



PILBARA IRON ORE AND INFRASTRUCTURE PROJECT

**Chichester Operations
Dust
Environmental Management Plan**

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
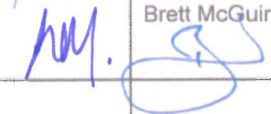
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1. INTRODUCTION

1.1 BACKGROUND

Fortescue Metals Group Limited (Fortescue) has commenced operation of the Pilbara Iron Ore and Infrastructure Project (the Project), which consists of several iron ore mines and associated rail and port infrastructure in the Pilbara region of Western Australia. The primary environmental approvals for the project have been obtained in four stages:

- Stage A consisting of an iron ore export facility at Port Hedland and a north-south railway from the central Pilbara to Port Hedland (approved under Ministerial Statement 690);
- Stage B consisting of two iron ore mines in the Eastern Pilbara (Christmas Creek and Mindy Mindy) and an east-west spur rail line connecting to the Stage A railway (approved under Ministerial Statement 707);
- Cloudbreak iron ore mine west of the Christmas Creek area (approved under Ministerial Statement 721 and Commonwealth Assessment EPBC 2005/2205); and
- Port facility upgrade of the third berth at Anderson Point, Port Hedland: Dredging and wharf construction (approved under Ministerial Statement 771).

The Cloudbreak and Christmas Creek mine sites are located on the southern slopes of the Chichester Range; collectively the two mine sites are referred to as the Chichester Operations.

During the initial stages of operation, mining will occur in the Cloudbreak and Christmas Creek areas, with ore hauled by truck from Christmas Creek to the ore processing facility at Cloudbreak. Ore from Cloudbreak and Christmas Creek is then transported by train along the approved north-south (Stage A) and east-west (Stage B) railways to Port Hedland.

Proposed extensions of the rail line to the south and to the east will be considered in future expansions.

The existing infrastructure at Fortescue's Herb Elliott Port provides for train unloading, stacking and reclaiming and ship loading of iron ore via a conveyor system. Expansion of the port facility to include an additional fourth and fifth berth and increased reclaiming capacity is proposed to handle increased ore production from the Chichester Operations.



1.2 PURPOSE

The purpose of this plan is to outline the existing information on the potential environmental impacts from dust resulting from Fortescue’s Chichester Operations. The Plan further details the management actions employed to mitigate and reduce these impacts.

The Plan is developed to meet the requirements of Commitment 2 of Ministerial Statement 707 and Commitment 16 of Ministerial Statement 721, as described in Table 1.

Table 1: Requirements of Ministerial Statements 707 and 721

Ministerial Statement	Requirement	Location
707 and 721	<i>Prepare an Operations Dust Management Plan which addresses:</i> <ul style="list-style-type: none">• Minimising the generation of dust and impacts and emissions on and off site;	6.0
	<ul style="list-style-type: none">• Dust control measures;	6.0
	<ul style="list-style-type: none">• Ore stockpiles moisture content;	4.1 6.3
	<ul style="list-style-type: none">• Dust monitoring network; and	7.0
	<ul style="list-style-type: none">• Outlines a ‘complaints and response’ process.	8.0

The specific objective of this management plan, as described in Ministerial Statements 707 and 721 is to:

“Protect the surrounding land users such that dust and particulate emissions will not adversely impact upon their welfare and amenity or cause health problems, and ensure that dust emissions, both individually and cumulatively, meet appropriate criteria and do not cause environmental or human health problems.”

1.3 SCOPE

This plan applies to dust generated from mining and associated operational activities within the Chichester Operations.



1.4 BACKGROUND

1.4.1 Climate

The climate of the Pilbara region is dominated by the presence of tropical cyclonic weather between November and March. Both mean wind speeds and monthly rainfall levels are higher during these months than at other times of the year.

Annual rainfall in the region is low, averaging 310 mm at Newman. The majority of this rain falls during cyclonic events between December and March, with almost no rain falling between August and November. The rainfall events in Newman are generally very concentrated, averaging approximately 7 mm rainfall per rain day.

