance
Track Dozers	<ul style="list-style-type: none"> • Where possible tracking between mine areas to be conducted during day time periods, or utilise a float for longer distances. 	Manager Mining
Digger / Face Shovels / Excavators	<ul style="list-style-type: none"> • Regular maintenance and replacement of any noise control options fitted (i.e. exhaust lagging, cowling on fans etc.) • Use of horns to alert drivers to be limited. Recommendation is to use a visual alarm in the cab of the haul trucks as an alternative. 	Manager Maintenance Manager Mining

5.3.2 Primary Crusher Area

Sources of noise emissions within the Primary Crushing Area (PCA) are associated with the following operational activities:

- Loading / unloading;
- Crushing;
- Conveying and transfer; and
- Stockpiling

The PCA design ensures that all transfer locations and moving parts are enclosed to limit noise and fugitive dust emissions. All PCA equipment will be routinely maintained to ensure the effectiveness of the noise suppression system. The location of PCA within the pit (at a minimum of 40m below ground level) ensures the pit walls act as a significant noise attenuation barrier and minimises heavy vehicle movement out of the mine pit.

Management and control measures to minimise noise emissions from PCA activities are summarised in Table 5.3.2.1.

Table 5.3.2.1 – Primary Crushing Area Management Actions and Control Measures

Reference	Action or Control Measure	Role / Responsibility
Crusher / Conveyor System	<ul style="list-style-type: none"> Locating crusher units within the mine-pit (approximately 40m below natural ground level) to reduce the influence of noise. All transfer and moving parts are enclosed to limit noise emissions. Overland conveyors are fully enclosed. Routine maintenance and inspections of conveyor rollers, bearings and enclosures. 	Mining Engineers
		Operator PCA

5.3.3 Concentrator Process Plant

Noise attenuation measures for the concentrator process plant have been incorporated within the design to ensure operations do not detrimentally affect nearby land uses. These control measures and other management actions are summarised in Table 5.3.3.1.

Table 5.3.3.1 – Concentrator Process Plant Management Actions and Control Measures

Reference	Action or Control Measure	Role / Responsibility
Concentrator Process Plant	<ul style="list-style-type: none"> Routine maintenance of the enclosed primary grinding process; Gearless drives for the Autogenous Mills; Pinion drivers for Ball Mills; Conveyors covered; Routine maintenance of the enclosed primary grinding process; and Placement of the waste rock dump to the northwest to create a sound barrier. 	Manager Process Plant

5.3.4 Tailings Storage Facility

There are no sources of noise associated with this facility.

5.3.5 Stockyard and Material Handling Facility

Noise attenuation measures have been incorporated within the design for the stockyard and material handling facility to ensure operations do not detrimentally affect nearby land uses. These control measures and other management actions are summarised in Table 5.3.5.1.

Table 5.3.5.1 – Control Actions Stockpiles

Reference	Control Measure	Role / Responsibility
Stockyard and Material Handling Facility	<ul style="list-style-type: none"> Enclosed conveyors at transfer points. Regular cleaning and maintenance of belt rollers and system. 	Superintendent Dewatering

5.3.6 Barge Loading Facility

Noise attenuation measures have been incorporated within the barge loading facility design to ensure operations do not detrimentally affect nearby land uses. These control measures and other management actions are summarised in Table 5.3.6.1.

Table 5.3.6.1 – Barge Loading Management Actions and Control Measures

Reference	Control Measure	Role / Responsibility
Barge Loading Facility	<ul style="list-style-type: none"> Enclosed conveyor at transfer points. An enclosed head box on the barge loading facility. Limiting horn blasts and sirens. Routine maintenance on conveyor system 	Manager Port Operations

5.3.7 Desalination Plant

The main potential noise sources within the desalination plant are:

- Energy Recovery System (ERS) modules which house Booster Pumps;
- High Pressure (HP) Pumps;
- Low Pressure Booster Pumps;
- Blowers;
- Compressors; and
- Rotary Screens.

During operation of the desalination plant, these sources are not anticipated to exceed the Regulations. This is due to noise attenuation measures being incorporated within the design of the desalination plant. These control measures and other management actions are summarised in Table 5.3.7.1.

Table 5.3.7.1 – Barge Loading Management Actions and Control Measures

Reference	Control Measure	Role / Responsibility
Desalination Plant	<ul style="list-style-type: none"> Rotary screens are enclosed with venting. The ERS and HP pump rooms are enclosed. Regular mechanical checks on HP booster pumps. Regular mechanical checks on HP motors and oil systems. Maintenance servicing as per manufacturers recommendations. Routine monitoring for OHS purposes will be undertaken in accordance with the <i>Mines Inspection Safety Regulations</i>. 	Manager Desalination

5.4 Contingency Action

If there is a valid complaint from a community member then the following actions are required:

- Investigation, including more comprehensive measurements of project operations, conducted by suitably qualified acoustic consultant; and
- Review of operational parameters of the mine site, including investigation into fixed plant and mobile equipment's operations.

6 Roles and Responsibilities

In addition to the area responsibilities discussed in the previous sections, the following departmental responsibilities are also outlined.

6.1 Staff and Contractors

All staff and contractors working on the project have a responsibility to undertake their work in a manner to reduce and manage noise emissions and comply with all prescribed noise management procedures.

For work related noise concerns these are to be directed to the CPM's Safety Department in the first instance.

6.2 Environmental Department

The Environment Department will be responsible for:

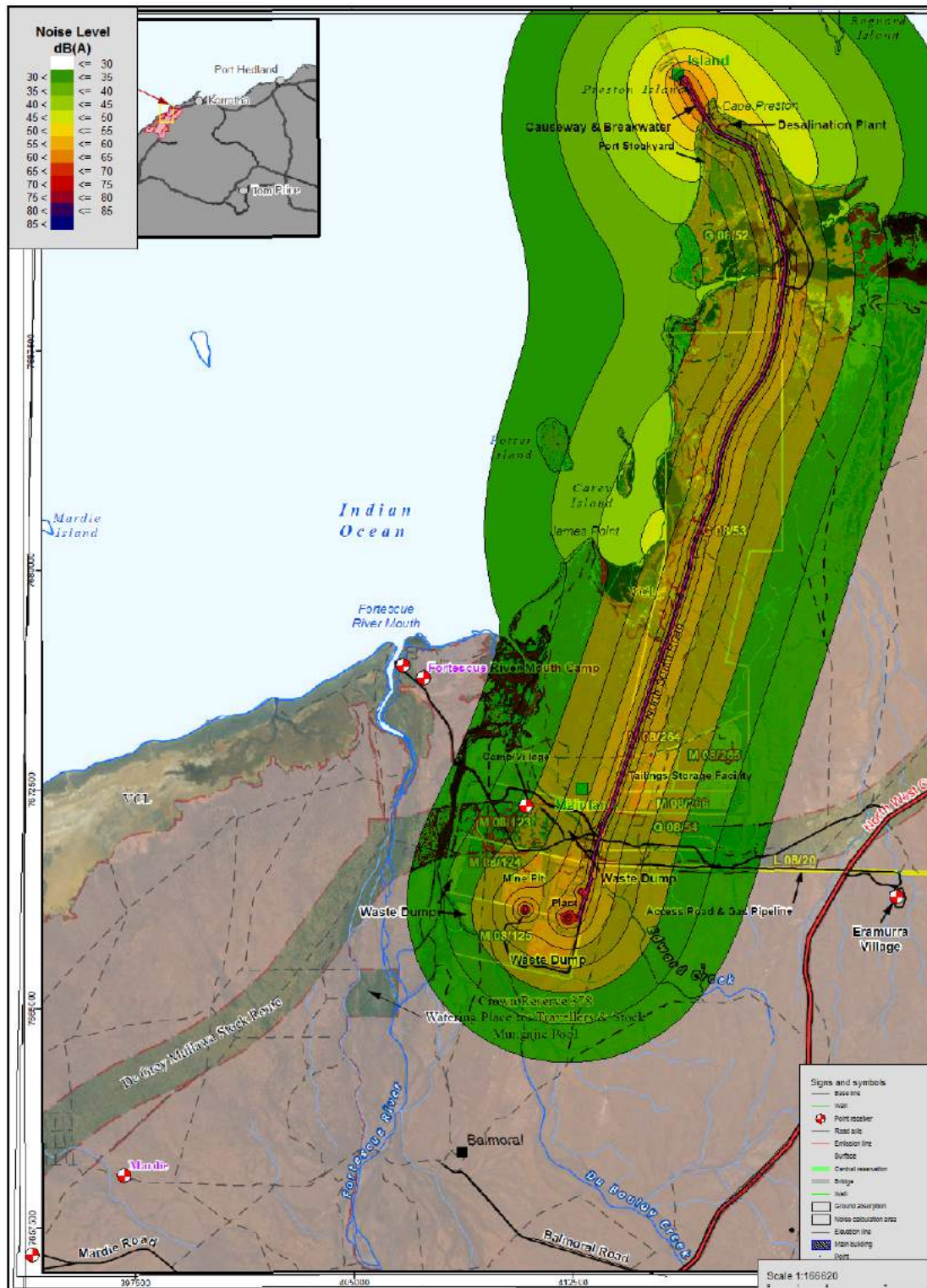
- Management and review of this environmental Operational Noise Management Plan;
- Operation and maintenance of noise monitors and review of environmental noise monitoring results, where applicable (i.e. community noise compliant);
- Provision of advice on environmental noise management for training and inductions;
- Initiate investigating any exceedance of the internal reporting target and compliance with relevant project approvals; and
- Preparation of statutory environmental monitoring reports.

