



Appendix 7: Weed Management Plan



Plan

Weed management plan

Environment

6 September 2024

45-PL-EN-0033

Rev: B



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EXECUTIVE SUMMARY

Proponent name	Fortescue Ltd			
Proposal name	Port & North-South Railway (Stage A)	Solomon Iron Ore Project – Sustaining Production	Eliwana Railway Project	Eliwana Iron Ore Mine Project
Ministerial number	MS 690	MS 1062	MS 1108	MS 1109
Condition/s (Management-based)	10-1	9-1(1)	9-1(2)	7-1(2)
Purpose of the EMP	To identify weed management and monitoring measures to minimise the introduction and spread of weed established within and adjacent to Fortescue controlled sites.			
Key environmental factor/s	Flora and Vegetation			
Objective	“to protect flora and vegetation so that biological diversity and ecological integrity are maintained”			



1 INTRODUCTION

Fortescue Ltd (Fortescue) is an integrated business comprised of mine, rail and port operations based in the Pilbara region of Western Australia, with its head office located in Perth (Figure 1).

1.1 Proposals

Port and North-South Railway (Stage A)

The Port and North-South railway (Stage A) was approved under Ministerial Statement (MS) 690 in 2005. The project consisted of a two-berth iron ore export facility at Port Hedland and a north-south railway from the central Pilbara to Port Hedland. Port facility upgrades to a five-berth iron ore export facility were made following development in the following stages:

- Third berth approved under Ministerial Statement 771 in August 2008.
- Fourth berth Not Assessed under MS 690 – Public Advice Given in 2010.
- Fifth berth approved under section 45C of *Environmental Protection Act* 1986 in February 2014.

Various other amendments have been made and approved under section 45 and section 46 of the *Environmental Protection Act* 1986.

Solomon Iron Ore Project

The Solomon Iron Ore Project was approved under Ministerial Statement (MS) 862 and federal approval under the *EPBC Act* (EPBC 2010/5567) in 2011. The project consisted of two mines and a railway that connected to the existing Fortescue rail line. The Solomon Iron Ore Sustaining Production was then approved in October 2017 under MS 1062, superseding MS 862. Federal approval for the Solomon Iron Ore Sustaining Production was approved under *EPBC Act* (EPBC 2014/7275) in June 2018.

Eliwana Railway Project

The Eliwana Railway Project connects the Eliwana mine to Fortescue's existing railway network at the Solomon Iron Ore mine, located 60 km north of Tom Price. The Eliwana Railway Project was approved by the Minister under Ministerial Statement (MS) 1108 on 14 August 2019 and federal approval under EPBC 2017/8025 on 25 September 2019.

Eliwana Iron Ore Mine Project

Eliwana mine is located 90 kilometres (km) west-northwest of Tom Price and is situated in the southern extents of the Hamersley Ranges within the Pilbara region. The Eliwana Iron Ore Mine Project comprises of mine pits and associated infrastructure, processing facilities, water



management infrastructure for groundwater abstraction and surplus water disposal, temporary and permanent waste landforms and tailings storage facilities. The Project was approved by the Minister under Ministerial Statement (MS) 1109 on 14 August 2019 and federal approval under EPBC 2017/8024 on 25 September 2019.

1.2 Background

Fortescue employees and contractors are obliged to comply with all relevant environmental Commonwealth and State legislation. Environment legislation directly relevant to this Plan is provided in Appendix A.

Definitions of terms and acronyms used throughout this Plan are provided in Appendix B.

1.3 Key environmental factor

The Plan addresses the EPA's objective for the key environmental factor Flora and Vegetation "*to protect flora and vegetation so that biological diversity and ecological integrity are maintained*".

The objective of this Plan is to identify weed management and monitoring measures to minimise the introduction and spread of weed established within and adjacent to Fortescue controlled sites.

1.4 Condition requirements

The conditioned requirements for weed management under MS 690, MS 1062, MS 1108, and MS 1109 are outlined in Table 1.



Table 1: Condition requirements

Condition	Requirement	Location in this Plan
MINISTERIAL STATEMENT 690 – PORT & NORTH-SOUTH RAILWAY (STAGE A)		
Condition 10-1	<p>The proponent shall manage weeds during construction and operation of the project in accordance with a Weed Hygiene and Management Plan prepared to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.</p> <p>Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:</p> <ul style="list-style-type: none"> • Department of Conservation and Land Management; and • Department of Agriculture. <p>The Weed Management Plan shall set out measures for:</p> <ol style="list-style-type: none"> 1. Identifying target weeds, having regard for weed species outside the corridor. 2. Weed control during construction and operation. 3. Hygiene and wash-down for all plant and equipment. 4. Monitoring the success of weed control. 	<p>Table 2: Weeds recorded at Fortescue controlled sites</p> <p>Table 4: MS 690 provision table</p> <p>Section 3: Monitoring Guidelines</p> <p>Table 8: Weed monitoring</p>
Condition 10-3	<p>The proponent shall make the Weed Hygiene and Management Plan required by condition 10-1 publicly available.</p>	<p>This Plan will be made publicly available in accordance with PAG4: <i>Post Assessment Guideline for Making information publicly available</i> (EPA, 2012).</p>
MINISTERIAL STATEMENT 1062 – SOLOMON IRON ORE PROJECT – SUSTAINING PRODUCTION		
Condition 4-1	<p>Subject to condition 4-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent shall make publicly available, in a manner approved in writing by the CEO, all environmental plans and reports required under this Statement.</p>	<p>This Plan will be made publicly available in accordance with PAG4: <i>Post Assessment Guideline for Making information publicly available</i> (EPA, 2012).</p>
Condition 7-2	<p>The Condition Environmental Management Plan shall:</p> <ol style="list-style-type: none"> 1. Specify the environmental objectives to be achieved, as specified in conditions 8-1, 9-1, 10-1, 11-1, 12-1, 14-1, 17-1 and 18-1; 2. Specify risk-based management actions that will be implemented to demonstrate compliance with the environmental objectives specified in conditions 8-1, 9-1, 10-1, 11-1, 12-1, 14-1, 17-1 and 18-1. Failure to implement one or more of the management actions represents non-compliance with these conditions; 	<p>Table 5: MS 1062 provision table</p> <p>Section 3: Monitoring Guidelines</p> <p>Table 8: Weed monitoring</p>



Condition	Requirement	Location in this Plan
	3. Specify measurable management target(s) to determine the effectiveness of the risk-based management actions; 4. Specify monitoring and analysis to measure the effectiveness of management actions against management targets, including but not limited to, parameters to be measured, baseline data, monitoring locations, and frequency and timing of monitoring; 5. Specify a process for revision of management actions and changes to proposed activities that could be undertaken, in the event that the management targets are not achieved; 6. Provide the format and timing to demonstrate that conditions 8-1, 9-1, 10-1, 11-1 12-1, 14-1, 17-1 and 18-1 have been met for the reporting period in the Compliance Assessment Report required by condition 3-1 including, but not limited to: (a) Verification of the implementation of management actions; and (b) Reporting on the effectiveness of management actions against management target(s).	Section 4: Contingency Actions Section 5: Adaptive management and review
Condition 9-1	The proponent shall manage the implementation of the proposal to meet the following environmental objective: (1) prevent any increase in the diversity of weed species or the abundance of weeds attributable to the proposal.	Table 5: MS 1062 provision table
Condition 9-2	The proponent shall prepare a plan required by condition 7-1 that satisfies the requirements of condition 7-2, to meet the outcome required by condition 9-1.	Table 11: Stakeholder consultation
Condition 9-3	The proponent shall continue to implement the version most recently approved by the CEO of the Weed Management Plan 45-PL-EN-0013 until the CEO has confirmed by notice in writing that the plan required by condition 7-1 satisfies the requirements of condition 7-2 to meet the objective required by condition 9-1.	Table 5: MS 1062 provision table
MINISTERIAL STATEMENT 1108 – ELIWANA IRON ORE RAIL PROJECT		
Condition 5-1	Subject to condition 5-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent must make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)), management plans and reports relevant to the assessment of this proposal and implementation of this Statement.	This Plan will be made publicly available in accordance with PAG4: <i>Post Assessment Guideline for Making information publicly available</i> (EPA, 2012).
Condition 6-2	(1) Specify the environmental objectives to be achieved. (2) Specify risk-based management actions that will be implemented to demonstrate compliance with the environmental objectives. (3) Specify measurable management targets to determine the effectiveness of the risk-based management actions. (4) Specify monitoring to measure the effectiveness of management actions against management targets, including but not limited to, parameters to be measured, baseline data, monitoring locations and frequency and timing of monitoring. (5) Specify a process for revision of management actions and changes to proposal activities in the event that the management targets are not	Table 6: MS 1108 provision table Section 3: Monitoring Guidelines Table 8: Weed monitoring Section 4: Contingency Actions