Ambient dust concentrations in the Pilbara region can be naturally high due to:

- Low rainfall and high evaporation rates, which cause soils to be dry and subject to lift-off;
- Relatively sparse natural vegetation;
- Limited housing and industry development;
- Frequent high winds; and
- Frequent uncontrolled bush fires.

The high ambient dust levels must be taken into consideration when assessing dust generated from Fortescue's mining activities.

Dust within the Chichester Operations is most likely to be generated and transported when:

- Stockpiles and cleared areas are dry (i.e. during periods of low rainfall and high evaporation); and
- Wind speeds are sufficiently high to enable wind-blown dust to be generated from stockpiles and cleared areas.



1.5 POTENTIAL ENVIRONMENTAL IMPACTS

1.5.1 Human Health

Health risks posed by inhaled dust particles are influenced by the penetration and deposition of particles in the various regions of the respiratory tract and the biological responses to these deposited materials (Department of Environment and Heritage, 1998).

Aerodynamic equivalent diameter (AED) size is a key determinant of the depth to which particles can penetrate the human respiratory tract. Exposure to certain types of dust particles can lead to such respiratory conditions as lung cancer, silicosis, and bronchitis.

As a general rule, dust with an AED less than $7\mu\text{m}$ is considered 'respirable' dust, while dust with an AED larger than $7\mu\text{m}$ is considered inhalable dust. Respirable dust particles may be inhaled through the nose and throat and, due to the smaller AED, can penetrate into the alveolar region of the lungs. Dust particles may be inhaled through the nose and throat and be deposited in the trachea and bronchia sections of the lungs. Both types of dust particles can cause health impacts.

Some dust particles can generate accelerated health impacts due to their shape or chemical nature. Examples of this are asbestos fibres (known carcinogens) and crystalline silica dust (which can form scar tissue on the lungs).

Iron ore dust is generally not associated with any specific pathogen effects.

1.5.2 Amenities

Aside from the potential health impacts, dust may also interfere with amenity. Amenity impacts may include:

- Preventing members of the workforce from undertaking outdoor activities in comfort;
- Soiling clothing on washing lines;
- Dust build-up on buildings and vehicles requiring frequent washing; and
- Staining of surfaces.

Dust of any particle size can contribute to amenity impacts. The general term for dust of any size is Total Suspended Particulates (TSP), measured in micrograms per cubic metre ($\mu\text{g}/\text{m}^3$).

There is negligible risk of amenity impacts on the community due to dust emissions from the Chichester Operations because of their distance from sensitive residential / community receptors. The nearest residence is Marillana Station, 31.5km south of



Cloudbreak (Environ, 2005). However, the amenity of workers is also an important consideration and is a factor in the development of this plan.

1.5.3 Vegetation Impacts

Where dust deposition is high over a sustained period, it can form a physical barrier on vegetation to restrict natural processes such as photosynthesis and respiration. Some species of plant are more sensitive to these effects than others.

Vegetation surveys of the Cloudbreak and Christmas Creek areas have been carried out (Mattiske, 2005; Biota, 2004) and this information is recorded within Fortescue's Geographical Information System (GIS). Monitoring of vegetation adjacent to areas of high activity is undertaken to ensure action can be taken in the event that a decline in vegetation condition is observed.

1.6 OTHER RELEVANT DOCUMENTS

This Management Plan is to be read in conjunction with the following Fortescue documents:

- *Dust Management Procedure (100-PR-SA-0052);*
- *Construction Dust Management Plan (45-PL-EN-0012);*
- *Dust Deposition Gauges – Installation and Operation Procedure; and*
- *Dust Deposition – Vegetation Health Assessment Procedure.*



2. STAKEHOLDER CONSULTATION

Fortescue has undertaken an extensive stakeholder consultation program whereby landowners, regulators and other relevant parties have been consulted with regard to investigation and design of the Project.

Fortescue applies the principles of its *Stakeholder Consultation Strategy* (100-PH-EN-0003) for the development and implementation of stakeholder engagement during management plan development and implementation.