7 Reporting

A complaints register is held by the Corporate Affairs department for external complaints including detailed response procedures for community issues. Upon receipt of a noise complaint this will be recorded in CPM's incident reporting database and appropriately considered and remedied, where possible.

When complaints based monitoring identifies that a noise target is exceeded and the investigation identifies that the event is not attributable to natural environmental conditions, a report will be provided to DEC within 7 days in accordance with Section 72 of the *Environmental Protection Act 1986*.

Appendix A– Noise Modelling Contour Plots

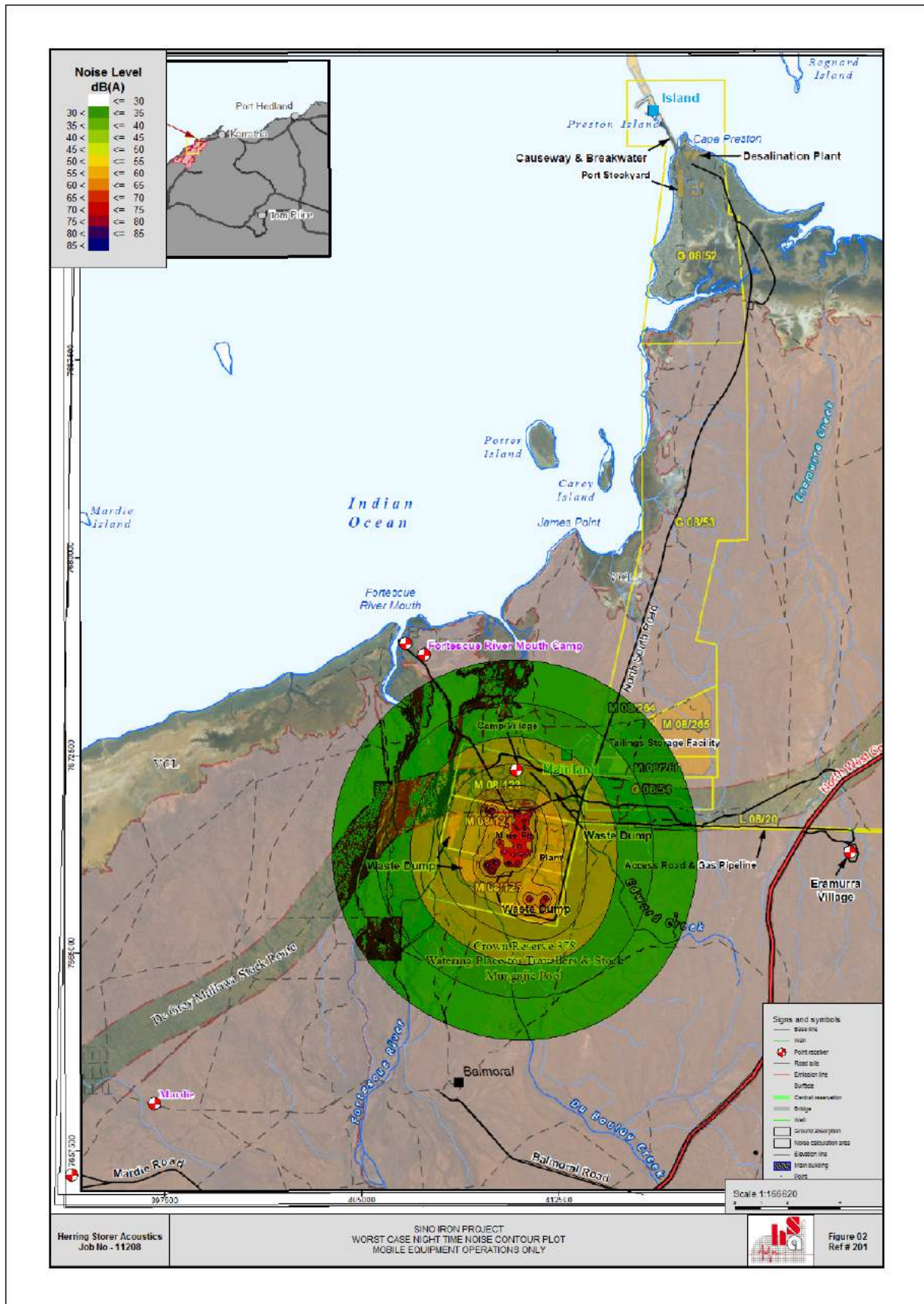


Herring Storer Acoustics
Job No - 11208

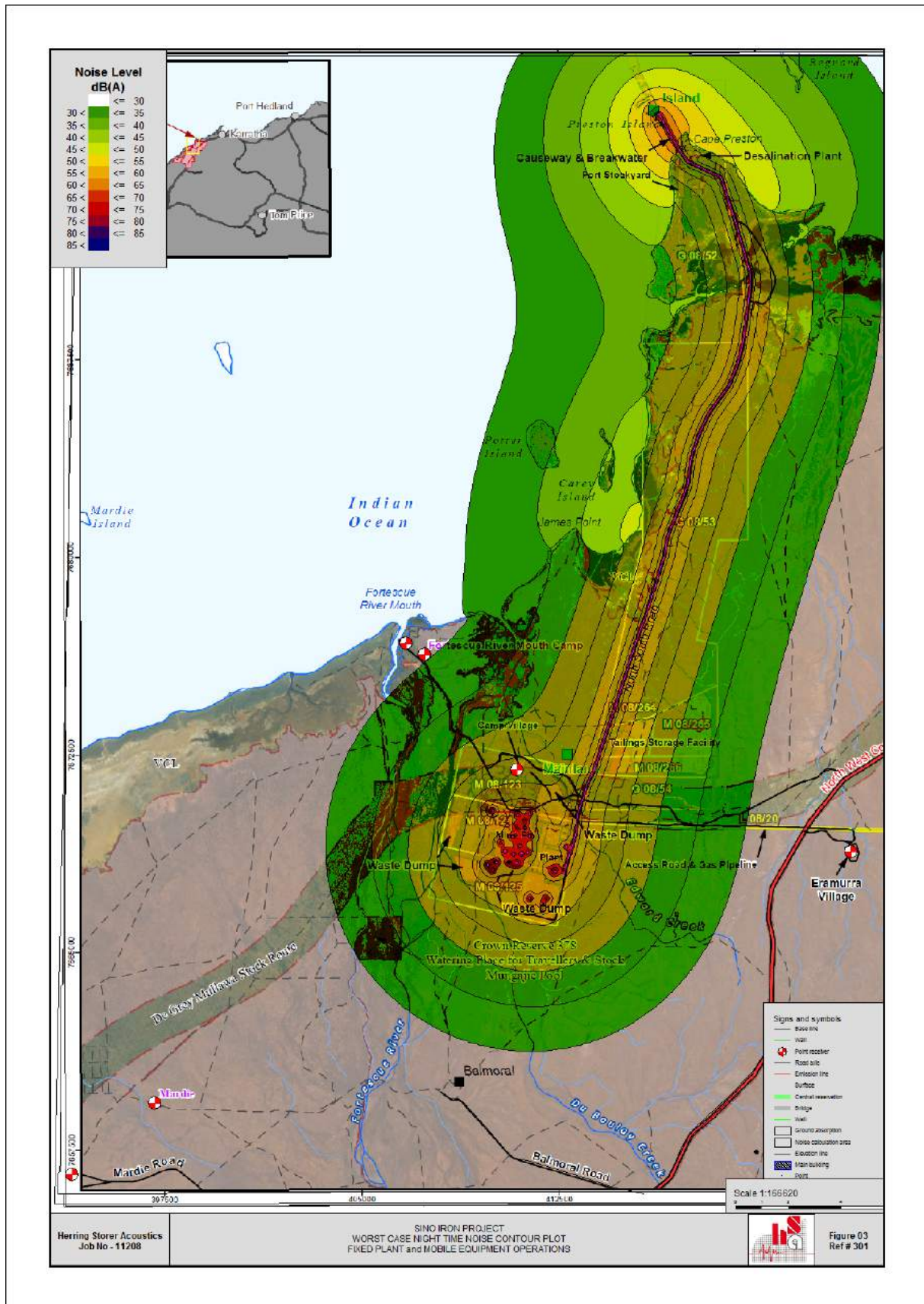
SINO IRON PROJECT
WORST CASE NIGHT TIME NOISE CONTOUR PLOT
FIXED PLANT OPERATIONS ONLY