Condition	Requirement	Location in this Plan
	<p>achieved. The process must include an investigation to determine the cause of the management target(s) not being achieved.</p> <p>(6) Provide the format and timing to demonstrate the objectives have been met for the reporting period in the compliance assessment report required by condition 4-6 including but not limited to:</p> <ul style="list-style-type: none"> a. Verification of the implementation of management actions. b. Reporting on the effectiveness of management actions against management targets. 	Section 5: Adaptive management and review
Condition 9-1 (2)	Prevent the introduction and spread of weed species as a result of the proposal.	Table 6: MS 1108 provision table
Condition 9-2	The proponent must prepare and submit a Flora and Vegetation Monitoring and Management Plan required by condition 6-1, that satisfies the requirements and condition 6-2, to meet the objective required by Condition 9-1 to the requirements of the CEO, in consultation with the agency responsible for the administration of the Biodiversity Conservation Act 2016.	This Plan Table 11: Stakeholder consultation
Condition 9-3	The plan required by condition 6-1 must include provisions required by condition 6-2 to address impacts to vegetation but not limited to: changes to surface water and groundwater flows; fragmentation, and weeds.	Table 6: MS 1108 provision table
MINISTERIAL STATEMENT 1109 – ELIWANA IRON ORE MINE PROJECT		
Condition 5-1	Subject to condition 5-2, within a reasonable time period approved by the CEO of the issue of this Statement and for the remainder of the life of the proposal the proponent must make publicly available, in a manner approved by the CEO, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)), management plans and reports relevant to the assessment of this proposal and implementation of this Statement.	This Plan will be made publicly available in accordance with PAG4: <i>Post Assessment Guideline for Making information publicly available</i> (EPA, 2012).
Condition 6-2	<ul style="list-style-type: none"> (1) Specify the environmental objectives to be achieved. (2) Specify risk-based management actions that will be implemented to demonstrate compliance with the environmental objectives. (3) Specify measurable management targets to determine the effectiveness of the risk-based management actions. (4) Specify monitoring to measure the effectiveness of management actions against management targets, including but not limited to, parameters to be measured, baseline data, monitoring locations and frequency and timing of monitoring. (5) Specify a process for revision of management actions and changes to proposal activities in the event that the management targets are not achieved. The process must include an investigation to determine the cause of the management target(s) not being achieved. (6) Provide the format and timing to demonstrate the objectives have been met for the reporting period in the compliance assessment report required by condition 4-6 including but not limited to: <ul style="list-style-type: none"> a. Verification of the implementation of management actions. b. Reporting on the effectiveness of management actions against management targets. 	<p>Table 7: MS 1109 provision table</p> <p>Section 3: Monitoring Guidelines</p> <p>Table 8: Weed monitoring</p> <p>Section 4: Contingency Actions</p> <p>Section 5: Adaptive management and review</p>



Condition	Requirement	Location in this Plan
Condition 7-1 (2)	Prevent the introduction of new weed ¹ species and ensure there is no net increase in the current extent of weed species within the mine development envelope shown in Figure 1 and described in the spatial data in Schedule 2 as a result of the implementation of the proposal.	Table 7: MS 1109 provision table
Condition 7-2	The proponent must prepare and submit a Flora and Vegetation Monitoring and Management Plan required by condition 6-1, that satisfies the requirements and condition 6-2, to meet the objective specified in Condition 7-1 to the requirements of the CEO.	This Plan
Condition 7-3	The plan required by condition 6-1 must include provisions required by condition 6-2 to address impacts to significant fauna and their habitat including, but not limited to: changes to surface water regimes and quality, changes to groundwater regimes and quality, clearing, fragmentation, dust and weeds.	Table 7: MS 1109 provision table

1.5 Rationale and approach

1.5.1 Weed prioritisation

For the purposes of this Plan, weed management and monitoring activities are targeted at priority weeds species. This is a cautionary principal approach to focus on priority weed species that have higher ecological impacts and are fast spreading invasive species. This approach aligns with the DBCA's priorities of the Pilbara region of management of high impact, rapidly-moderately invasive species that are impacting on high conservation assets.

Priority weeds include:

- Weeds of National Significance (WONS).
- Western Australian Organism List (WAOL) declared pests that require management within the Local Government Area(s) where the Fortescue controlled site is located.
- Environmental weeds rated by DBCA with an ecological rating of High or Unknown and invasiveness rating of Rapid or Moderate within the Pilbara Ranking Summary. Environmental weeds rated as High or Unknown and Rapid or Moderate considered important for pastoralists purposes (e.g., Buffel grass and Birdwood grass) are only Priority Weeds within pastoral exclusion areas or where an approval condition requires their management.
- Weeds that have not been recorded in the Pilbara as Declared Pests or Environmental Weeds within the Pilbara Ranking Summary and have been determined to be introduced into the project area as a result of the implementation of the proposal.

¹ Weed is defined within MS 1109 as "Any plant declared under section 22(2) of the *Biosecurity and Agriculture Management Act* 2007, any plant listed on a National Weeds List and any weeds listed on DBCA's Pilbara Impact and Invasiveness Ratings list as amended or replaced from time to time.



Other weed species are environmental weeds, as rated by DBCA under the Pilbara impact and invasiveness ranking, to have lower ecological impacts and slower spreading invasive species. For the purposes of this Plan, other weed species will be managed and monitored at a frequency that reflects the risk associated due to the slower spread and lower ecological impacts.

Table 2 outlines the weed species that have been recorded at Fortescue Controlled sites, with their classification as Priority or Other. Remaining weed species that have not been recorded at Fortescue Controlled sites are listed in Appendix C.

The categorisation of Priority and Other weed species will be reviewed when changes are made to the Declared Pests or Environmental Weeds listing to ensure Fortescue's weed management and monitoring program reflect current requirements in the Pilbara region.



Table 2: Weeds recorded at Fortescue controlled sites

Species	Common Name	Weeds of National Significance	Declared Pests - WOAL	Environmental weeds	Fortescue weed classification	Mainline Rail (MS 690)	Port (MS 690)	Solomon Mine (MS 1062)	Hammersley Rail (MS 1062)	Eliwana Rail (MS 1108)	Eliwana Mine (MS 1109)
* <i>Aerva javanica</i> ⁴	Kapok Bush		Permitted	H (R)	Priority	X	X	X [#]	X [#]	X	X
* <i>Alternanthera pungens</i>	Khaki Weed		Permitted	L (S)	Other			X [#]		X	
* <i>Amaranthus viridis</i>			Permitted	L (S)	Other			X [^]			
* <i>Argemone ochroleuca</i>	Mexican Poppy		Permitted	U (R)	Priority	X		X [#]	X [^]	X	X
* <i>Bidens bipinnata</i> ²	Bipinnate Begger's Tick		Permitted	U (R)	Priority (Pastoral exclusion areas only or where an approval condition requires it)	X		X [#]	X [#]	X	X
* <i>Bidens subalternans</i>			Permitted	Not listed	Priority (Pastoral exclusion areas only)			X [#]	X [#]		
* <i>Bothriochloa pertusa</i>	Indian Bluegrass		Permitted	Not listed	Other						X
* <i>Calotropis procera</i>	Rubber Tree		Declared Pest	ALERT	Priority	X ³	X ⁴		X ⁴		
* <i>Cenchrus ciliaris</i>	Buffel Grass		Permitted	H (R)	Priority (Pastoral exclusion areas only or where an approval condition requires it)	X	X	X [#]	X [#]	X ⁵	X
* <i>Cenchrus echinatus</i>	Burrgrass		Permitted	M (R)	Other	X					
* <i>Cenchrus setiger</i> ⁴	Birdwood Grass		Permitted	H (R)	Priority (Pastoral exclusion areas only or where an approval condition requires it)	X	X	X [#]	X [#]	X ⁵	X
* <i>Chenopodium album</i>	Fat Hen		Permitted	Not listed	Other			X [^]			
* <i>Chloris barbata</i>	Purpletop Chloris		Permitted	H (R)	Priority	X	X	X [^]	X [^]		
* <i>Chloris virgata</i>	Feathertop Rhodes Grass		Permitted	H (R)	Priority	X		X [^]	X [#]	X	
* <i>Citrullus amarus</i>	Afghan Melon		Permitted	U (M)	Priority	X		X [^]	X [#]		
* <i>Citrullus colocynthis</i>	Colocynth		Permitted	U (M)	Priority	X		X [^]	X [#]		
* <i>Cleome aculeata</i>			Not Listed	Not listed	Priority			X [^]			
* <i>Conyza bonariensis</i>	Flaxleaf Fleabane		Permitted	Not listed	Other	X		X [#]		X	
* <i>Crotalaria juncea</i>	Sunn-hemp		Permitted	Not listed	Other				X [#]		
* <i>Cynodon dactylon</i>	Couch		Permitted	H (R)	Priority	X		X [^]	X [#]		
* <i>Cyperus involucratus</i>	N/A		Not listed	Not listed	Other	X					
* <i>Cyperus polystachyos</i>	Bunchy Sedge		Permitted	U (U)	Other			X [#]			
* <i>Datura leichhardtii</i>	Native Thornapple		Permitted	U (U)	Other			X [#]		X	X
* <i>Digitaria ciliaris</i>	Summer Grass		Permitted	L (S)	Other	X		X [#]	X [^]	X	
* <i>Echinochloa colona</i>	Awnless Barnyard Grass		Permitted	H (R)	Priority	X		X [#]	X [#]	X	

² *Bidens bipinnata* is currently under assessment by the WA Herbarium, with recent changes to Florabase resulting in *Bidens bipinnata* being restricted to eastern Australia.

³ Reported under the *Biosecurity and Agriculture Management Act 2007* (R-EN-0081).

⁴ This record was recorded when the species was listed as Permitted under the *Biosecurity Agriculture Management Act 2007 (Ecoscape 2017)* (DPIRD 2017).