3. APPLICABLE LEGISLATION

Fortescue employees and contractors shall comply with all Commonwealth and State legislation that applies to the development and operation of the Project. Legislation relevant to the management of issues relevant to operational dust is outlined in Table 2.

Table 2: Relevant legislation and its application

Legislation	Application
<i>Environmental Protection Act 1986</i>	State environmental impact assessment and Ministerial approval process.

The following Australian Standards have been developed in relation to dust monitoring:

- *AS 3580.1.1:2007* – Methods for sampling and analysis of ambient air – Guide for siting air monitoring equipment;
- *AS 3580.10.1.2003* - Methods for and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric method;
- *AS 3580.9.6:2003* - Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM(sub)10(/sub) high volume sampler with size-selective inlet - Gravimetric method; and
- *AS 3580.9.8-2008* - Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 continuous direct mass method using a tapered element oscillating microbalance analyser.



4. EXISTING ENVIRONMENT

4.1 OVERVIEW OF DUST SOURCES

Iron ore resources at the Chichester Operations are relatively shallow and are mined via strip mining. This method allows one or more strips (or parallel pits) to be mined, whilst progressively placing overburden as backfill in mined out sections of the pits. This reduces the extent of the open working pit, reduces the area of surface storage facilities required for overburden, and allows the pit to be progressively rehabilitated.

The mines produce three ore products:

- High Grade Lump;
- High Grade Fines; and
- Rocket Fines.

The high grade lump and high grade fines products will only require crushing and screening which will occur at the Cloudbreak and Christmas Creek ore processing facilities (OPF). The rocket fines will require treatment to reduce the silica and alumina contaminants. This will be undertaken at the Cloudbreak desand plant.

The major operational activities at Chichester Operations which may contribute to dust generation will be:

- Vegetation clearing;
- Excavation of overburden;
- Drill and blasting;
- Ore screening and crushing;
- Ore stockpiling and windblown dust from stockpiles;
- Windblown dust from tails disposal facilities; and
- Operation of heavy machinery and vehicle transport.



4.2 CHARACTERISTICS OF CHICHESTER ORE

Three ore products will be produced. At a planned production rate of 45Mtpa, the ore products and their relative contributions to overall production are:

- High Grade Lump (17%);
- High Grade Fines (28%); and
- Rocket Fines (55%).

Initial production comprises of high grade fines with rocket fines being produced at the desand plant. High grade lump will follow at a later stage (pers. comm. G. Fletcher, Fortescue).

The characteristics of the fine ore products to be produced at Chichester Operations are shown in Table 3. High grade lump will be a coarse material (97% > 8 mm) with a moisture content of 4% (pers. comm. Dr. J. Clout, Fortescue).

Note that these are product specifications and that actual specifications of ore at the mine site may vary.

The physical characteristics suggest that the material with the highest propensity for dust generation will be high grade fines. High grade lump appears to be very unlikely to produce any significant dust.

Table 3: Characteristics of Chichester ore at 7% moisture content

Particulate Size	% of Ore Product	
	High Grade Fines	Rocket Fines
> 6.3 mm	11.0	18.8
4-6.3 mm	14.0	21.3
2-4 mm	19.1	21.8
1-2 mm	14.3	16.1
0.5-1 mm	11.3	6.0
0.212-0.5 mm	10.6	5.4
0.106-0.212 mm	6.1	5.5
0.075-0.106 mm	2.8	1.6
0.038-0.075 mm	4.6	2.0
< 0.038 mm	6.1	1.6

Source: (pers. comm. Dr. J. Clout, Fortescue)



5. ROLES AND RESPONSIBILITIES

Table 4 provides provisional roles and responsibilities of the personnel responsible for the implementation of the *Chichester Operations Dust Environmental Management Plan*.