Figure 01
Ref # 101

Uncontrolled When Printed



Uncontrolled When Printed



Uncontrolled When Printed

Appendix B— Monitored Noise Levels



Mardie Noise Monitor

Date	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
11/08/2010 12:00:00 AM	0	1.8	88	44	26	26
12/08/2010 0:00	0	3.5	43	36	26	31
13/08/2010 0:00	0	3.1	352	45	27	26
14/08/2010 0:00	0	4.8	177	31	26	26
15/08/2010 0:00	0	3.1	172	36	26	26
16/08/2010 0:00	0	3.4	159	35	27	28
17/08/2010 0:00	0	4.2	246	37	32	28
18/08/2010 0:00	0	4.4	214	35	27	26
19/08/2010 0:00	0	4.2	213	33	27	27
20/08/2010 0:00	0	3.0	306	39	27	27
21/08/2010 0:00	0	3.3	172	36	29	30
22/08/2010 0:00	0	3.4	237	32	29	29
23/08/2010 0:00	0	1.4	280	31	27	27
24/08/2010 0:00	0	2.8	202	31	39	35
25/08/2010 0:00	0	7.5	148	33	28	27
26/08/2010 0:00	0	1.6	99	37	28	26
27/08/2010 0:00	0	3.0	142	37	29	26
28/08/2010 0:00	0	1.9	236	39	28	26
29/08/2010 0:00	0	3.0	158	31	28	26
30/08/2010 0:00	0	3.2	169	31	27	26
31/08/2010 0:00	0	0.9	198	35	27	29
1/09/2010 0:00	0	2.5	250	43	32	26
2/09/2010 0:00	0	3.8	226	42	30	26
3/09/2010 0:00	0	5.1	182	33	26	27
4/09/2010 0:00	0	1.4	139	37	27	27
5/09/2010 0:00	0	2.3	162	38	26	27
6/09/2010 0:00	0	2.7	178	35	27	26
7/09/2010 0:00	0	3.1	224	38	27	26
8/09/2010 0:00	0	4.8	218	38	37	27
9/09/2010 0:00	0	3.5	243	31	27	26
10/09/2010 0:00	0	1.6	54	28	28	30
11/09/2010 0:00	0	2.8	213	31	28	26
12/09/2010 0:00	0	1.3	96	34	27	26
13/09/2010 0:00	0	2.1	189	34	29	29
14/09/2010 0:00	0	3.0	198	35	35	31
15/09/2010 0:00	0	1.9	56	35	28	27
16/09/2010 0:00	0	1.3	125	33	26	26
17/09/2010 0:00	0	0.8	160	36	28	27
18/09/2010 0:00	0	3.2	133	43	29	34

Uncontrolled When Printed



Date	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
19/09/2010 0:00	0	9.5	90	43	29	33
20/09/2010 0:00	0	9.5	104	44	29	29
21/09/2010 0:00	0	3.2	177	41	28	29
22/09/2010 0:00	0	3.7	161	38	29	29
23/09/2010 0:00	0	1.9	169	40	29	28
24/09/2010 0:00	0	2.6	168	38	29	28
25/09/2010 0:00	0	1.9	219	41	29	28
26/09/2010 0:00	0	4.3	178	35	31	28
27/09/2010 0:00	0	1.1	341	33	30	28
28/09/2010 0:00	0	2.6	231	34	29	28
29/09/2010 0:00	0	2.3	150	35	30	28
30/09/2010 0:00	0	2.0	207	38	31	28
1/10/2010 0:00	0	2.4	220	34	30	29
2/10/2010 0:00	0	2.0	211	34	31	29
3/10/2010 0:00	0	4.0	188	35	31	28
4/10/2010 0:00	0	2.8	209	40	41	32
5/10/2010 0:00	0	6.0	225	36	34	29
6/10/2010 0:00	0	0.8	196	42	31	29
7/10/2010 0:00	0	2.7	187	41	30	29
8/10/2010 0:00	0	2.3	161	42	30	29
9/10/2010 0:00	0	2.1	171	37	30	28
10/10/2010 0:00	0	3.0	212	39	33	29
11/10/2010 0:00	0	3.7	242	40	39	30
12/10/2010 0:00	0	4.8	253	39	32	29
13/10/2010 0:00	0	3.5	318	36	30	29
14/10/2010 0:00	0	4.1	196	36	32	29
15/10/2010 0:00	0	1.0	230	44	30	28
16/10/2010 0:00	0	1.4	105	42	30	29
17/10/2010 0:00	0	3.0	177	40	30	28
18/10/2010 0:00	0	1.5	169	43	32	31
30/10/2010 0:00	0	2.1	285	47	37	30
31/10/2010 0:00	0	2.0	129	43	30	29
1/11/2010 0:00	0	3.6	163	41	31	29
2/11/2010 0:00	0	2.5	176	48	38	30
3/11/2010 0:00	0	0.0	315	35	31	30
4/11/2010 0:00	0	2.2	233	37	31	29
5/11/2010 0:00	0	1.1	332	46	43	31
6/11/2010 0:00	0	7.0	217	42	34	29
7/11/2010 0:00	0	3.6	215	42	31	29
8/11/2010 0:00	0	1.5	254	35	31	29

Uncontrolled When Printed



Date	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
9/11/2010 0:00	0	3.5	206	37	33	29
10/11/2010 0:00	0	3.5	197	45	45	30
11/11/2010 0:00	0	4.7	226	49	46	33
12/11/2010 0:00	0	6.1	244	43	41	32
13/11/2010 0:00	0	1.7	229	42	34	30
14/11/2010 0:00	0	4.9	230	42	36	30
15/11/2010 0:00	0	5.4	256	42	33	29
16/11/2010 0:00	0	3.1	249	34	35	31
17/11/2010 0:00	0	5.4	265	37	34	30
18/11/2010 0:00	0	3.6	219	34	33	30
19/11/2010 0:00	0	2.8	226	36	32	31
20/11/2010 0:00	0	2.7	223	35	31	29
21/11/2010 0:00	0	0.7	133	42	36	30
22/11/2010 0:00	0	4.4	235	46	40	32
23/11/2010 0:00	0	4.8	227	42	38	29
24/11/2010 0:00	0	4.0	246	38	33	29
25/11/2010 0:00	0	3.6	227	37	34	31
26/11/2010 0:00	0	2.5	255	38	32	29
27/11/2010 0:00	0	2.2	254	37	32	30
28/11/2010 0:00	0	4.2	111	37	32	34
29/11/2010 0:00	0	7.6	184	36	33	30
30/11/2010 0:00	0	3.5	126	30	-	-



Fortescue River Mouth Noise Monitor

Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
3/10/2008	20.7	0	3.1	212	48	45	34
4/10/2008	24.3	0	2.0	217	43	33	27
5/10/2008	21.6	0	3.5	192	43	27	27
6/10/2008	22.6	0	0.2	78	47	29	26
7/10/2008	24.9	0	3.5	177	41	31	28
8/10/2008	27.2	0	2.0	144	41	46	40
31/10/2008	17.7	0	0.5	170	38	41	34
1/11/2008	20.1	0	1.6	301	36	41	32
2/11/2008	19.9	0	0.6	81	39	44	37
3/11/2008	18.4	0	1.5	243	49	52	45
4/11/2008	16.9	0	4.9	214	48	45	31
5/11/2008	16	0	2.7	204	46	43	33
6/11/2008	17.1	0	3.1	222	50	48	43
7/11/2008	17.6	0	7.8	174	45	35	27
8/11/2008	14.8	0	0.4	114	53	40	26
9/11/2008	16.3	0	0.1	230	40	44	28
10/11/2008	17.8	0	0.1	210	37	44	38
11/11/2008	17.7	0	0.5	251	48	48	35
13/11/2008	17.2	0	2.0	217	47	47	36
14/11/2008	16.7	0	4.0	224	49	47	31
15/11/2008	15.4	0	0.6	237	42	45	37
16/11/2008	17.6	0	3.6	255	47	47	33
17/11/2008	17.1	0	1.9	244	48	37	41
27/11/2008	25	0	4.1	222	49	46	33
28/11/2008	15.7	0	4.4	190	39	41	29
29/11/2008	15.9	0	0.9	78	42	48	40
30/11/2008	18.4	0	0.6	205	39	51	45
1/12/2008	18.7	0	1.7	230	39	51	44
2/12/2008	29.3	0	3.5	264	42	55	41
3/12/2008	27.6	0	2.9	217	52	50	42
4/12/2008	16.7	0	3.5	226	50	51	43
5/12/2008	16.9	0	0.7	250	46	52	39
6/12/2008	16.4	0	1.2	243	45	50	42
7/12/2008	16.1	0	2.1	256	46	52	41
8/12/2008	15.8	0	1.6	255	50	51	40
9/12/2008	15.6	0	1.8	262	51	52	44
10/12/2008	15.6	0	5.0	211	50	35	38
11/12/2008	25.2	0	3.6	208	46	47	28
12/12/2008	24	0	2.1	155	38	39	24

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
13/12/2008	25	0	0.8	331	42	41	30
14/12/2008	27.1	0	0.6	160	41	43	31
15/12/2008	26.4	0	0.6	192	40	46	40
16/12/2008	27.6	0	1.4	74	55	56	36
17/12/2008	30.2	0	2.8	225	56	42	31
24/12/2008	19.4	0	1.1	13	34	41	41
25/12/2008	20.4	0	0.1	246	33	44	42
26/12/2008	19.5	0	2.1	301	38	44	41
27/12/2008	19.2	0	1.9	23	33	46	42
28/12/2008	19.1	0	1.5	326	36	44	42
29/12/2008	19.3	0	1.8	309	35	45	41
30/12/2008	18.2	0	1.7	208	46	38	39
31/12/2008	27.8	0	0.6	130	38	50	48
1/01/2009	25.9	0	0.3	182	44	51	49
2/01/2009	28.4	0	0.9	257	41	47	39
3/01/2009	28.8	0	2.1	201	40	49	39
4/01/2009	27.5	0	1.2	181	41	52	49
5/01/2009	29.1	0	0.6	297	42	51	48
6/01/2009	28.9	0	2.9	350	38	50	44
7/01/2009	24.5	0	1.9	290	37	48	46
8/01/2009	24.3	0	2.4	215	46	50	45
9/01/2009	25.3	0	0.8	247	44	48	39
10/01/2009	24	0	0.2	71	42	50	44
11/01/2009	25.3	0	0.2	211	42	51	40
12/01/2009	25.1	0	0.1	222	43	50	47
13/01/2009	24.8	0	1.4	299	45	50	44
14/01/2009	25.9	0	0.1	77	43	49	47
15/01/2009	25.4	0	3.0	333	45	51	41
22/01/2009	27.8	0	4.1	233	44	46	47
23/01/2009	27.9	0	2.8	277	42	50	45
24/01/2009	27.9	0	3.6	8	42	46	50
25/01/2009	27.1	2	13.1	68	45	52	48
26/01/2009	23.4	0	6.9	92	56	64	60
27/01/2009	20.6	0	8.7	42	47	51	50
28/01/2009	21.4	0	2.3	253	48	52	47
29/01/2009	21.7	0	2.7	254	51	54	49
30/01/2009	21.4	0	6.3	240	53	51	49
31/01/2009	21.9	0	4.6	245	51	50	46
1/02/2009	21.8	0	3.1	254	52	51	49
2/02/2009	23.3	0	4.0	239	54	51	47