⁵ Management required within the Themeda Grasslands on Cracking Clays TEC and the Brockman Iron Cracking Clays PEC as outlined under Condition 9-1 of MS 1108.



Species	Common Name	Weeds of National Significance	Declared Pests - WOAL	Environmental weeds	Fortescue weed classification	Mainline Rail (MS 690)	Port (MS 690)	Solomon Mine (MS 1062)	Hammersley Rail (MS 1062)	Eliwana Rail (MS 1108)	Eliwana Mine (MS 1109)
<i>*Eragrostis minor</i>	Smaller Stinkgrass		Permitted	Not listed	Other				X [#]		
<i>*Euphorbia hirta</i>	Asthma Plant		Not listed	L (S)	Other			X [^]			X
<i>*Flaveria trinervia</i>	Speedy Weed		Not listed	Not listed	Other	X		X [#]	X [#]	X	X
<i>*Lactuca serriola</i>	Prickly Lettuce		Permitted	Not listed	Other			X [#]		X	
<i>*Lysimachia arvensis</i>	Scarlet Pimpernel		Permitted	Not listed	Other			X [#]			
<i>*Macroptilium atropurpureum</i>	Purple Bean		Permitted	Not listed	Other	X					
<i>*Malvastrum americanum</i>	Spiked Malvastrum		Permitted	H (R)	Priority	X		X [#]	X [#]	X	X
<i>*Melinis repens</i>			Permitted	Not listed	Other	X					
<i>*Opuntia spp.</i>	Prickly Pear	WONS	Declared Pest	H (R)	Priority	X ⁶					
<i>*Oxalis corniculata</i>	Yellow Wood Sorrel		Permitted	Not listed	Other					X	
<i>*Parkinsonia aculeata</i>	Parkinsonia	WONS	Declared Pest	H (R)	Priority	X ⁷	X ⁸				
<i>*Paspalum urvillei</i>	Vasey Grass		Permitted	Not listed	Other			X [^]			
<i>*Passiflora foetida</i>	Stinking Passion Flower		Permitted	H (R)	Priority	X					
<i>*Portulaca pilosa</i>	Djanggarra		Permitted	Not listed	Other				X [^]	X	
<i>*Rumex vesicaria</i>	Ruby Dock		Permitted	H (R)	Priority	X		X [#]	X [^]	X	
<i>*Setaria verticillata</i>	Whorled Pigeon Grass		Permitted	H (R)	Priority	X		X [#]	X [#]	X	X
<i>*Sigesbeckia orientalis</i>	Indian Weed		Permitted	U (R)	Priority			X [#]			
<i>*Solanum lycopersicum</i> (formerly <i>*Lycopersicon esculentum</i>)	Tomato		Permitted	Not listed	Other	X		X [^]			
<i>*Solanum nigrum</i>	Black Berry Nightshade		Permitted	L (R)	Other			X [#]		X	X
<i>*Sonchus oleraceus</i>	Common Sowthistle		Permitted	L (R)	Other	X	X	X [#]	X [#]	X	X
<i>*Stylosanthes hamata</i>	Verano Stylo		Permitted	H (M)	Priority	X					
<i>*Tamarix aphylla</i>	Athel Pine	WONS	Declared Pest	H (R)	Priority	X ⁹					
<i>*Tribulus terrestris</i>	Caltrop		Permitted	U (M)	Priority	X		X [#]	X [#]	X	
<i>*Tridax procumbens</i>	Tridax		Permitted	Not listed	Other			X [^]			
<i>*Vachellia farnesiana</i>	Mimosa Bush		Permitted	H (R)	Priority	X		X [#]	X [#]	X	X

- First recorded Baseline 2012

^ - First recorded post Baseline

⁶ This record was recorded prior to the enactment of the *Biosecurity Agriculture Management Act 2007*.

⁷ Reported under the *Biosecurity Agriculture Management Act 2007* (R-EN-0081).

⁸ Reported under the *Biosecurity Agriculture Management Act 2007* (PH-EN-0039).

⁹ Reported under the *Biosecurity and Agriculture Management Act 2007* (PH-EN-0038).



1.5.2 Risk areas

Risk areas assessments have been completed for all Fortescue controlled sites to identify where the greatest risk from weeds infestation occurs (i.e., weeds have the potential to quickly establish and/or have impact on areas with conservation significance). Risk areas are identified through intersecting infrastructure risk areas (i.e., areas and/or activities that have potential to transport potentially infested materials) and environmental risk areas (i.e., high ecological impact areas).

Infrastructure risks areas were identified by buffering the following infrastructure datasets by 100 meters to address edge effects:

- Fortescue infrastructure layers
- Fortescue mine pits boundaries
- Land Use Certificate areas (approved, completed and expired).

Environmental risks areas were identified by buffering the following infrastructure datasets by 100 meters:

- Creeks and rivers
- Conservation significant flora and fauna locations
- Mulga vegetation
- Fortescue marsh boundary
- Significant fauna habitat
- Threatened and Priority Ecological Community mapping.

Current risk areas are defined in:

- Figure 2 – Port and mainline rail (MS 690)
- Figure 3 – Hamersley rail (MS 1062)
- Figure 4 – Solomon mine (MS 1062)
- Figure 5 – Eliwana railway (MS 1108)
- Figure 6 – Eliwana mine (MS 1109)



2 MANAGEMENT PLAN COMPONENTS

2.1 Environmental management objective

A series of environmental management objectives have been developed to mitigate environmental impacts associated with the spread of weeds on conservation values of conservation significant flora, vegetation and/or fauna habitat that could potentially be caused by Fortescue's activities (exploration, construction, operation, and decommissioning). These include:

1. Identify the location of priority weed species in Fortescue controlled sites and ensure the potential for weed outbreaks is included in project planning (refer to Section 3.2).
2. Establish management strategies to minimise the potential impacts of weeds on conservation values of conservation significant flora, vegetation and/or fauna habitat (refer to Table 4, Table 5, Table 6 and Table 7, with key elements within the provision table described in Table 3).
3. Develop weed monitoring programs that employ adaptive management methods to detect impacts on conservation values of conservation significant flora, vegetation and/or fauna habitat (refer to Section 3).

Table 3: Descriptions of key elements of environmental management process to achieve identified objectives

Element	Definition/ description
Management Action	Tasks undertaken to enable the objective to be met
Evidence	Demonstrates that the Management Action has been applied and the outcome evaluated.
Timing	Period during which the Management Action should be undertaken.
Responsibility	Accountability for ensuring management action is completed. The responsible role is dependent on project timing. Refer to Appendix D.

2.2 Environmental risk

2.2.1 Risk reviews

Fortescue actively manages risk by undertaking a risk assessment prior to relevant approval submissions to identify high risk areas where weeds have been identified and potential impacts are likely. Annual Environmental Risk Reviews are undertaken during construction and operations phase where all environmental risks are considered with a focus on high risk impacts. The review considers the effectiveness of management actions that are currently in place for these impacts. The review also considers any relevant incidents that have occurred, if the actions from incident investigations have translated into new management actions, and generally considers the need for any new management actions to ensure lower risk targets can be achieved.



2.2.2 Compliance

Fortescue ensures compliance with its legal obligations through first party quality assurance by site and corporate environment teams with a focus on effective environmental management through the implementation of the Fortescue wide Environmental Management System.

Fortescue has adopted a risk-based approach to monitor compliance with its legal obligations. Site environment teams will monitor their compliance with this Plan and the required site-specific management and monitoring programs.

Where non-conformances occur the incident will be reported in accordance with the *Incident Event Management Procedure* (45-PR-SA-0080) and implement contingency actions defined in Table 10 and any reporting requirements defined in Table 4, Table 5, Table 6, and Table 7.

Non-conformance issues and/or opportunities for improvement identified will be documented and tracked via Fortescue's business management system.



Table 4: MS 690 provision table

<p>MANAGEMENT - BASED</p> <p>PURPOSE: To meet the requirements of Condition 10-1 of Ministerial Statement MS 690 for Port & North-South Railway (Stage A)</p> <p>EPA Factor: Flora and vegetation</p> <p>EPA objectives: “to protect flora and vegetation so that biological diversity and ecological integrity are maintained”.</p> <p>Proposal: Pilbara Iron Ore & Infrastructure Project: Port & North-South Railway (Stage A); EPA Assessment 1505</p> <p>Objectives: Condition 10-1: Manage weeds during construction and operation of the project in accordance with a Weed Hygiene and Management Plan prepared to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.</p> <p>Key Environmental Values: Conservation significant fauna critical habitats; conservation significant vegetation and flora.</p> <p>Key Impacts and Risks: spread of weeds from vehicle movements, introduced/imported material, earthworks or surface and/or subsurface water flow.</p> <p>Rationale and Approach:</p> <ul style="list-style-type: none"> • Pilbara Iron Ore & Infrastructure Project: Port & North-South Railway (Stage A); EPA Assessment 1505 • Mainline Rail Baseline Monitoring Report (Appendix E)