Table 4: Roles and Responsibilities

Position	Responsibility
Head of Environment	Implementation and maintenance of the <i>Chichester Operations Dust Environmental Management Plan</i> . Undertake review of the management plan.
Environment Superintendent	Ensure all staff are aware of their obligations in relation to the plan. Participate in compliance audits and inspections. Provide technical support to site personnel.
Construction / Operations Managers	Ensure that the plan is being adhered to by all staff and contractors. Participate in compliance audits and inspections.



6. ENVIRONMENTAL MANAGEMENT

A series of management objectives has been determined. For each of these objectives, several management actions have been developed to ensure the impacts from Fortescues operations are managed, and a range of monitoring and assessment functions to which the plan is being implemented. The general approach to management of dust has been detailed according to the following structure:

Item	Content
Objective	What is intended to be achieved?
Management Actions	Tasks that will be undertaken to ensure the Objective is met, lists of procedures required
Performance Indicators	Qualitative or quantitative measurement to gauge the performance of the actions undertaken
Monitoring	Details of measurement of performance indicators
Reporting	Nature, timing and responsibility for reporting results
Corrective Action	Action to be taken if monitoring indicates objective is not being met
Term	Active term of management plan
Responsibility	Delegation/nomination of responsibilities for overseeing management plan operation



6.1 CLEARED AND DISTURBED AREAS

Fortescue will endeavour to minimise dust emissions from cleared and disturbed areas as outlined in Table 5.

Table 5: Management strategies for cleared and disturbed areas

Objective	To ensure that dust emissions from cleared and disturbed areas do not impact on the health or amenity of workers and to reduce the potential for dust deposition to impact vegetation.
Management Actions	Minimise vegetation clearing as much as practicable. Cease clearing during high wind speed events where complaints are received in relation to that clearing. Progressively rehabilitate disturbed areas.
Performance Indicators	No indication of impacts to health or amenity of workers (No. of complaints and incident reports). No significant vegetation decline at vegetation monitoring sites (No reduction in vegetation condition score compared with controls).
Monitoring	Monitoring of dust deposition will be conducted in accordance with Section 7 of this plan.
Reporting	Incidents and Complaints reported in the Annual Environmental Report. Vegetation health assessment reported in the Annual Environmental Report. Monthly reporting.
Corrective Action	Should complaints and or incidents indicate that dust generation is impacting the on-site work force or monitoring results indicate a reduction in vegetation health, additional dust suppression measures will be implemented. These dust suppression measures will include: <ul style="list-style-type: none">• increased watering; and/or• the use of dust control additives in areas not regularly trafficked.
Term	Life of Project
Responsibility	Operations Managers Environment Superintendent



6.2 VEHICLE TRAFFIC AREAS

Fortescue will manage dust emissions from vehicle traffic to ensure it does not impact on health or amenity of workers or vegetation health as outlined in Table 6.

Table 6: Management strategies for vehicle traffic areas

Objective	To ensure that dust emissions from vehicle traffic on roads and operational areas during operations do not impact on the health or amenity of workers and to reduce the potential for dust deposition to impact vegetation.
Management Actions	Fortescue will implement dust suppression measures on high traffic areas such as access and haul roads and laydown areas around the mines. Dust control measures may include: <ul style="list-style-type: none"> • use of water carts; • non-water soil stabilisers; and • reduction of speed limits.
Performance Indicators	No significant vegetation health decline adjacent to vehicle traffic areas (no reduction in vegetation condition score compared with controls). No indication of health or amenity impacts to on-site workers (No. of complaints and incident reports).
Monitoring	Monitoring of dust deposition will be conducted in accordance with Section 7 of this plan.
Reporting	Incidents and Complaints reported in the Annual Environmental Report. Vegetation health assessment reported in the Annual Environmental Report. Monthly reporting.
Corrective Action	Should complaints and or incidents indicate that dust generation is impacting the on-site work force or monitoring results indicate a reduction in vegetation health, additional dust suppression measures will be implemented. These dust suppression measures will include: <ul style="list-style-type: none"> • Increased watering in the first instance; • If this does not result in adequate control, the use of dust controls additives and sheeting of roads with aggregate.
Term	Life of Project
Responsibility	Operations Managers Environment Superintendent



6.3 ORE PROCESSING AND STORAGE

Fortescue will manage the potential impact from dust emissions during operations from ore processing and storage as detailed in Table 7.