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
3/02/2009	24.6	0	2.7	86	56	49	47
4/02/2009	23.4	0	5.6	197	55	52	47
5/02/2009	24.3	0	2.4	304	57	49	48
6/02/2009	25.9	0	2.6	193	55	50	47
7/02/2009	25.3	0	2.2	125	55	51	49
8/02/2009	25.6	0	1.5	43	54	51	46
9/02/2009	25	0.2	2.8	180	56	51	49
10/02/2009	25.3	0	4.9	225	55	53	50
11/02/2009	16.9	0	4.3	195	54	54	50
12/02/2009	16.2	0	0.5	260	54	57	52
13/02/2009	16.9	0	0.5	219	53	58	52
14/02/2009	18.5	0	3.0	28	53	50	57
15/02/2009	12.1	0.2	7.9	114	60	63	60
16/02/2009	12.4	0	9.4	76	58	60	54
17/02/2009	12.1	0	7.2	323	51	55	52
18/02/2009	12.2	0.39999	2.6	320	54	50	48
19/02/2009	13.7	0	1.1	6	52	47	51
20/02/2009	15.6	0	3.8	65	50	49	46
21/02/2009	14.4	0	1.0	132	47	48	46
22/02/2009	15.1	0	3.4	201	45	49	49
23/02/2009	16.2	0	3.1	220	45	47	47
24/02/2009	15.9	0	2.6	141	49	48	49
25/02/2009	15.7	0	3.4	233	47	51	51
26/02/2009	14.7	0	6.4	206	47	51	50
27/02/2009	15.1	0	4.3	69	47	50	50
28/02/2009	14.8	0	1.9	189	48	51	47
1/03/2009	14.1	0	4.8	224	47	58	48
23/03/2009	35.3	#N/A	#N/A	#N/A	42	59	49
24/03/2009	34.1	#N/A	#N/A	#N/A	41	57	35
25/03/2009	31.9	#N/A	#N/A	#N/A	39	53	35
26/03/2009	31.5	#N/A	#N/A	#N/A	37	48	41
27/03/2009	33.1	#N/A	#N/A	#N/A	41	54	45
28/03/2009	34	#N/A	#N/A	#N/A	38	55	42
29/03/2009	34.6	#N/A	#N/A	#N/A	37	55	53
30/03/2009	34.4	#N/A	#N/A	#N/A	42	55	56
31/03/2009	35.1	#N/A	#N/A	#N/A	38	58	47
1/04/2009	34	#N/A	#N/A	#N/A	38	55	53
2/04/2009	34.1	#N/A	#N/A	#N/A	38	56	55
3/04/2009	37.6	#N/A	#N/A	#N/A	44	50	52
4/04/2009	37.7	#N/A	#N/A	#N/A	37	46	40

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
5/04/2009	32.7	#N/A	#N/A	#N/A	43	52	47
6/04/2009	33.7	#N/A	#N/A	#N/A	43	50	46
6/05/2009	24.2	0	6.4	100	45	36	38
7/05/2009	24.9	0	4.1	158	41	31	26
8/05/2009	23.8	0	4.2	157	45	33	29
9/05/2009	24.7	0	2.8	159	43	33	28
10/05/2009	23.8	0	3.1	164	40	32	28
11/05/2009	24.5	0	3.3	176	39	38	26
12/05/2009	25.4	0	3.0	170	40	32	28
13/05/2009	26.2	0	4.1	154	43	47	36
14/05/2009	26.2	0	3.6	158	47	45	48
15/05/2009	28	0	5.0	114	47	48	44
16/05/2009	27.3	0	4.8	69	44	51	41
17/05/2009	27.5	0	6.6	74	40	29	26
18/05/2009	25.1	0	3.3	162	36	30	25
19/05/2009	23.3	0	1.4	203	37	28	24
20/05/2009	23.3	0	1.3	146	38	29	27
21/05/2009	23	0	1.5	88	35	41	34
22/05/2009	28.5	0	1.1	53	38	49	44
23/05/2009	29.6	0	6.4	194	40	26	25
24/05/2009	21.5	0	3.8	174	37	24	25
25/05/2009	19.9	0	3.2	158	41	46	44
26/05/2009	28.9	0	1.2	91	37	49	34
27/05/2009	27.4	0	1.3	143	35	25	33
28/05/2009	13.6	0	1.3	172	33	38	28
29/05/2009	13.2	0	2.8	179	36	30	27
30/05/2009	13.5	0	1.1	178	38	33	26
31/05/2009	14.8	0	1.0	123	40	41	38
1/06/2009	15.7	0	3.1	166	41	44	34
2/06/2009	14.6	0	2.8	61	42	46	40
3/06/2009	15.8	0	3.5	132	34	49	45
4/06/2009	18.1	0	3.8	137	34	39	29
5/06/2009	15.4	0	1.9	102	35	40	35
6/06/2009	15.7	0	1.9	112	38	35	28
7/06/2009	8.3	0	2.7	165	43	32	29
8/06/2009	8	0	4.4	99	41	28	29
9/06/2009	8.9	0	2.8	154	40	28	28
10/06/2009	11.3	0	3.0	109	41	40	40
11/06/2009	18.4	0	4.1	46	38	37	37
12/06/2009	17.5	0	1.7	212	37	33	32

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
13/06/2009	12.3	0	4.0	179	37	33	30
14/06/2009	9.8	0	4.5	138	37	27	29
15/06/2009	6.1	0	1.7	97	41	30	33
16/06/2009	5.1	0	3.5	164	39	31	32
17/06/2009	5.7	0	4.6	160	37	29	29
18/06/2009	14.4	0	2.4	198	33	30	28
19/06/2009	14.4	0	2.1	162	42	34	29
20/06/2009	11	0	3.0	193	38	33	29
21/06/2009	10.8	0	5.5	203	33	26	28
27/06/2009	11.9	0	1.1	192	31	33	28
28/06/2009	13.7	0	0.8	211	30	32	35
29/06/2009	14.9	0	0.9	143	31	32	32
30/06/2009	15.5	0	3.3	213	31	30	28
1/07/2009	14.1	#N/A	#N/A	#N/A	34	29	29
2/07/2009	14.1	#N/A	#N/A	#N/A	37	28	28
3/07/2009	13.4	#N/A	#N/A	#N/A	30	29	29
4/07/2009	10.2	0	2.7	135	32	29	28
5/07/2009	12.3	0	3.3	240	34	28	27
6/07/2009	11.5	0	4.3	163	31	28	27
7/07/2009	12.3	0	1.7	155	35	32	30
8/07/2009	12.7	0	1.3	191	33	32	30
9/07/2009	13.8	0	2.8	165	31	26	28
10/07/2009	13.5	0	0.8	62	32	28	29
11/07/2009	18.2	0	1.6	165	36	30	27
12/07/2009	16.1	0	5.2	207	32	25	26
13/07/2009	13.7	0	5.8	161	36	25	28
14/07/2009	10.9	0	6.7	109	41	26	26
15/07/2009	8.5	0	4.7	126	40	25	28
16/07/2009	9.3	0	2.1	155	32	30	28
17/07/2009	10.7	0	1.7	80	31	29	28
18/07/2009	13.8	0	2.6	157	33	28	26
19/07/2009	11.8	0	3.1	166	36	31	26
20/07/2009	14	0	3.7	222	37	27	28
21/07/2009	15.8	0	4.3	201	38	27	26
22/07/2009	11.6	0	3.0	177	34	27	25
23/07/2009	11.5	0	3.7	172	29	27	26
24/07/2009	17.5	0	2.7	197	37	34	31
25/07/2009	15	0	4.5	216	36	28	27
26/07/2009	14.8	0	5.1	152	37	28	28
27/07/2009	14.1	0	2.7	152	39	32	30