Management targets	Management actions	Evidence	Timing	Responsibility ¹⁰	Monitoring	Reporting
Condition 10-1: Manage weeds during construction and operation of the project in accordance with a Weed Hygiene and Management Plan prepared to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.						
<p>No statistically significant increase¹¹ in weed species diversity OR total weed species cover within impact sites over two monitoring events compared to reference site values.</p> <p>AND</p> <p>where subsequent investigation determines that the impacts are probably a result of the implementation of the proposal.</p>	<p>Identify risk areas (refer to Section 1.5.2) to ensure spatial data for presence and distribution of weeds in Fortescue controlled sites is up to date to enable effective weed management practices to be implemented.</p> <p>Risk based priority: High</p>	<p>Weed risk mapping (Figure 2 and Figure 3)</p> <ul style="list-style-type: none"> • Weed risk areas identified. • GIS dataset. 	<p>Prior to relevant approval submission¹²</p> <p>Every two years during operation</p>	<p>Manager Environment Governance</p>	<p>Refer to:</p> <p>Monitoring: Table 8, reference 1 and 2</p> <p>Statistical analysis methods: Section 3.3.1</p>	<p>Annual reporting</p> <p>Annual Compliance Assessment Reports (CAR) are required to be submitted in accordance with Conditions 5-1 of MS 690 and EPA’s <i>Post Assessment Guideline for Preparing a Compliance Assessment Report (CAR), Post Assessment Guideline No. 2.</i></p> <p>In the event that management targets were exceeded during the reporting period, the CAR will include a description of the effectiveness of the contingency actions that have been implemented to manage the impact and any adaptive management measures applied as a result of the exceedance.</p> <p>In the event that management actions have not been implemented during the reporting period, the CAR will include details on the cause of the management action not being completed and any impact caused by the non-implementation.</p> <p>Biosecurity and Agricultural Management Act reporting</p> <p>Where a declared pest is identified during a weed survey, weed mapping activity or weed monitoring event, the presence or suspected presence of the declared pest must be reported to the Director General in accordance with the requirements under Section 26 of the</p>
	<p>Conduct a desktop assessment for Land Use Certificate (LUC)¹³ applications in accordance with <i>Land use certificate procedure</i> (100-PR-TA-0001) to identify weed locations within the proposed disturbance area.</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> • Weed locations identified. 	<p>During the LUC assessment</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Prior to conducting ground disturbance activities, ensure known locations of priority weed populations are identified and management measures to minimise the potential for weed spread are included in the LUC. Ensure clearing is conducted in accordance with a permit issued under the <i>Land Use Certificate Procedure</i> (100-PR-TA-0001) and the <i>Ground Disturbance and Topsoil Management Procedure</i> (IO-PR-EN-0010).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> • Disturbance is undertaken with a LUC. • Relevant weed management measures are identified in the LUC. 	<p>Prior to LUC approval</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Implement weed hygiene requirements for high risk vehicles, plant, and equipment in identified weed risk areas and/or in areas where weed populations have been identified and high-risk activities are proposed to be undertaken as outlined in the <i>Weed hygiene procedure</i> (45-PR-EN-0035) (Appendix I).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> • High risk activities are identified. • Relevant weed hygiene and management measures are identified in the LUC. <p>Audits:</p>	<p>Following completion of activity</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		

¹⁰ Refer to Appendix D for details on roles and responsibilities.

¹¹ A statistically significant increase is determined objectively using accepted statistical techniques with significance of (P) set at P<0.05. Refer to Section 3.3.1.

¹² Relevant approval submission may include an approval issued under the *Environmental Protection Act 1986*, *Environment Protection and Biodiversity Conservation Act 1999*, the *Mining Act 1978*, the *Rights in Water and Irrigation Act 1914* or the *Bush Fires Act 1954*.

¹³ Refer to Appendix B for description of Land Use Certificates.



Management targets	Management actions	Evidence	Timing	Responsibility ¹⁰	Monitoring	Reporting
		<ul style="list-style-type: none"> Weed hygiene undertaken where required. 				<i>Biosecurity and Agriculture Management Act 2007.</i>
	Implement a weed control program in identified weed risk areas, with the focus of control activities on priority weed species (refer to Section 1.5.1), in accordance with <i>Weed Control Guidelines (45-GU-EN-0011)</i> (Appendix J). <ul style="list-style-type: none"> >80% of priority weed areas recorded within the Port and Mainline rail areas receive treatment. Risk based priority: High	Weed control report: <ul style="list-style-type: none"> Weed control program undertaken. 	Annually during operations	Manager Environment Projects / Manager Environment Operations		
	Undertake inspections, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	BMS Plant and Animal record: <ul style="list-style-type: none"> Weed records 	Ongoing inspections during operations	Manager Environment Operations		
	Undertake weed mapping, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Weed mapping undertaken for Port and Rail areas. Risk based priority: High	GIS dataset	Every two years during operations.	Manager Environment Governance		
	Where monitoring results indicate a potential impact on conservation values of conservation significant flora, vegetation and/or conservation significant fauna critical habitat, implement contingency actions (see Section 4) and any reporting requirements. Update the following to reflect the monitoring outcomes: <ul style="list-style-type: none"> Weed mapping dataset and the weed control program. Plan where required, to inform an adaptive management approach to weed management across the business. 	Reporting records outline Contingency actions implemented and reporting requirements met. Plan updated as required.	When required in response to monitoring outcomes, within 21 days of receiving the final consultant's report	Corrective Actions: Project Manager/ Manager Environment Operations Reporting/ Program and Plan updates: Manager Environment Governance		



Table 5: MS 1062 provision table

<p>MANAGEMENT - BASED</p> <p>PURPOSE: To meet the requirements of Condition 9-1 of Ministerial Statement MS 1062 for Solomon Iron Ore Project – Sustaining Production</p> <p>EPA Factor: Flora and vegetation</p> <p>EPA objectives: “to protect flora and vegetation so that biological diversity and ecological integrity are maintained”</p> <p>Proposal: Public Environmental Review: Solomon Iron Ore Project: Sustaining Production (SO-RP-EN-0141): EPA Assessment NO: 2019</p> <p>Objectives: Condition 9-1 (1) Prevent any increase in the diversity of weed species or the abundance of weeds attributable to the proposal.</p> <p>Key Environmental Values: conservation significant fauna critical habitats; conservation significant vegetation and flora</p> <p>Key Impacts and Risks: spread of weeds from vehicle movements, introduced/imported material, earthworks or surface and/or subsurface water flow.</p> <p>Rationale and Approach:</p> <ul style="list-style-type: none"> Public Environmental Review: Solomon Iron Ore Project: Sustaining Production (SO-RP-EN-0141): EPA Assessment NO: 2019 Solomon Hub Flora and Vegetation Assessment Solomon Restricted Vegetation Assessment Supplementary report
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Management targets	Management actions	Evidence	Timing	Responsibility ¹⁴	Monitoring	Reporting
Condition 9-1(1): Prevent any increase in the diversity of weed species or the abundance of weeds attributable to the proposal						
No statistically significant increase ¹⁵ in weed species diversity OR total weed species cover within impact sites over two monitoring events compared to reference site values. AND where subsequent investigation determines that the impacts are probably a result of the implementation of the proposal.	Identify risk areas (refer to Section 1.5.2) to ensure spatial data for presence and distribution of weeds in Fortescue controlled sites is up to date to enable effective weed management practices to be implemented. Risk based priority: High	Weed risk mapping (Figure 4) <ul style="list-style-type: none"> Weed risk areas identified. GIS dataset. 	Prior to relevant approval submission ¹⁶ Every two years during operation	Manager Environment Governance	Refer to: Monitoring: Table 8, reference 1 and 2 Statistical analysis methods: Section 3.3.1	Annual reporting Annual Compliance Assessment Reports (CAR) are required to be submitted in accordance with Conditions 3-6 of MS 1062 and EPA's <i>Post Assessment Guideline for Preparing a Compliance Assessment Report (CAR), Post Assessment Guideline No. 2</i> . In the event that management targets were exceeded during the reporting period, the CAR will include a description of the effectiveness of the contingency actions that have been implemented to manage the impact and any adaptive management measures applied as a result of the exceedance. Potential non-compliance reporting In the event that monitoring, tests, surveys or investigations indicate an exceedance of a management target has occurred within the reporting period, Fortescue will: <ul style="list-style-type: none"> Where the exceedance is attributable to construction, operation or decommissioning
	Conduct a desktop assessment for Land Use Certificate (LUC) ¹⁷ applications in accordance with <i>Land use certificate procedure</i> (100-PR-TA-0001) to identify weed locations within the proposed disturbance area. Risk based priority: High	LUC: <ul style="list-style-type: none"> Weed locations identified. 	During the LUC assessment	Manager Exploration / Manager Environment Projects / Manager Environment Operations		
	Prior to conducting ground disturbance activities, ensure known locations of priority weed populations are identified and management measures to minimise the potential for weed spread are included in the LUC. Ensure clearing is conducted in accordance with a permit issued under the <i>Land Use Certificate Procedure</i> (100-PR-TA-0001) and the <i>Ground Disturbance and Topsoil Management Procedure</i> (IO-PR-EN-0010). Risk based priority: High	LUC: <ul style="list-style-type: none"> Disturbance is undertaken with a LUC. Relevant weed management measures are identified in the LUC. 	Prior to LUC approval	Manager Exploration / Manager Environment Projects / Manager Environment Operations		

¹⁴ Refer to Appendix D for details on roles and responsibilities.

¹⁵ A statistically significant increase is determined objectively using accepted statistical techniques with significance of (P) set at P<0.05. Refer to Section 3.3.1.

¹⁶ Relevant approval submission may include an approval issued under the *Environmental Protection Act 1986, Environment Protection and Biodiversity Conservation Act 1999, the Mining Act 1978, the Rights in Water and Irrigation Act 1914* or the *Bush Fires Act 1954*.