Table 7: Management strategies for ore processing and storage

Objective	To ensure that dust emissions from ore processing, transport and storage during operations do not impact on the health or amenity of workers and to reduce the potential for dust deposition to impact vegetation.
Management Actions	Fortescue will install dust extraction systems at the screening, crushing and desand plants where necessary and practicable. Where practicable and necessary stockpiles will be irrigated.
Performance Indicators	No indication of health or amenity impacts to workers (No. of complaints and incident reports). No significant vegetation decline at vegetation monitoring sites (No reduction in vegetation condition score compared with controls).
Monitoring	Monitoring of dust deposition will be conducted in accordance with Section 7 of this plan.
Reporting	Summary of incident events and vegetation monitoring reported in the Annual Environmental Report. Monthly reports.
Corrective Action	Should complaints and or incidents indicate that dust generation is unacceptable, additional dust control measures will be investigated. The additional dust control measures may include; <ul style="list-style-type: none">• the upgrade of dust extraction systems; and• an increase in watering of stockpiles.
Term	Life of Project
Responsibility	Operations Managers Environment Superintendent



7. MONITORING

A summary of the roles and responsibilities for the monitoring programme is provided in Table 8.

Table 8: Chichester Operations dust monitoring

Monitoring Activity	Frequency	Responsibility
Dust deposition gauges are installed around the mine site with a minimum of 1 dust deposition gauge at a background location. Average deposition is recorded at each of these locations.	Monthly	Environment Superintendent
Assessments of vegetation condition to assess the impacts of dust deposition.	Monthly	Environment Superintendent

7.1 DUST DEPOSITION GAUGES

A dust deposition gauge is a gravimetric instrument used to quantify deposited particulate matter. It relies on the passive deposition and capture of dust within a funnel and bottle arrangement. They can be deployed in remote areas, and are inexpensive to construct and operate, and do not require power. They provide basic data on dust deposition rates (usually as $g/m^2/month$) and the relative 'dustiness' of sampling locations.

The following limitations apply to dust deposition gauges:

- Measurement gives levels of dust deposition rather than dust concentration; therefore they are more appropriate for assessing vegetation and amenity impacts rather than health impacts;
- Results are averaged over long periods (usually 30 days), and specific short-term dust events may therefore not be identified;
- Conversely, single non-representative high dust events may artificially inflate results;
- The gauges provide an indication of total dust deposition, and do not differentiate between sources of dust, whether they are natural or anthropogenic; and
- Due to the nature of the equipment, there is a large potential for error associated with the measurements.



A monitoring program for the Chichester Operations has been established using dust deposition gauges. Details of the programme are given in the procedure *Dust Deposition Gauges – Installation and Operation Procedure*.

7.2 MONITORING OF VEGETATION

In order to determine the impact of dust deposition on vegetation, Fortescue undertakes monitoring of vegetation to determine the impact of localised dust deposition and will assess the requirement for additional dust suppression measures.

Vegetation health monitoring commenced in July 2007 in accordance with the *Dust Deposition – Vegetation Health Assessment Procedure*. Vegetation condition is scored from 0 to 5 (with 0 being dead and 5 being completely or almost completely healthy).

Management review is triggered by a decline in condition relative to controls.



8. COMPLAINTS PROCESSES

Given the distance of the Chichester Operations from residential and recreational areas and public roads, it is unlikely that complaints will be received due to dust emissions from the site. However, in the event that complaints are received, Fortescue will undertake the following process:

- Record any complaints received as an incident in line with Fortescue's *Incident Event Reporting* (100-PR-SA-0011);
- Advise the complainant of the outcomes of the incident investigation and of any remedial measures that are appropriate; and
- Liaise with representatives from the Department of Environment and Conservation (DEC) as appropriate.



9. AUDITS AND INSPECTIONS

Auditing of Fortescue's performance against its environmental compliance obligations is achieved through the conduct of regular internal audits.