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
28/07/2009	10.9	0	3.7	167	39	34	28
29/07/2009	10.9	0	2.4	145	42	32	29
30/07/2009	10	0	2.0	154	44	34	32
31/07/2009	10	0	3.3	173	43	34	32
1/08/2009	9.9	0	4.4	157	43	32	31
2/08/2009	11.1	0	4.1	161	42	32	29
3/08/2009	10.8	0	3.3	159	38	29	30
4/08/2009	10.7	0	2.9	155	35	29	29
5/08/2009	11.2	0	2.0	146	30	27	27
6/08/2009	11.5	0	3.2	165	32	27	27
7/08/2009	11.2	0	3.0	168	33	27	26
8/08/2009	11.5	0	2.5	131	30	26	26
9/08/2009	13.2	0	2.8	174	33	28	25
10/08/2009	14.6	0	0.8	34	29	27	27
11/08/2009	21	0	2.6	225	35	28	26
12/08/2009	19.1	0	2.7	208	40	31	29
13/08/2009	18	0	4.1	233	40	34	29
14/08/2009	14.4	0	3.0	200	38	27	31
15/08/2009	16.7	0	1.7	272	46	36	30
16/08/2009	16.1	0	2.2	191	34	28	29
17/08/2009	15.7	0	3.5	204	37	30	28
18/08/2009	15.2	0	2.9	183	34	26	26
19/08/2009	14.7	0	2.2	212	39	34	32
20/08/2009	18.4	0	3.3	214	36	27	28
21/08/2009	15.5	0	2.6	209	37	32	29
22/08/2009	20.2	0	2.3	247	41	36	28
23/08/2009	19.3	0	4.9	215	43	32	26
24/08/2009	14.2	0	3.5	200	34	25	30
25/08/2009	18.3	0	2.9	258	33	29	25
26/08/2009	15.4	0	1.3	52	33	35	27
27/08/2009	16.9	0	0.7	193	38	41	32
28/08/2009	19.6	0	3.8	229	40	44	35
29/08/2009	19.7	0	7.3	213	43	27	29
30/08/2009	15.3	0	5.5	188	35	27	27
31/08/2009	15.7	0	3.3	200	39	27	26
1/09/2009	14.6	0	1.8	207	38	34	32
2/09/2009	16.4	0	5.6	216	39	29	27
3/09/2009	14.9	0	2.3	160	34	29	26
4/09/2009	14.9	0	3.6	178	34	25	28
5/09/2009	16.5	0	2.2	242	45	32	29

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
6/09/2009	18.5	0	5.2	194	37	33	27
7/09/2009	16.7	0	3.6	109	40	30	29
8/09/2009	15.5	0	2.7	163	33	34	31
9/09/2009	19.9	0	3.7	211	35	31	27
10/09/2009	18.5	0	0.9	179	42	36	31
11/09/2009	19.2	0	3.9	230	41	35	34
12/09/2009	19.7	0	5.8	234	44	37	33
13/09/2009	20.1	0	4.3	238	35	34	32
14/09/2009	19.5	0	4.4	244	33	33	27
15/09/2009	19.2	0	1.8	260	45	45	35
16/09/2009	18	0	5.8	224	39	28	26
17/09/2009	15.7	0	4.3	166	38	29	30
18/09/2009	15.7	0	2.5	177	39	38	28
19/09/2009	15.9	0	3.1	257	35	29	31
20/09/2009	15.5	0	2.6	218	48	40	32
21/09/2009	17.4	0	6.0	225	44	37	27
22/09/2009	17.9	0	0.7	210	36	29	24
23/09/2009	15.1	0	3.3	151	39	29	29
24/09/2009	15.2	0	2.6	206	38	29	30
25/09/2009	15.4	0	2.0	176	37	39	32
26/09/2009	17.9	0	2.0	123	44	35	28
27/09/2009	17.4	0	4.3	179	39	32	28
28/09/2009	17	0	4.6	162	37	39	28
29/09/2009	18.2	0	1.1	196	47	48	37
30/09/2009	18.5	0	5.3	223	48	31	24
1/10/2009	13.3	0	3.1	164	40	34	29
2/10/2009	18.2	0	0.8	233	42	31	27
3/10/2009	15.9	0	4.5	198	37	29	26
4/10/2009	16.3	0	2.1	174	33	29	24
5/10/2009	15.8	0	3.8	178	33	30	31
6/10/2009	17.6	0	0.6	284	43	30	29
7/10/2009	18.5	0	1.8	231	36	27	27
8/10/2009	17	0	3.3	217	32	28	25
9/10/2009	21.1	0	2.3	221	38	34	28
10/10/2009	21.6	0	2.7	214	40	36	31
11/10/2009	22.1	0	3.9	226	41	37	29
12/10/2009	20	0	1.8	218	35	28	29
13/10/2009	19.7	0	3.0	203	37	25	25
14/10/2009	20	0	4.0	195	35	24	26
15/10/2009	19.9	0	1.2	194	34	29	28

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
16/10/2009	20.8	0	3.1	177	31	26	27
17/10/2009	20.5	0	6.8	188	37	29	25
18/10/2009	20.9	0	3.3	173	37	26	27
19/10/2009	19.5	0	1.0	122	35	28	26
20/10/2009	22.6	0	2.4	58	35	30	28
21/10/2009	24.3	0	1.7	213	39	31	32
22/10/2009	21.4	0	2.4	256	42	34	32
23/10/2009	22.7	0	3.0	223	40	36	31
24/10/2009	24.0	#N/A	#N/A	#N/A	38	36	31
25/10/2009	22.6	#N/A	#N/A	#N/A	43	45	42
26/10/2009	26.4	#N/A	#N/A	#N/A	52	48	37
27/10/2009	28.3	#N/A	#N/A	#N/A	44	46	33
28/10/2009	25.6	0	4.4	222	46	39	30
29/10/2009	26.1	0	5.0	225	43	43	29
30/10/2009	25.0	0	3.7	192	45	43	37
31/10/2009	25.7	0	4.2	231	41	30	29
1/11/2009	24.9	0	2.5	209	37	31	31
2/11/2009	26.6	0	1.9	228	42	35	31
3/11/2009	24.2	0	0.9	228	36	32	27
4/11/2009	25.4	0	2.7	184	44	30	29
5/11/2009	24.7	0	2.6	227	41	36	32
6/11/2009	25.5	0	4.0	224	42	39	32
7/11/2009	24.6	0	3.7	237	37	32	29
8/11/2009	24.3	0	2.4	280	34	36	25
9/11/2009	25.2	0	3.3	155	34	39	31
10/11/2009	26.4	0	3.8	238	34	34	24
11/11/2009	25.4	0	3.8	228	36	41	26
12/11/2009	26.8	0	1.2	242	40	42	33
13/11/2009	27.3	0	3.1	220	40	43	31
14/11/2009	27.3	0	2.3	216	44	41	27
15/11/2009	28.1	0	1.5	234	39	40	31
16/11/2009	27.7	0	2.7	223	42	46	34
17/11/2009	27.6	0	6.2	228	45	42	34
18/11/2009	24.6	0	3.8	231	45	44	41
19/11/2009	23.5	0	6.5	229	50	51	39
20/11/2009	22.8	0	6.8	222	41	36	26
21/11/2009	20.1	0	4.6	168	37	42	31
22/11/2009	23.8	0	2.1	264	42	32	25
23/11/2009	23.1	0	3.3	171	44	35	28
24/11/2009	21.8	0	2.5	181	43	34	25

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
25/11/2009	21.4	0	3.9	189	34	30	25
26/11/2009	21.4	0	3.3	209	43	45	31
27/11/2009	24.4	0	1.2	271	35	41	28
28/11/2009	22.7	0	0.9	317	35	47	30
29/11/2009	23.6	0	1.9	238	39	46	33
30/11/2009	23.9	0	2.5	227	42	41	30
1/12/2009	24.2	0	4.4	201	45	48	35
2/12/2009	26.4	0	6.5	213	44	44	33
3/12/2009	23.2	0	2.2	234	38	48	39
4/12/2009	26.4	0	4.3	281	38	48	39
5/12/2009	26.0	0	3.8	227	43	47	34
6/12/2009	25.6	0	3.3	219	41	48	42
7/12/2009	27.6	0	3.3	259	44	51	39
8/12/2009	28.2	0	4.6	234	43	50	35
9/12/2009	26.8	0	0.5	287	38	47	33
10/12/2009	27.0	0	2.7	208	41	48	32
11/12/2009	28.0	0	1.3	233	42	46	25
12/12/2009	25.8	0	3.5	201	46	53	31
13/12/2009	27.4	0	1.1	204	36	51	45
14/12/2009	28.6	0	2.3	257	41	50	42
15/12/2009	30.8	0	5.4	230	45	49	45
16/12/2009	29.9	0	5.1	238	50	50	42
17/12/2009	28.8	0	5.5	226	38	46	42
18/12/2009	28.0	0	1.5	21	40	50	45
19/12/2009	28.5	0	4.1	230	46	52	47
20/12/2009	30.2	0	2.8	223	38	51	46
21/12/2009	27.5	0	0.1	127	49	51	48
22/12/2009	27.0	0	6.2	231	54	55	46
23/12/2009	24.8	0	7.6	237	50	49	42
24/12/2009	25.1	0	4.2	274	34	55	45
25/12/2009	25.7	0	2.4	276	39	52	38
26/12/2009	26.1	0	4.8	196	45	53	39
27/12/2009	27.6	0	3.4	220	44	55	43
28/12/2009	28.1	0	2.0	244	41	51	41
29/12/2009	29.2	0	2.4	287	41	50	36
30/12/2009	28.3	0	2.0	212	46	51	45
31/12/2009	30.4	0	4.9	235	48	50	43
1/01/2010	31.9	0	8.3	209	37	38	35
2/01/2010	30.0	0	3.9	38	41	50	44
3/01/2010	31.8	0	2.3	124	38	49	44