¹⁷ Refer to Appendix B for description of Land Use Certificates.



Management targets	Management actions	Evidence	Timing	Responsibility ¹⁴	Monitoring	Reporting
	Implement weed hygiene requirements for high risk vehicles, plant, and equipment in identified weed risk areas and/or in areas where weed populations have been identified and high-risk activities are proposed to be undertaken as outlined in the <i>Weed hygiene procedure</i> (45-PR-EN-0035) (Appendix I). Risk based priority: High	LUC: <ul style="list-style-type: none"> High risk activities are identified. Relevant weed hygiene and management measures are identified in the LUC. Audits: <ul style="list-style-type: none"> Weed hygiene undertaken where required. 	Following completion of activity	Manager Exploration / Manager Environment Projects / Manager Environment Operations		<p>activities, report the exceedance in writing to the DWER within 21 days of the exceedance being identified in accordance with Condition 7-4(1) of MS 1062.</p> <ul style="list-style-type: none"> Investigate to determine the cause of the management targets being exceeded in accordance with Condition 7-4(2) of MS 1062. Provide a report to the DWER within 90 days of the exceedance being reported as required by Condition 7-4(1) in accordance with the requirements of Condition 7-4(3) of MS 1062.
	Implement a weed control program in identified weed risk areas, with the focus of control activities on priority weed species (refer to Section 1.5.1), in accordance with <i>Weed Control Guidelines</i> (45-GU-EN-0011) (Appendix J). Risk based priority: High	Weed control report: <ul style="list-style-type: none"> Weed control program undertaken. 	Annually during operations	Manager Environment Projects / Manager Environment Operations		<p>In the event that monitoring, tests, surveys or investigations indicate that one or more management actions have not been implemented, Fortescue will:</p> <ul style="list-style-type: none"> Report the failure to implement management action(s) in writing to the DWER within 7 days of identification in accordance with Condition 7-5(1) of MS 1062. Investigate to determine the cause of the management action(s) not being implemented in accordance with Condition 7-5(2) of MS 1062. Investigate to provide information for the DWER to determine potential environmental harm or alteration of the environment that occurred due to the failure to implement management actions in accordance with Condition 7-5(3) of MS 1062. Provide a report to the DWER within 21 days of the reporting required by condition 7-5(4) of MS 1062.
	Undertake inspections, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	BMS Plant and Animal record: <ul style="list-style-type: none"> Weed records 	Ongoing inspections during operations	Manager Environment Operations		
	Undertake weed mapping, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	GIS dataset.	Every two years during operations.	Manager Environment Governance		
	Where monitoring results indicate a potential impact on conservation values of conservation significant flora, vegetation and/or conservation significant fauna critical habitat, implement contingency actions (see Section 4) and any reporting requirements. Update the following to reflect the monitoring outcomes: <ul style="list-style-type: none"> Weed mapping dataset and the weed control program. Plan where required, to inform an adaptive management approach to weed management across the business. 	Reporting records outline Contingency actions implemented and reporting requirements met. Plan updated as required.	When required in response to monitoring outcomes, within 21 days of receiving the final consultant's report	Corrective Actions: Project Manager/ Manager Environment Operations Reporting/ Program and Plan updates: Manager Environment Governance		Biosecurity and Agricultural Management Act reporting Where a declared pest is identified during a weed survey, weed mapping activity or weed monitoring event, the presence or suspected presence of the declared pest must be reported to the Director General in accordance with the requirements under Section 26 of the <i>Biosecurity and Agriculture Management Act 2007</i> .



Table 6: MS 1108 provision table

<p>MANAGEMENT - BASED</p> <p>PURPOSE: To meet the requirements of Condition 9-1(2) of Ministerial Statement MS 1108 for Eliwana Iron Ore Rail Project</p> <p>EPA Factor: Flora and vegetation</p> <p>EPA objectives: “to protect flora and vegetation so that biological diversity and ecological integrity are maintained”</p> <p>Proposal: Public Environmental Review: Eliwana Railway Project; EPA Assessment NO: 2129</p> <p>Objectives: Condition 9-1(2) Prevent the introduction and spread of weed species as a result of the proposal.</p> <p>Key Environmental Values: Conservation significant fauna critical habitat; conservation significant vegetation and flora</p> <p>Key Impacts and Risks: spread of weeds from vehicle movements, introduced/imported material, earthworks or surface and/or subsurface water flow</p> <p>Rationale and Approach:</p> <ul style="list-style-type: none"> Public Environmental Review: Eliwana Railway Project; EPA Assessment NO: 2129 Eliwana Consolidated Flora and Vegetation Survey (Biota 2017)

Management targets	Management actions	Evidence	Timing	Responsibility ¹⁸	Monitoring	Reporting
Condition 9-1(2): Prevent the introduction and spread of weed species as a result of the proposal						
<p>No increasing trend¹⁹ in Weed frequency within the Rail Development Envelope (as defined by Figure 1 of MS 1108) over three annual monitoring events.</p> <p>AND</p> <p>where subsequent investigation determines that the impacts are likely a result of the implementation of the proposal.</p> <p>No new weed species²⁰ introduced within the Rail Development Envelope (as defined by Figure 1 of MS 1108)</p> <p>AND</p> <p>where subsequent investigation determines that the impacts are likely a result of the</p>	<p>Identify risk areas (refer to Section 1.5.2) to ensure spatial data for presence and distribution of weeds in Fortescue controlled sites is up to date to enable effective weed management practices to be implemented.</p> <p>Risk based priority: High</p>	<p>Weed risk mapping (Figure 5)</p> <ul style="list-style-type: none"> Weed risk areas identified. GIS dataset. 	<p>Prior to relevant approval submission²¹</p> <p>Annually during operation</p>	<p>Manager Environment Governance</p>	<p>Refer to:</p> <p>Monitoring: Table 8, reference 3</p> <p>Statistical analysis methods: Section 3.3.1</p>	<p>Annual reporting</p> <p>Annual Compliance Assessment Reports (CAR) are required to be submitted in accordance with Conditions 4-6 and 4-7 of MS 1108 and EPA's <i>Post Assessment Guideline for Preparing a Compliance Assessment Report (CAR), Post Assessment Guideline No. 2.</i></p> <p>In the event that management targets were exceeded during the reporting period, the CAR will include a description of the effectiveness of the contingency actions that have been implemented to manage the impact and any adaptive management measures applied as a result of the exceedance.</p> <p>Potential non-compliance reporting</p> <p>In the event that an exceedance of a management target has occurred within the reporting period, Fortescue will, in accordance with Condition 6-5 of MS 1108:</p> <ul style="list-style-type: none"> Where the exceedance is attributable to construction, operation or decommissioning activities, report the exceedance in writing to the DWER within 7 days of the exceedance being identified. Investigate to determine the cause of the management targets being exceeded.
	<p>Conduct a desktop assessment for Land Use Certificate (LUC)²² applications in accordance with <i>Land use certificate procedure</i> (100-PR-TA-0001) to identify weed locations within the proposed disturbance area.</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> Weed locations identified. 	<p>During the LUC assessment</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Prior to conducting ground disturbance activities, ensure known locations of priority weed populations are identified and management measures to minimise the potential for weed spread are included in the LUC. Ensure clearing is conducted in accordance with a permit issued under the <i>Land Use Certificate Procedure</i> (100-PR-TA-0001) and the <i>Ground Disturbance and Topsoil Management Procedure</i> (IO-PR-EN-0010).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> Disturbance is undertaken with a LUC. Relevant weed management measures are identified in the LUC. 	<p>Prior to LUC approval</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Implement weed hygiene requirements for high risk vehicles, plant, and equipment in identified weed risk areas and/or in areas where weed populations have been identified and high-risk activities are proposed to be undertaken as outlined in the <i>Weed hygiene procedure</i> (45-PR-EN-0035) (Appendix I).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> High risk activities are identified. Relevant weed hygiene and management measures are identified in the LUC. <p>Audits:</p> <ul style="list-style-type: none"> Weed hygiene undertaken where required. 	<p>Following completion of activity</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		

¹⁸ Refer to Appendix D for details on roles and responsibilities.

¹⁹ Increasing trend means where the total percentage increase greater than 25% each annual monitoring event or over any time within a consecutive three-year period.

²⁰ Weed species that were not identified during baseline surveys.

²¹ Relevant approval submission may include an approval issued under the *Environmental Protection Act 1986*, *Environment Protection and Biodiversity Conservation Act 1999*, the *Mining Act 1978*, the *Rights in Water and Irrigation Act 1914* or the *Bush Fires Act 1954*.

²² Refer to Appendix B for description of Land Use Certificates.