Fortescue will conduct compliance audits at least annually. Audit reports will describe the status of compliance with environmental obligations at the time of the audit and identify areas of non-conformance and non-compliance and assign corrective actions to remedy any non-conformance and non-compliance issues.



10. REVIEW

It is important that plans and procedures are frequently reviewed and revised as Fortescue's operations change and opportunities for improved management practices are identified.

This Management Plan will be reviewed at least every five years, or when significant additional information comes to hand. The review will be based on achieving approval requirements, Fortescue commitments, and progress in implementing the management plan and will incorporate any new investigations, information, techniques and advice from experts and regulatory authorities.

Upon review, the document revision status will be updated in accordance with Fortescue's document control procedures.



11. CONSOLIDATED MANAGEMENT ACTIONS

Table 9 gives a summary of the management actions identified within this plan.

Table 9: Summary of management actions

Environmental Aspect	Management Actions
Cleared and Disturbed areas	Minimise vegetation clearing as much as practicable. Cease clearing during high wind speed events where complaints are received in relation to that clearing. Progressively rehabilitate disturbed areas.
Vehicle Traffic Areas	Fortescue will implement dust suppression measures on high traffic areas such as access and haul roads and laydown areas around the mines. Dust control measures may include: <ul style="list-style-type: none">• use of water carts;• non-water soil stabilisers; and• Reduction of speed limits.
Ore Processing and Storage	Fortescue will install dust extraction systems at the screening, crushing and desand plants where necessary and practicable. Where practicable and necessary stockpiles will be irrigated.
Monitoring	Dust deposition gauges are installed around the mine site with a minimum of 1 dust deposition gauge at a background location. Assessments of vegetation condition to assess the impacts of dust deposition.



12. REFERENCES

- Department of Environment and Heritage (1998). *Dust Control. Best Practice Environmental Management in Mining Series*, Department of Environment and Heritage, 1998.
- Environ (2005). *Public Environmental Review: Pilbara Iron Ore and Infrastructure Project: Cloudbreak*. Report prepared for Fortescue Metals Group Limited, September 2005.
- Department of Environment (2004). *Pilbara Air Quality Study Summary Report*. Air Quality Management Branch, Department of Environment, August 2004.
- Mattiske Consulting Pty Ltd (2005). *Flora and Vegetation on the Cloudbreak and White Knight Leases*. Report prepared for Fortescue Metals Group Limited, February 2005.
- Fortescue Metals Group Ltd (2006). *Pilbara Iron Ore and Infrastructure Project. Construction Dust Management Plan E-SA-RP-0206-1181*, August 2006.
- National Occupational Health and Safety Commissions (1995). *Exposure Standards for Atmospheric Contaminants in the Occupational Environment* Publication 1003:1995.
- Australian Standard (2004). *Workplace Atmospheres – Method for Sampling and Gravimetric Determination of Respirable Dust AS 2985-2004*.
- Australian Standard (2004). *Workplace Atmospheres – Method for Sampling and Gravimetric Determination of Inhalable Dust AS 3640-2004*.