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
4/01/2010	30.5	0	3.1	262	41	51	46
5/01/2010	30.0	0	5.6	243	43	45	36
6/01/2010	26.5	0	1.3	78	45	52	40
7/01/2010	27.1	0	7.3	228	46	51	45
8/01/2010	26.7	0	6.6	230	51	53	48
9/01/2010	27.6	0	6.6	250	53	53	49
10/01/2010	27.0	0	6.5	237	45	48	45
11/01/2010	27.7	0	4.3	300	40	50	46
12/01/2010	28.1	0	4.5	23	46	51	44
13/01/2010	28.9	0	2.6	317	42	52	48
14/01/2010	30.1	0	3.7	213	45	49	49
15/01/2010	28.9	0	0.5	172	43	49	47
16/01/2010	30.0	0	3.3	150	44	49	49
17/01/2010	31.7	0	3.5	188	42	50	49
18/01/2010	30.8	0	3.7	237	45	50	50
19/01/2010	29.8	0	2.5	278	43	54	48
20/01/2010	30.0	0	5.0	264	44	52	49
21/01/2010	28.3	0	3.8	62	49	55	41
22/01/2010	28.0	0	4.3	235	47	55	46
23/01/2010	27.2	0	4.0	213	47	52	44
24/01/2010	27.1	0	6.0	229	51	55	43
25/01/2010	25.5	0	6.1	224	50	53	46
26/01/2010	25.4	0	6.0	238	50	52	43
27/01/2010	25.5	0	5.9	249	48	52	44
28/01/2010	25.7	0	4.7	240	48	53	47
29/01/2010	25.9	0	4.0	257	47	53	47
30/01/2010	26.1	0	5.8	237	45	49	44
31/01/2010	27.3	0	3.5	266	47	53	40
1/02/2010	28.7	0	3.4	71	48	52	47
2/02/2010	27.9	0	3.8	256	48	51	43
3/02/2010	26.7	0	6.7	235	48	50	47
4/02/2010	26.8	0	5.3	284	49	47	42
5/02/2010	26.0	#N/A	#N/A	#N/A	42	48	37
6/02/2010	25.9	0	2.3	253	46	43	35
7/02/2010	15.1	0	2.0	247	49	47	34
8/02/2010	14.4	0	2.5	258	48	48	37
9/02/2010	16.6	0	2.9	215	44	49	38
10/02/2010	17.5	0	1.9	264	44	47	35
11/02/2010	17.2	0	1.9	287	46	47	43
12/02/2010	22.3	0	9.3	194	48	50	41

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
13/02/2010	20.5	0	3.8	253	49	51	43
14/02/2010	17.7	0	4.2	228	48	49	38
15/02/2010	16.7	0	6.3	248	48	49	40
16/02/2010	17.6	0	4.2	235	45	46	40
17/02/2010	18.5	0	3.3	262	42	47	40
18/02/2010	19.1	0	1.4	324	40	44	32
19/02/2010	19.3	0	3.8	307	39	45	35
20/02/2010	19.1	0	1.6	225	39	45	38
21/02/2010	20.7	0	0.9	260	35	35	40
22/02/2010	19.5	0	4.1	1	38	44	40
23/02/2010	18.9	0	3.6	34	34	43	35
24/02/2010	18.3	0	2.5	228	40	45	41
25/02/2010	19.8	0	4.4	227	47	47	43
26/02/2010	20.1	0	4.4	234	46	50	42
27/02/2010	22.7	0	5.6	108	39	48	37
28/02/2010	21.7	0	1.5	210	35	48	37
1/03/2010	21.1	0	1.8	158	42	45	39
2/03/2010	20.7	0	2.8	77	37	47	35
3/03/2010	19.9	0	2.6	253	38	46	42
4/03/2010	18.9	0	4.5	236	35	43	43
5/03/2010	18.4	0	3.6	306	36	46	38
6/03/2010	18.2	0	2.8	311	35	45	40
7/03/2010	17.8	0	3.3	297	35	43	34
8/03/2010	17.6	0	2.5	268	39	56	35
9/03/2010	18.7	0	2.5	227	37	50	30
10/03/2010	17.5	0	1.0	267	47	49	40
11/03/2010	19.5	0	4.1	233	42	47	34
12/03/2010	21.4	0	2.8	56	40	44	37
13/03/2010	18.4	0	1.0	264	38	46	36
14/03/2010	20.8	0	3.5	230	40	51	35
15/03/2010	18.6	0	2.1	236	42	49	44
16/03/2010	20.1	0	4.0	241	46	46	32
17/03/2010	18.4	0	1.6	197	39	45	35
18/03/2010	17.8	0	2.3	32	38	49	37
19/03/2010	20.3	0	2.4	207	39	48	48
20/03/2010	19.2	0	2.7	163	38	49	40
21/03/2010	19.2	0	2.4	228	36	48	44
22/03/2010	19.4	0	2.4	247	38	52	46
23/03/2010	18.3	0	3.0	196	40	49	37
24/03/2010	18.9	0	1.7	161	34	39	32

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
25/03/2010	17.5	0	1.5	68	36	51	43
26/03/2010	21.3	0	2.6	53	39	51	45
27/03/2010	20.4	0	1.8	262	42	51	42
28/03/2010	21.5	0	2.5	242	45	49	44
29/03/2010	20.2	0	4.9	197	38	47	40
30/03/2010	21.4	0	4.4	257	37	50	44
31/03/2010	21.3	0	2.2	254	39	55	42
1/04/2010	19.1	0	2.3	242	40	52	38
2/04/2010	16.7	0	4.2	237	47	51	45
3/04/2010	16.1	0	6.0	234	50	52	34
4/04/2010	14.1	0	2.3	227	45	49	33
5/04/2010	13.8	0	3.7	228	42	50	36
6/04/2010	14.3	0	2.2	215	46	54	43
7/04/2010	16.1	0	3.1	235	50	44	30
8/04/2010	10.5	0	1.3	209	40	54	49
9/04/2010	15.0	0	2.2	328	47	35	42
10/04/2010	15.0	0	2.3	322	46	53	47
11/04/2010	16.4	0	4.7	308	52	45	37
12/04/2010	15.0	0	2.0	213	45	34	39
13/04/2010	14.6	0	2.0	230	51	58	50
14/04/2010	16.8	0	4.3	229	49	49	51
15/04/2010	16.7	0	1.6	221	52	44	47
16/04/2010	16.3	0	3.2	224	49	51	50
17/04/2010	16.0	0	2.6	228	50	48	45
18/04/2010	25.9	0	3.5	203	49	54	51
19/04/2010	26.4	0	3.0	239	48	40	39
20/04/2010	33.8	0	2.6	223	41	51	39
21/04/2010	35.8	0	1.9	254	38	44	31
22/04/2010	32.3	0	2.2	181	35	45	35
23/04/2010	32.4	0	1.9	126	37	52	42
24/04/2010	33.6	0	1.9	176	36	53	51
25/04/2010	36.0	0	3.4	41	34	48	39
26/04/2010	34.4	0	2.6	198	36	44	37
27/04/2010	32.9	0	1.4	123	45	46	41
28/04/2010	33.8	0	2.9	156	39	46	35
29/04/2010	32.1	0	2.3	149	36	39	30
30/04/2010	31.1	0	3.0	158	34	30	31
1/05/2010	31.7	0	2.1	158	34	32	28
2/05/2010	31.0	0	1.9	152	37	32	29
3/05/2010	29.7	0	2.4	179	33	32	28

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
4/05/2010	28.6	0	2.8	159	33	35	30
5/05/2010	29.5	0	3.6	184	44	34	31
6/05/2010	31.5	0	2.9	95	39	36	28
7/05/2010	29.2	0	2.1	172	42	32	28
8/05/2010	29.1	0	3.4	171	41	32	30
9/05/2010	27.7	0	3.0	158	38	35	28
10/05/2010	26.6	0	2.6	156	35	33	28
11/05/2010	27.5	0	3.1	162	40	37	29
12/05/2010	26.2	0	3.0	151	38	29	28
13/05/2010	27.3	0	1.1	79	40	34	30
14/05/2010	29.2	0	5.2	202	39	34	28
15/05/2010	20.7	0	4.6	129	38	30	30
16/05/2010	20.6	0	3.2	93	42	33	31
17/05/2010	23.6	0	2.6	110	44	41	38
18/05/2010	27.7	0	3.6	53	41	36	31
19/05/2010	25.5	0	1.7	224	41	36	29
20/05/2010	22.6	0	3.0	209	35	40	30
21/05/2010	22.4	0	2.1	294	30	37	28
22/05/2010	23.0	0	1.1	206	40	40	31
23/05/2010	24.0	0	4.4	210	40	36	27
24/05/2010	19.9	0	3.3	162	34	28	28
25/05/2010	18.4	0	2.1	261	31	28	27
26/05/2010	18.8	0	3.1	180	43	32	30
27/05/2010	19.2	0	2.8	215	45	34	29
28/05/2010	19.3	0	4.5	199	34	27	28
29/05/2010	16.9	0	2.1	128	42	29	29
30/05/2010	16.5	0	3.0	149	35	28	29
31/05/2010	17.7	0	2.5	155	37	33	28
1/06/2010	19.6	0	3.7	167	35	31	28
2/06/2010	12.5	0	2.3	115	40	27	29
3/06/2010	12.7	0	3.4	160	38	31	28
4/06/2010	16.3	0	4.2	164	40	30	30
5/06/2010	16.3	0	2.0	100	43	48	38
6/06/2010	19.6	0	3.3	77	46	38	29
7/06/2010	16.6	0	2.9	112	41	32	29
8/06/2010	13.5	0	3.1	157	37	29	28
9/06/2010	13.8	0	4.8	101	42	36	32
10/06/2010	12.9	0	3.8	159	42	30	29
11/06/2010	11.9	0	3.7	149	41	31	29
12/06/2010	15.4	0	1.9	140	40	34	30