Management targets	Management actions	Evidence	Timing	Responsibility ¹⁸	Monitoring	Reporting
implementation of the proposal.	Implement a weed control program in identified weed risk areas, with the focus of control activities on priority weed species (refer to Section 1.5.1), in accordance with <i>Weed Control Guidelines</i> (45-GU-EN-0011) (Appendix J). Risk based priority: High	Weed control report: <ul style="list-style-type: none"> Weed control program undertaken. 	Annually during operations	Manager Environment Projects / Manager Environment Operations		<ul style="list-style-type: none"> Provide a report to the DWER within 90 days of the exceedance being reported as required by Condition 6-5(1).
	Undertake inspections, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	BMS Plant and Animal record: <ul style="list-style-type: none"> Weed records. 	Ongoing inspections during operations	Manager Environment Operations		<p>In the event that one or more management actions have not been implemented, Fortescue will in accordance with Condition 6-6 of MS 1108:</p> <ul style="list-style-type: none"> Investigate to determine the cause of the management action(s) not being implemented and to determine if there was any potential environment harm or alteration of the environment. Report in writing to DWER the failure to implement management action(s) and any potential environmental harm within 7 days of identification.
	Undertake weed mapping, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	GIS dataset.	Annually during operations.	Manager Environment Governance		<p>Biosecurity and Agricultural Management Act reporting</p> <p>Where a declared pest is identified during a weed survey, weed mapping activity or weed monitoring event, the presence or suspected presence of the declared pest must be reported to the Director General in accordance with the requirements under Section 26 of the <i>Biosecurity and Agriculture Management Act</i> 2007.</p>
	Where monitoring results indicate a potential impact on conservation values of conservation significant flora, vegetation and/or conservation significant fauna critical habitat, implement contingency actions (see Section 4) and any reporting requirements. Update the following to reflect the monitoring outcomes: <ul style="list-style-type: none"> Weed mapping dataset and the weed control program. Plan where required, to inform an adaptive management approach to weed management across the business. 	Reporting records outline Contingency actions implemented and reporting requirements met. Plan updated as required.	When required in response to monitoring outcomes, within 21 days of receiving the final consultant's report	<p>Corrective Actions:</p> <p>Project Manager/ Manager Environment Operations</p> <p>Reporting/ Program and Plan updates:</p> <p>Manager Environment Governance</p>		



Table 7: MS 1109 provision table

<p>MANAGEMENT - BASED</p> <p>PURPOSE: To meet the requirements of Condition 7-1(2) of Ministerial Statement MS 1109 for Eliwana Iron Ore Mine Project</p> <p>EPA Factor: Flora and vegetation</p> <p>EPA objectives: “to protect flora and vegetation so that biological diversity and ecological integrity are maintained”</p> <p>Proposal: Public Environmental Review: Eliwana Mine Project; EPA Assessment NO: 2125</p> <p>Objectives: Condition 7-1(2) Prevent the introduction of new weed species and ensure there is no net increase in the current extent of weed species within the mine development envelope shown in Figure 1 and described in the spatial data in Schedule 2 as a result of the implementation of the proposal.</p> <p>Key Environmental Values: Conservation significant fauna critical habitat; conservation significant vegetation and flora</p> <p>Key Impacts and Risks: spread of weeds from vehicle movements, introduced/imported material, earthworks or surface and/or subsurface water flow.</p> <p>Rationale and Approach:</p> <ul style="list-style-type: none"> Public Environmental Review: Eliwana Mine Project; EPA Assessment NO: 2125 Eliwana Consolidated Flora and Vegetation Survey (Biota 2017)
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Management targets	Management actions	Evidence	Timing	Responsibility ²³	Monitoring	Reporting
Condition 7-1(2): Prevent the introduction of new weed species and ensure there is no net increase in the current extent of weed species within the mine development envelope shown in Figure 1 and described in the spatial data in Schedule 2 as a result of the implementation of the proposal						
<p>No statistically significant increase²⁴ in weed species diversity OR total weed species cover within impact sites over two monitoring events compared to reference site values.</p> <p>AND</p> <p>where subsequent investigation determines that the impacts are probably a result of the implementation of the proposal.</p>	<p>Identify risk areas (refer to Section 1.5.2) to ensure spatial data for presence and distribution of weeds in Fortescue controlled sites is up to date to enable effective weed management practices to be implemented.</p> <p>Risk based priority: High</p>	<p>Weed risk mapping (Figure 6)</p> <ul style="list-style-type: none"> Weed risk areas identified. GIS dataset 	<p>Prior to relevant approval submission²⁵</p> <p>Every two years during operation</p>	<p>Manager Environment Governance</p>	<p>Refer to:</p> <p>Monitoring: Table 8, reference 1 and 2</p> <p>Statistical analysis methods: Section 3.3.1</p>	<p>Annual reporting</p> <p>Annual Compliance Assessment Reports (CAR) are required to be submitted in accordance with Conditions 4-6 of MS 1109 and EPA's <i>Post Assessment Guideline for Preparing a Compliance Assessment Report (CAR), Post Assessment Guideline No. 2.</i></p> <p>In the event that management targets were exceeded during the reporting period, the CAR will include a description of the effectiveness of the contingency actions that have been implemented to manage the impact and any adaptive management measures applied as a result of the exceedance.</p> <p>Potential non-compliance reporting</p> <p>In the event that an exceedance of a management target has occurred within the reporting period, Fortescue will in accordance with Condition 6-5 of MS 1109:</p> <ul style="list-style-type: none"> Where the exceedance is attributable to construction, operation or decommissioning activities, report the exceedance in writing to the DWER within 21 days of the exceedance being identified. Investigate to determine the cause of the management targets being exceeded.
	<p>Conduct a desktop assessment for Land Use Certificate (LUC)²⁶ applications in accordance with <i>Land use certificate procedure</i> (100-PR-TA-0001) to identify weed locations within the proposed disturbance area.</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> Weed locations identified 	<p>During the LUC assessment</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Prior to conducting ground disturbance activities, ensure known locations of priority weed populations are identified and management measures to minimise the potential for weed spread are included in the LUC. Ensure clearing is conducted in accordance with a permit issued under the <i>Land Use Certificate Procedure</i> (100-PR-TA-0001) and the <i>Ground Disturbance and Topsoil Management Procedure</i> (IO-PR-EN-0010).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> Disturbance is undertaken with a LUC. Relevant weed management measures are identified in the LUC. 	<p>Prior to LUC approval</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		
	<p>Implement weed hygiene requirements for high risk vehicles, plant, and equipment in identified weed risk areas and/or in areas where weed populations have been identified and high-risk activities are proposed to be undertaken as outlined in the <i>Weed hygiene procedure</i> (45-PR-EN-0035) (Appendix I).</p> <p>Risk based priority: High</p>	<p>LUC:</p> <ul style="list-style-type: none"> High risk activities are identified. Relevant weed hygiene and management measures are identified in the LUC. <p>Audits:</p> <ul style="list-style-type: none"> Weed hygiene undertaken where required. 	<p>Following completion of activity</p>	<p>Manager Exploration / Manager Environment Projects / Manager Environment Operations</p>		

²³ Refer to Appendix D for details on roles and responsibilities.

²⁴ A statistically significant increase is determined objectively using accepted statistical techniques with significance of (P) set at P<0.05. Refer to Section 3.3.1.

²⁵ Relevant approval submission may include an approval issued under the *Environmental Protection Act 1986, Environment Protection and Biodiversity Conservation Act 1999, the Mining Act 1978, the Rights in Water and Irrigation Act 1914* or the *Bush Fires Act 1954*.

²⁶ Refer to Appendix B for description of Land Use Certificates.



Management targets	Management actions	Evidence	Timing	Responsibility ²³	Monitoring	Reporting
	Implement a weed control program in identified weed risk areas, with the focus of control activities on priority weed species (refer to Section 1.5.1), in accordance with <i>Weed Control Guidelines</i> (45-GU-EN-0011) (Appendix J). Risk based priority: High	Weed control report: <ul style="list-style-type: none"> Weed control program undertaken. 	Annually during operations	Manager Environment Projects / Manager Environment Operations		<ul style="list-style-type: none"> Provide a report to the DWER within 90 days of the exceedance being reported as required by Condition 6-5(1).
	Undertake inspections, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	BMS Plant and Animal record: <ul style="list-style-type: none"> Weed records 	Ongoing inspections during operations	Manager Environment Operations		<p>In the event that one or more management actions have not been implemented, Fortescue will in accordance with Condition 6-6 of MS 1109:</p> <ul style="list-style-type: none"> Investigate to determine the cause of the management action(s) not being implemented and to determine if there was any potential environment harm or alteration of the environment. Report in writing to DWER the failure to implement management action(s) and any potential environmental harm within 28 days of identification.
	Undertake weed mapping, with focus on high risk areas (see Section 1.5.2), to ensure new populations or extension of existing populations of priority weed species are identified and included in the site-specific weed control program. Risk based priority: High	GIS dataset.	Every two years during operations.	Manager Environment Governance		
	Where monitoring results indicate a potential impact on conservation values of conservation significant flora, vegetation and/or conservation significant fauna critical habitat, implement contingency actions (see Section 4) and any reporting requirements. Update the following to reflect the monitoring outcomes: <ul style="list-style-type: none"> Weed mapping dataset and the weed control program. Plan where required, to inform an adaptive management approach to weed management across the business. 	Reporting records outline Contingency actions implemented and reporting requirements met. Plan updated as required.	When required in response to monitoring outcomes, within 21 days of receiving the final consultant's report	Corrective Actions: Project Manager/ Manager Environment Operations Reporting/ Program and Plan updates: Manager Environment Governance		Biosecurity and Agricultural Management Act reporting Where a declared pest is identified during a weed survey, weed mapping activity or weed monitoring event, the presence or suspected presence of the declared pest must be reported to the Director General in accordance with the requirements under Section 26 of the <i>Biosecurity and Agriculture Management Act</i> 2007.