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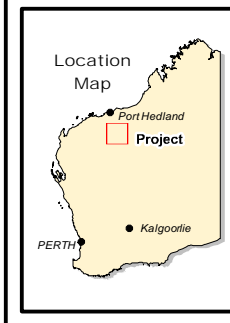
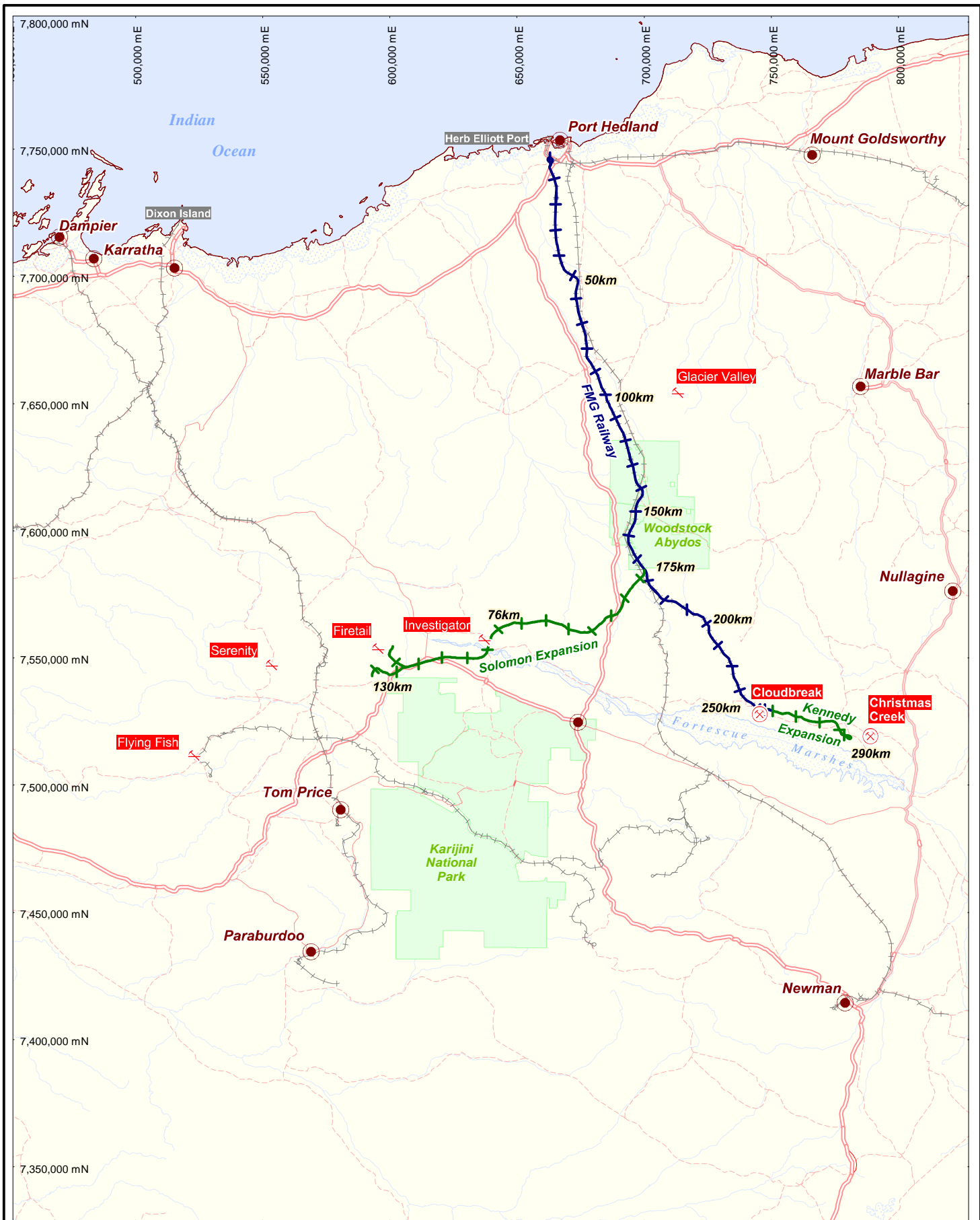
Figures

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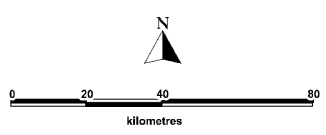
Figure 1

Regional Project Location

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- Legend**
- Towns
 - Major Roads/Tracks
 - Creeks
 - + FMG Railway
 - + FMG Proposed Railways
 - Other Railways
 - ⊗ FMG Mines
 - ⚡ FMG Resources



FMG Fortescue Metals Group Ltd

FMG Regional Project

Author: P. Connolly	Date: 3/8/2009
Drawn By: U. Boldbayar	Revision: 0
Doc No: 100_MP_EN_0003	Confidentiality: 1
Projection: MGA Zone 50 (GDA 94)	Scale: 1:2million