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
13/06/2010	17.5	0	2.5	96	40	33	34
14/06/2010	16.1	0	1.8	73	44	32	33
15/06/2010	18.8	0	2.6	68	39	30	34
16/06/2010	18.2	0	3.9	59	34	37	34
17/06/2010	21.4	0	2.2	60	34	36	34
18/06/2010	19.3	0	1.8	234	35	35	31
19/06/2010	19.4	0	2.0	229	36	32	29
20/06/2010	18.0	0	1.1	153	32	30	29
21/06/2010	16.9	0	2.7	56	37	39	29
22/06/2010	16.7	0	1.0	121	42	36	31
23/06/2010	14.6	0	3.5	154	32	29	31
24/06/2010	12.7	0	1.4	163	37	32	29
25/06/2010	16.6	0	3.7	168	38	31	29
26/06/2010	13.0	0	2.8	170	37	30	28
27/06/2010	13.7	0	1.9	164	33	27	29
28/06/2010	16.0	0	1.6	158	37	27	28
29/06/2010	12.4	0	4.4	165	35	28	31
30/06/2010	12.1	0	3.8	136	34	28	31
1/07/2010	9.4	0	5.7	107	38	30	29
2/07/2010	8.9	0	3.6	170	37	27	28
3/07/2010	17.0	0	1.8	193	35	28	28
4/07/2010	18.2	0	2.4	188	34	32	33
5/07/2010	10.5	0	2.8	41	33	29	30
6/07/2010	11.5	0	0.9	85	38	30	34
7/07/2010	10.3	0	3.3	145	42	31	30
8/07/2010	17.6	0	3.3	62	41	30	30
9/07/2010	17.3	0	2.2	31	50	42	30
10/07/2010	11.3	0	4.9	207	32	29	29
11/07/2010	8.5	0	0.9	66	32	27	29
12/07/2010	9.5	0	3.0	158	46	27	29
13/07/2010	10.2	0	4.0	159	36	29	29
14/07/2010	9.2	0	2.1	121	36	32	31
15/07/2010	9.9	0	3.7	157	38	30	31
16/07/2010	13.8	0	2.5	87	33	29	28
17/07/2010	18.3	0	3.2	171	32	30	30
18/07/2010	20.3	0	3.9	191	31	27	30
19/07/2010	18.4	0	2.9	160	39	31	29
20/07/2010	14.1	0	2.8	96	34	33	29
21/07/2010	17.4	0	3.2	181	39	33	29
22/07/2010	17.1	0	3.5	142	42	35	29

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
23/07/2010	12.5	0	4.1	174	42	32	28
24/07/2010	11.6	0	5.9	101	37	31	29
25/07/2010	8.8	0	4.0	161	33	30	28
26/07/2010	13.7	0	1.5	172	31	30	29
27/07/2010	12.5	0	0.2	331	32	31	28
28/07/2010	15.6	0	1.9	161	34	30	29
29/07/2010	16	0	3.0	213	39	32	31
30/07/2010	15.9	0	4.3	186	37	29	28
31/07/2010	10.6	0	3.5	157	43	28	30
1/08/2010	8.2	0	5.9	105	43	28	29
2/08/2010	9.8	0	5.9	105	44	30	30
3/08/2010	10.5	0	3.5	161	40	31	30
4/08/2010	10.5	0	2.6	162	39	32	30
5/08/2010	11.7	0	3.2	167	37	31	32
6/08/2010	8.6	0	3.4	167	33	31	30
7/08/2010	7.6	0	3.2	160	31	30	28
8/08/2010	9.5	0	4.0	179	34	30	29
9/08/2010	9.8	0	1.5	175	45	33	35
10/08/2010	9.8	0	3.8	138	50	33	33
11/08/2010	4.7	0	1.8	88	47	31	32
12/08/2010	8	0	3.5	43	34	29	33
13/08/2010	16.8	0	3.1	352	43	28	29
14/08/2010	10.7	0	4.8	177	33	28	29
15/08/2010	8.6	0	3.1	172	38	28	29
16/08/2010	9	0	3.4	159	32	27	28
17/08/2010	16.1	0	4.2	246	39	34	29
18/08/2010	12.7	0	4.4	214	37	30	30
19/08/2010	9.8	0	4.2	213	35	29	29
20/08/2010	13.4	0	3.0	306	40	29	29
21/08/2010	9.4	0	3.3	172	38	31	32
22/08/2010	15.2	0	3.4	237	33	31	31
23/08/2010	11.5	0	1.4	280	33	30	29
24/08/2010	11.3	0	2.8	202	34	35	34
25/08/2010	16.5	0	7.5	148	34	30	32
26/08/2010	13.9	0	1.6	99	41	33	28
27/08/2010	13.6	0	3.0	142	39	28	27
28/08/2010	15.4	0	1.9	236	39	30	28
29/08/2010	13	0	3.0	158	31	28	26
30/08/2010	13.5	0	3.2	169	33	27	27
31/08/2010	13.8	0	0.9	198	35	31	32

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
1/09/2010	17.6	0	2.5	250	46	31	31
2/09/2010	13.4	0	3.8	226	43	28	28
3/09/2010	10.4	0	5.1	182	37	33	29
4/09/2010	11.7	0	1.4	139	38	26	27
5/09/2010	8.5	0	2.3	162	41	27	28
6/09/2010	8.9	0	2.7	178	37	30	29
7/09/2010	13.1	0	3.1	224	41	28	29
8/09/2010	11	0	4.8	218	41	39	29
9/09/2010	17.3	0	3.5	243	34	28	27
10/09/2010	13.1	0	1.6	54	32	29	28
11/09/2010	17.8	0	2.8	213	32	32	31
12/09/2010	14.9	0	1.3	96	37	32	29
13/09/2010	11.9	0	2.1	189	37	27	27
14/09/2010	17.9	0	3.0	198	40	34	36
15/09/2010	12.9	0	1.9	56	38	36	31
16/09/2010	12.9	0	1.3	125	38	27	28
17/09/2010	15.1	0	0.8	160	39	29	28
18/09/2010	14	0	3.2	133	40	29	37
19/09/2010	15.8	0	9.5	90	45	32	30
20/09/2010	15.1	0	9.5	104	46	34	29
21/09/2010	13.8	0	3.2	177	44	35	29
22/09/2010	14.9	0	3.7	161	41	33	29
23/09/2010	15.4	0	1.9	169	42	33	29
24/09/2010	15.2	0	2.6	168	39	30	27
25/09/2010	15.1	0	1.9	219	39	30	28
26/09/2010	19.8	0	4.3	178	35	30	30
27/09/2010	20.9	0	1.1	341	35	27	28
28/09/2010	19.1	0	2.6	231	34	27	30
29/09/2010	18.8	0	2.3	150	34	27	29
30/09/2010	19.1	0	2.0	207	39	34	31
1/10/2010	20.9	0	2.4	220	36	29	30
2/10/2010	20.3	0	2.0	211	35	26	29
3/10/2010	21.7	0	4.0	188	35	30	28
4/10/2010	21.5	0	2.8	209	40	39	34
5/10/2010	25.8	0	6.0	225	35	32	30
6/10/2010	21.1	0	0.8	196	45	28	27
7/10/2010	23.8	0	2.7	187	43	29	27
8/10/2010	20	0	2.3	161	43	26	27
9/10/2010	20.8	0	2.1	171	35	26	28
10/10/2010	21.7	0	3.0	212	41	32	31

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
11/10/2010	22.1	0	3.7	242	43	34	31
12/10/2010	22.3	0	4.8	253	38	26	29
13/10/2010	21.9	0	3.5	318	33	27	28
14/10/2010	21.6	0	4.1	196	38	29	29
15/10/2010	21.5	0	1.0	230	47	27	28
16/10/2010	20.6	0	1.4	105	47	29	29
17/10/2010	18.9	0	3.0	177	44	28	27
18/10/2010	18.6	0	1.5	169	37	28	28
19/10/2010	19.1	0	2.7	152	35	28	28
20/10/2010	19.8	0	2.0	207	37	31	29
21/10/2010	21.5	0	2.0	246	37	33	29
22/10/2010	23	0	3.0	280	37	30	29
23/10/2010	23.9	0	1.5	356	36	29	26
24/10/2010	22.9	0	1.0	13	35	35	32
25/10/2010	24.1	0	2.7	293	37	31	30
26/10/2010	22.5	0	3.3	212	39	33	30
27/10/2010	23.4	0	3.9	193	44	41	35
28/10/2010	23.4	0	6.3	227	48	34	30
29/10/2010	21.1	0	5.3	229	39	35	33
30/10/2010	24	0	2.1	285	48	32	26
31/10/2010	23	0	2.0	129	45	31	26
1/11/2010	19	0	3.6	163	42	31	26
2/11/2010	19.9	0	2.5	176	46	32	26
3/11/2010	23.2	0	0.0	315	35	31	27
4/11/2010	23.9	0	2.2	233	38	33	30
5/11/2010	24.1	0	1.1	332	45	45	34
6/11/2010	25.9	0	7.0	217	42	36	31
7/11/2010	23.5	0	3.6	215	40	33	31
8/11/2010	23.3	0	1.5	254	37	30	28
9/11/2010	21.5	0	3.5	206	38	35	28
10/11/2010	23.3	0	3.5	197	44	44	32
11/11/2010	25	0	4.7	226	47	46	35
12/11/2010	24.5	0	6.1	244	45	42	35
13/11/2010	23.7	0	1.7	229	45	39	33
14/11/2010	22.3	0	4.9	230	46	40	32
15/11/2010	22.6	0	5.4	256	42	38	27
16/11/2010	22.1	0	3.1	249	38	38	28
17/11/2010	23.2	0	5.4	265	40	43	33
18/11/2010	23.3	0	3.6	219	39	42	34
19/11/2010	24.6	0	2.8	226	37	42	34