3 MONITORING GUIDELINES

A weed monitoring program is required to measure the effectiveness of the management actions outlined in this Plan. The outcomes of the monitoring program for Fortescue controlled sites will contribute to ongoing improvements in management actions to ensure an adaptive management approach is adopted.

3.1 Objectives

The overall objective of Fortescue's weed monitoring program is to monitor and measure the success and effectiveness of management actions to minimise impacts on conservation significant vegetation and flora and ensure compliance with applicable State and Commonwealth approval conditions.

The guiding objectives of the weed monitoring program include:

1. Develop and maintain an accurate record of weed populations within and adjacent to Fortescue controlled sites.
2. Identify changes in the cover and diversity of weed species within Fortescue controlled sites.
3. Monitor and measure the success of management measures to inform an adaptive management approach.
4. Determine if changes in weed cover and diversity within Fortescue controlled sites is a direct or indirect result of Fortescue activities or broader regional changes.

Operational monitoring will be informed by the findings of the monitoring itself as they become available. Refinements to this Plan and its management strategies will be made as required based on monitoring findings to ensure an adaptive management approach is undertaken during Fortescue activities.

3.2 Baseline surveys and monitoring

Baseline surveys

Baseline monitoring surveys should be undertaken for all monitoring sites to assess cover and diversity of the weed populations prior to the first monitoring event. The baseline surveys aim to:

- Document all weeds within impact and reference sites.
- Identify the baseline for existing weeds at impact and reference sites.
- Compare weeds between impact and reference sites.



Baseline sampling of weed populations assists in the development of an effective site-specific monitoring program to determine if changes in weed cover and weed diversity are a direct or indirect result of Fortescue activities or broader regional change. Depending on when the baseline survey was undertaken monitoring methods and sites may vary.

Results of the existing baseline weed surveys are available in the following Appendices:

- Appendix E – Mainline Rail Baseline Monitoring Report
- Appendix F – Port Baseline Monitoring Report
- Appendix G – Solomon Mine and Hamersley Rail Baseline Monitoring Report
- Appendix H – Eliwana Mine and Eliwana Rail

Monitoring site selection

An effective weed monitoring program should be based on replicable sampling at reference and impact sites:

- Control sites are sites that are not directly or indirectly impacted by Fortescue's disturbance activities (away from disturbance).
- Impact sites are sites that are in close proximity to Fortescue's disturbance activities that are exposed to the direct and indirect impacts of operational activities (i.e., located within areas where priority weed species (as defined in Section 1.5.1 have been recorded).
- Adequate design to provide evidence of the effectiveness of management measures undertaken to achieve the objectives of the *Weed Management Plan*:
 - Minimise the potential impacts of weeds on conservation values of conservation significant flora, vegetation and/or fauna habitat.
 - Detect impacts on conservation values of conservation significant flora, vegetation and/or fauna habitat.

Appropriate control and impact monitoring sites should:

- Be located within a typical area in terms of weed species composition and cover determined by reviewing the existing survey and spatial data for the project area.
- Have as many of the preferred habitat types for conservation significant fauna species represented in the monitoring program, with at least one monitoring site per representative habitat type, where possible. This should be reflected in both impact and control sites (1:1).
- Have conservation significant flora and vegetation units represented in the monitoring program, with at least one monitoring site per unit, where possible. This should be reflected in both impact and control sites.



- Use the type and variety of substrate, vegetation, topography, geographic extent and habitat variation to help determine the number and location of control and impact sites required.
- Employ the same design and monitoring methods at both impact and control sites and monitoring be undertaken concurrently at both impact and control sites.
- Consider site project plans and mine plans when selecting monitoring sites to avoid the need to relocate sites and impacts to data continuity.
- In accessible areas, including:
 - Safely accessible.
 - Near tracks, that require no additional disturbance.
 - On Unallocated Crown Land or Fortescue tenure to ensure ongoing accessibility (where possible).
 - Outside of significant heritage sites, unless approval has been obtained from Traditional Owners.

To allow for comparisons of change overtime moving monitoring sites should be avoided; however, on occasion changes to operational plans (i.e., mine plan changes), land access (i.e., relinquishment of tenure / heritage constraints) or safety requirements (i.e., accessing areas after significant rainfall), may require a change to monitoring locations. Any changes, and impacts of these, will be detailed in the annual monitoring report, and captured in the next revision of the management plan.

Ongoing monitoring is completed annually and is reported in the annual Compliance Assessment Report.

3.3 Monitoring Methods

An effective long-term weed monitoring program is adaptive. Innovations in monitoring techniques and methods should be incorporated into the program design over time. This is however dependent on, and driven by, the quality and quantity of data collected from each site. Any changes will be detailed in the annual monitoring report and captured in the next revision of the management plan.

A set of monitoring parameters and methods have been selected to provide broad coverage of changes in weed populations and distributions that can be expected under a range of different mining related impacts. The number of monitoring parameters will vary depending on the site-specific conditions.



Where possible, initial baseline survey(s) have been conducted during the pre-construction phase to assess the cover and diversity of weed species prior to the first monitoring event.

Table 8 provides a summary of the weed monitoring parameters and monitoring effort for all weeds monitored under this Plan.



Table 8: Weed monitoring

Ref	Type	Design	Monitoring parameters	Method	Monitoring effort	Timing/frequency	Monitoring location
1	All weeds <ul style="list-style-type: none"> • Priority weeds • Other weeds 	Quadrats Plot-based monitoring based on replicable sampling at impact and reference sites. Each plot-based site consists of three 10 m x 10 m quadrats	Density	An estimate of density of each weed species within each monitoring site	Assessment per quadrat	Timing: 6-8 weeks post wet season (approximate timing)	Port and mainline rail (MS 690) Figure 2 Hamersley rail (MS 1062) Figure 3 Solomon Mine (MS 1062) Figure 4 Eliwana Mine (MS 1109) Figure 6
			Diversity	Count the number of different weed species present within each monitoring site			
			Cover	Calculate total weed cover within each monitoring site (Table 9)			
			Environmental Threats	Observation, mapping, photographs etc.			
			Meteorological data	Data from Weather Stations installed near monitoring site locations	One per operating site	Frequency: Biennially	
			Photo Point Monitoring	Fixed photo points	At least one per site		
2	Priority weeds	High risk areas (see Section 1.5.2)	Species presence / absence	Visual inspection – identify new populations or extension of existing populations of weed species	Annual inspection campaign per operating site	Timing: Adhoc throughout the year Frequency: Annually	Port and mainline rail (MS 690) Figure 2 Hamersley rail (MS 1062) Figure 3 Solomon Mine (MS 1062) Figure 4 Eliwana Mine (MS 1109) Figure 6

Weed management plan

This document is uncontrolled when printed.



Ref	Type	Design	Monitoring parameters	Method	Monitoring effort	Timing/frequency	Monitoring location
3	All weeds <ul style="list-style-type: none"> • Priority weeds • Other weeds 	Grids 1 point every 5 km. Increasing to every 1 km in environmental high-risk areas. Immediately adjacent to linear infrastructure footprint within the extent of the MS 1108 approved railway development envelope. Each grid location consists of a central point with a 100 m radius.	Total weed frequency	Percentage of possible grid points occupied by weeds within each development envelope	Assessment per development envelope	Timing: 6-8 weeks post wet season (approximate timing) Frequency: Annually	Eliwana rail (MS 1108) Approved railway development envelope
			Species diversity	Count the number of different weed species present within each grid location			
			Species cover class	Estimate of cover class per weed species present at each grid location			
			Environmental Threats	Observation, mapping, photographs, etc			
			Meteorological Data	Data from Weather Stations installed near monitoring site locations	One per operating site		



Table 9 outlines the parameters, percentage and ratings for weed cover.

Table 9: Total weed cover

Monitoring Parameter	Method	Percentage	Rating
Total weed cover	Calculate total weed cover within each monitoring site	0%	(0)
		<1%	(1)
		1-20%	(2)
		21-40%	(3)
		41-60%	(4)
		61-80%	(5)
		81-100%	(6)

3.3.1 Data handling and statistical analysis

Data will be handled in accordance with the data handling protocol established as part of the annual monitoring tender. The protocol will include the requirements as to data storage and protection, data extraction, quality control, analysis, interpretation, reporting and presentation. The protocol will also directly reference and align with the requirements detailed in *Document Control, Information Management* (100-ST-DC-001) and *Geographic Information Systems and Raw Data Guidelines* (100-GU-EN-0009).

Statistical analysis of monitoring results will be undertaken using univariate or multivariate analysis (i.e., T-test, ANOVA) to determine whether there is any statistical difference in the parameter values between impact and reference sites.

4 CONTINGENCY ACTIONS

Contingency actions will be implemented during construction, operational and decommissioning activities when monitoring indicates that a monitoring target have been exceeded (Table 10).