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
20/11/2010	25.3	0	2.7	223	39	45	31
21/11/2010	24.6	0	0.7	133	45	46	37
22/11/2010	25.3	0	4.4	235	47	44	36
23/11/2010	24.9	0	4.8	227	43	45	34
24/11/2010	26	0	4.0	246	41	41	35
25/11/2010	24.9	0	3.6	227	43	42	37
26/11/2010	24.7	0	2.5	255	44	43	37
27/11/2010	24.5	0	2.2	254	41	40	29
28/11/2010	23.2	0	4.2	111	39	40	38
29/11/2010	26	0	7.6	184	38	34	28
30/11/2010	22.4	0	3.5	126	38	38	30
1/12/2010	17.8	0	2.7	207	42	47	38
2/12/2010	18.6	0	3.1	248	43	43	37
3/12/2010	18.4	0	3.9	275	43	44	36
4/12/2010	17.8	0	4.9	239	43	43	37
5/12/2010	18.1	0	4.3	261	44	44	37
6/12/2010	17.9	0	2.8	243	44	44	36
7/12/2010	19.4	0	6.3	243	46	43	37
8/12/2010	19.6	0	5.4	246	45	43	35
9/12/2010	18.4	0	4.4	247	38	40	33
10/12/2010	19.1	0	0.5	6	43	42	34
11/12/2010	19.3	0	4.1	205	41	43	29
12/12/2010	19.5	0	2.2	203	37	41	39
13/12/2010	20.7	0	2.9	246	39	42	30
14/12/2010	20.3	0	1.3	308	46	49	40
15/12/2010	21.9	0	5.9	52	39	44	44
16/12/2010	18.4	0	2.9	46	52	49	51
17/12/2010	18.8	0	7.7	31	56	54	46
18/12/2010	17.3	0	8.0	344	46	44	41
19/12/2010	16.6	0	4.4	289	42	43	46
20/12/2010	17.2	0	2.0	291	38	45	40
21/12/2010	17.5	0	1.6	253	44	45	41
22/12/2010	17.8	0	4.7	250	46	45	42
23/12/2010	18.2	0	3.6	242	44	44	41
24/12/2010	19.3	0	2.8	222	40	42	38
25/12/2010	20.4	0	2.1	236	39	46	40
26/12/2010	21.2	0	2.5	233	42	44	43
27/12/2010	21.5	0	2.3	243	45	47	46
28/12/2010	21	0	2.2	256	44	46	45
29/12/2010	22.1	0	5.1	306	49	48	44

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
30/12/2010	22.1	0	5.1	327	53	44	42
31/12/2010	22.2	0	2.4	216	50	48	47
1/01/2011	22	0	0.8	354	55	46	46
2/01/2011	18.7	0	5.0	59	54	49	46
3/01/2011	20.9	0	6.4	71	53	49	48
4/01/2011	21	0	2.7	334	52	49	47
5/01/2011	21.8	0	1.7	258	53	52	51
6/01/2011	22.3	0	3.3	253	53	54	48
7/01/2011	22	0	3.5	260	54	49	47
8/01/2011	24	0	3.5	256	54	49	48
9/01/2011	24.3	0	1.4	262	53	50	46
10/01/2011	20.2	0	2.0	103	54	50	48
11/01/2011	22.3	0	3.5	262	53	52	50
12/01/2011	23.1	0	2.8	245	52	53	49
13/01/2011	21.5	0	3.6	253	49	50	48
14/01/2011	23.4	0	1.5	290	52	49	46
15/01/2011	21.9	0	0.8	143	51	49	49
16/01/2011	23.3	0	1.0	189	53	52	46
17/01/2011	22.9	0	4.5	77	48	50	48
18/01/2011	23	0	3.9	313	47	49	48
19/01/2011	23.4	0	3.8	270	46	48	48
20/01/2011	23.8	0	4.2	253	56	47	44
21/01/2011	23.1	0	1.2	235	54	49	47
22/01/2011	21.9	0	2.5	76	56	47	46
23/01/2011	23.4	0	1.4	257	58	47	46
24/01/2011	24.3	0	3.6	238	48	44	44
25/01/2011	24.6	0	3.6	252	45	45	44
26/01/2011	24	0	1.8	226	46	47	48
4/02/2011	25	0	0.4	112	49	49	49
5/02/2011	25.3	0	4.6	263	51	45	49
6/02/2011	21.5	0	5.1	9	54	52	51
7/02/2011	20.5	0	4.0	90	57	52	48
8/02/2011	21.1	0	3.2	18	77	56	54
9/02/2011	23.2	0	2.3	171	93	55	54
10/02/2011	22	0	9.2	70	81	55	50
11/02/2011	21.5	0	3.7	22	68	51	48
12/02/2011	23	0	1.0	220	60	45	48
13/02/2011	21.3	0	0.9	41	70	53	51
14/02/2011	21.7	0	1.0	104	69	55	52
15/02/2011	22.3	0	5.2	129	65	66	67

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
16/02/2011	18.4	0.25	6.8	68	71	61	54
17/02/2011	19.3	0	3.1	52	76	52	46
18/02/2011	20	0	3.9	55	72	48	46
19/02/2011	21.3	0	4.5	18	69	47	50
20/02/2011	21.6	0	2.7	337	69	50	50
21/02/2011	22.1	0	2.9	239	63	51	47
22/02/2011	19.5	0	5.3	208	61	68	64
23/02/2011	17.6	0.5	14.8	329	61	48	46
24/02/2011	18.3	0	5.8	336	60	44	38
25/02/2011	18.8	0	0.9	345	59	47	48
26/02/2011	20	0	2.1	232	54	44	43
27/02/2011	21.2	0	6.3	182	54	47	46
28/02/2011	22.6	0	6.4	160	49	44	42
1/03/2011	23.5	0	1.6	33	55	43	43
2/03/2011	23.2	0	2.7	135	61	43	40
3/03/2011	23.4	0	3.0	151	69	51	46
4/03/2011	23	0	3.3	307	70	45	43
5/03/2011	22.8	0	2.6	293	61	43	45
6/03/2011	23.7	0	4.1	303	67	42	43
7/03/2011	24.1	0	2.7	29	69	38	41
8/03/2011	23.5	0	2.3	279	69	42	41
9/03/2011	24.9	0	4.6	225	71	43	41
10/03/2011	23.2	0	0.8	356	68	40	38
11/03/2011	21.5	0	3.4	216	67	42	41
12/03/2011	23.7	0	2.3	210	57	43	43
13/03/2011	24.8	0	4.0	291	65	41	42
14/03/2011	22	0	4.2	191	66	43	42
15/03/2011	25.3	0	3.4	197	60	44	43
16/03/2011	25	0	3.0	241	62	43	43
17/03/2011	24.6	0	2.7	287	68	44	42
18/03/2011	24	0	0.7	285	57	43	41
19/03/2011	23.4	0	3.4	218	58	46	42
20/03/2011	22.8	0	3.8	188	73	-	-
22/03/2011	30.3	#N/A	#N/A	#N/A	45	54	51
23/03/2011	30.3	#N/A	#N/A	#N/A	47	53	54
24/03/2011	32	#N/A	#N/A	#N/A	50	55	52
25/03/2011	32.2	#N/A	#N/A	#N/A	53	52	47
26/03/2011	29.6	#N/A	#N/A	#N/A	52	47	45
27/03/2011	27.3	#N/A	#N/A	#N/A	54	48	42
28/03/2011	25.3	#N/A	#N/A	#N/A	53	51	45

Uncontrolled When Printed



Date	Temp	Rainfall (mm)	Wind Speed (m/sec)	Wind Direction (degrees)	Day Average	Evening Average	Night Average
29/03/2011	25.9	#N/A	#N/A	#N/A	51	57	54
30/03/2011	31.6	#N/A	#N/A	#N/A	48	57	59
31/03/2011	28.9	#N/A	#N/A	#N/A	48	51	53
1/04/2011	29.7	#N/A	#N/A	#N/A	45	55	49
2/04/2011	27.3	#N/A	#N/A	#N/A	50	50	56
3/04/2011	19.3	#N/A	#N/A	#N/A	49	50	54
4/04/2011	18.6	#N/A	#N/A	#N/A	54	52	54
5/04/2011	21.4	#N/A	#N/A	#N/A	65	49	52
6/04/2011	20.2	#N/A	#N/A	#N/A	64	52	49
7/04/2011	19.2	#N/A	#N/A	#N/A	65	52	53
8/04/2011	20.4	#N/A	#N/A	#N/A	66	54	55
9/04/2011	20.6	#N/A	#N/A	#N/A	60	58	55
10/04/2011	21	#N/A	#N/A	#N/A	63	53	54
11/04/2011	19.9	#N/A	#N/A	#N/A	67	53	52
12/04/2011	18.7	#N/A	#N/A	#N/A	70	60	58
13/04/2011	20.8	#N/A	#N/A	#N/A	79	61	55
14/04/2011	20.9	#N/A	#N/A	#N/A	84	53	50
15/04/2011	18.8	#N/A	#N/A	#N/A	84	59	57
16/04/2011	20.1	#N/A	#N/A	#N/A	70	50	53
17/04/2011	20.3	#N/A	#N/A	#N/A	39	-	-