Table 10: Management targets and contingency actions

Approval	Management targets	Contingency action
<p>MS 690 Condition 10-1</p> <p>MS 1062 Condition 9-1(1)</p> <p>MS 1109 Condition 7-1(2)</p>	<p>Management Target Level 1 No statistically significant increase²⁷ in weed species diversity OR total weed species cover within impact sites over two monitoring events compared to reference sites.</p>	<p>If an exceedance is recorded:</p> <ul style="list-style-type: none"> • Validate the exceedance through: <ul style="list-style-type: none"> ○ Re-examine applied monitoring parameters to validate they are operating within management levels. ○ Cross reference weed monitoring results with the most recent environmental monitoring data (i.e., surface water/ meteorological etc.) to determine whether the cause can be identified. ○ Undertake a desktop assessment to determine whether the cause can be identified. ○ Ground truth where required to validate findings of the assessment and/or determine/identify what may be causing the exceedance. Where the cause is identified during ground truthing and can be rectified, undertake action immediate action, which may include mechanical/hand removal of small weed populations). For actions which require alternative resources (for example weed control in accordance with <i>Weed Control Guidelines</i> (45-GU-EN-0011)), schedule works to be undertaken as soon as possible. ○ Ensure two yearly weed mapping activity includes any results which demonstrate the exceedance may be a result of construction, operation, or decommissioning activities.
<p>MS 1108 Condition 9-1(2)</p>	<p>Management Target Level 1 No increasing trend²⁸ in weed frequency within the Rail Development Envelope (as defined by Figure 1 of MS 1108) over three monitoring events.</p> <p>Management Target Level 1 No new weed species introduced within the Rail Development Envelope (as defined by Figure 1 of MS 1108).</p>	<p>Once the exceedance has been validated:</p> <p>If caused by construction, operation, or decommissioning activities:</p> <ul style="list-style-type: none"> • Review management measures with an adaptive management response. • Review weed control program and increase frequency as required. • Once management actions have been completed, undertake a subsequent monitoring event to verify parameters are within acceptable limits. • Continue to implement actions to address the exceedance until approval to cease has been given by the DWER. <p>Where the exceedance was not caused by construction, operation, or decommissioning activities:</p> <ul style="list-style-type: none"> • Resume standard monitoring frequency.
<p>MS 690 Condition 10-1</p> <p>MS 1062 Condition 9-1(1)</p> <p>MS 1109 Condition 7-1(2)</p> <p>MS 1108 Condition 9-1(2)</p>	<p>Management Target Level 2 Where subsequent investigation determines that the impacts are likely a result of the implementation of the proposal.</p>	<p>Once the exceedance has been validated:</p> <p>If caused by construction, operation, or decommissioning activities:</p> <ul style="list-style-type: none"> • Review management measures with an adaptive management response. • Review weed control program and increase frequency as required. • Once management actions have been completed, undertake a subsequent monitoring event to verify parameters are within acceptable limits. • Continue to implement actions to address the exceedance until approval to cease has been given by the DWER. <p>Where the exceedance was not caused by construction, operation, or decommissioning activities:</p> <ul style="list-style-type: none"> • Resume standard monitoring frequency.

²⁷ A statistically significant increase is determined objectively using accepted statistical techniques with significance of (P) set at P<0.05. Refer to Section 3.3.1.

²⁸ Increasing trend means where the increase has been recorded in each annual monitoring event with a total percentage change greater than 25%.



5 ADAPTIVE MANAGEMENT AND REVIEW

Fortescue will implement adaptive management practices to learn from the implementation of mitigation measures, monitoring and evaluation against management targets, to more effectively meet the conditioned environmental objective. Adaptive management practices that will be assessed for the weed management and monitoring program as part of this approach include as required:

- Evaluation of the monitoring program, data and comparison to baseline data and reference sites on an annual basis to verify whether responses to project activities are the same or similar to predictions.
- Evaluation of assumptions and uncertainties of the weed management and monitoring program.
- Re-evaluation of the risk assessment and revision of risk based priorities as a result of monitoring outcomes.
- Review of data and information gathered over the review period that has increased understanding of site environment in the context of the regional ecosystem.
- Review of management actions as the project matures and new management measures and technologies become available that may be more effective for weed management.
- Assessment of changes which are outside the control of the project and the management measures identified (i.e., a new project within the area or region; regional change affecting weed management).
- Evaluation and introduction of new or different monitoring methods due to changes in technology.

The overarching monitoring program will be technically assessed and reviewed every five years. The assessment and review will be undertaken by an independent Pilbara ecology expert with a relevant tertiary qualification and a minimum 10 years terrestrial Pilbara ecology experience. The main objective of the assessment and review will be to ensure that the methods, parameters and frequency used are considerate and appropriate to the findings of the monitoring program. If no targets are exceeded (detailed in Table 10) after five years, the frequency of monitoring will be reduced to a frequency supported by the review.

Review of this Plan will be undertaken every five years or as required by a condition. Revisions of this Plan will be submitted to the relevant State and Commonwealth regulator for approval, in accordance with relevant approval conditions.



6 STAKEHOLDER CONSULTATION

Fortescue has undertaken extensive stakeholder consultation program whereby landowners, regulators and other relevant parties have been consulted with regard to investigation and design through the environmental approvals process.

Table 11 will be updated following receipt of stakeholder comment as a result of the review and approval process.

Table 11: Stakeholder consultation

Stakeholder	Correspondence	Changes
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev A) under Condition 10-1 of MS 690 (UID-54830; 04/12/2015).	
DBCA	Fortescue: Submission for comments of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev A) under Condition 10-1 of MS 690 (UID-54831; 04/12/2015).	
DPIRD	Fortescue: Submission for comments of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev A) under Condition 10-1 of MS 690 (UID-54832; 04/12/2015).	
DPIRD	DPIRD: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev A) under Condition 10-1 of MS 690 (UID-55591; 11/01/2016).	
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev A) under Condition 10-1 of MS 690 (UID-61388; 22/07/2016).	
DWER	Fortescue: Response to comments and submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0) under Condition 10-1 of MS 690 (UID-62145; 19/08/2016).	Rev 0 of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Approval of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0) under Condition 10-1 of MS 690 (UID-62659; 01/09/2016).	Approval - Rev 0 of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0A) under Condition 10-1 of MS 690 and Condition 9-2 of MS 1062 (UID-84910 and UID-84908; 03/10/2018).	
DBCA	Fortescue: Submission for comments of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0A) under Condition 10-1 of MS 690 (UID-84911; 03/10/2018).	Rev 0A of <i>Weed Management Plan</i> (100-PL-EN-1017)
DPIRD	Fortescue: Submission for comments of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0A) under Condition 10-1 of MS 690 (UID-84913; 03/10/2018).	
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0A) under Condition 10-1 of MS 690 and Condition 9-2 of MS 1062 (UID-85911; 31/10/2018).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0B) under Condition 10-1 of MS 690 and Condition 9-2 of MS 1062 (UID-89107 and UID-89091; 22/01/2019).	Rev 0B of <i>Weed Management Plan</i> (100-PL-EN-1017)



DWER	Fortescue Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0C) to include requirements under Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-97517 and UID-97520; 06/09/2019).	Rev 0C of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0C) under Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-99807 and UID-99640; 07/10/2019).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0D) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-89107, UID-99811, UID-99814, and UID-99809; 07/11/2019).	Rev 0D of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0D) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-107785, UID-107788, UID-107786, and UID-107787; 10/03/2020).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0E) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-108653, UID-108656, UID-108654, and UID-108655; 19/06/2020).	Rev 0E of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0F) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (07/2020).	Rev 0F of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Meeting between DWER and Fortescue to discuss technical aspects of the plan, including weed monitoring methods along linear infrastructure, timing of monitoring and weed definition (25/06/2021)	
DWER	DWER: Summary email of meeting between DWER and Fortescue and request for amendments to <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0F) (UID-122293; 29/06/2021).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0G) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-127148, UID-127151, UID-127149, and UID-127150; 01/11/2021).	Rev 0G of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0G) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-130624, UID-130627, UID-130625, and UID-130626; 27/01/2022).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0H) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-130631, UID-130633, UID-130634, and UID-130635; 04/02/2022).	Rev 0H of <i>Weed Management Plan</i> (100-PL-EN-1017)
DWER	DWER: Comments on <i>Weed Management Plan</i> (100-PL-EN-1017 Rev 0H) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-160496, UID-160499, UID-160497, and UID-160498; 18/08/2023).	



DWER	Fortescue: Submission of <i>Weed Management Plan</i> (45-PL-EN-0033 Rev A) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-162373, UID-162374, UID-162375, and UID-162376; 06/10/2023).	Rev A of <i>Weed Management Plan</i> (45-PL-EN-0033)
DWER	DWER: Comments on <i>Weed Management Plan</i> 45-PL-EN-0033 Rev A) (UID-182131, UID-182134, UID-182132, and UID-182133; 09/08/2024).	
DWER	Fortescue: Submission of <i>Weed Management Plan</i> (45-PL-EN-0033 Rev B) under Condition 10-1 of MS 690, Condition 9-2 of MS 1062, Condition 9-2 of MS 1108 and Condition 7-2 of MS 1109 (UID-182387, UID-182390, UID-182388, and UID-182389; 08/09/2024).	Rev B of <i>Weed Management Plan</i> (45-PL-EN-0033)



7 REFERENCES

This Plan and all internal supporting documents will be managed as per Fortescue Document Governance Standards. These may be read in conjunction with this report.

- [1] Department of Primary Industries and Regional Development, Biosecurity and Regulation, Invasive Species Program (DPIRD 2017). “Review of the Declared Pests of Western Australia 2016: 2017 Revision”, September 2016 and December 2017.
- [2] Ecoscape 2017. “Vegetation Health Monitoring Program 2017”, Unpublished report prepared for Fortescue Metals Group (100-RP-EN-9660).
- [3] *Weed Hygiene Procedure* (45-PR-EN-0035)
- [4] *Weed Control Guidelines* (45-GU-EN-0011)

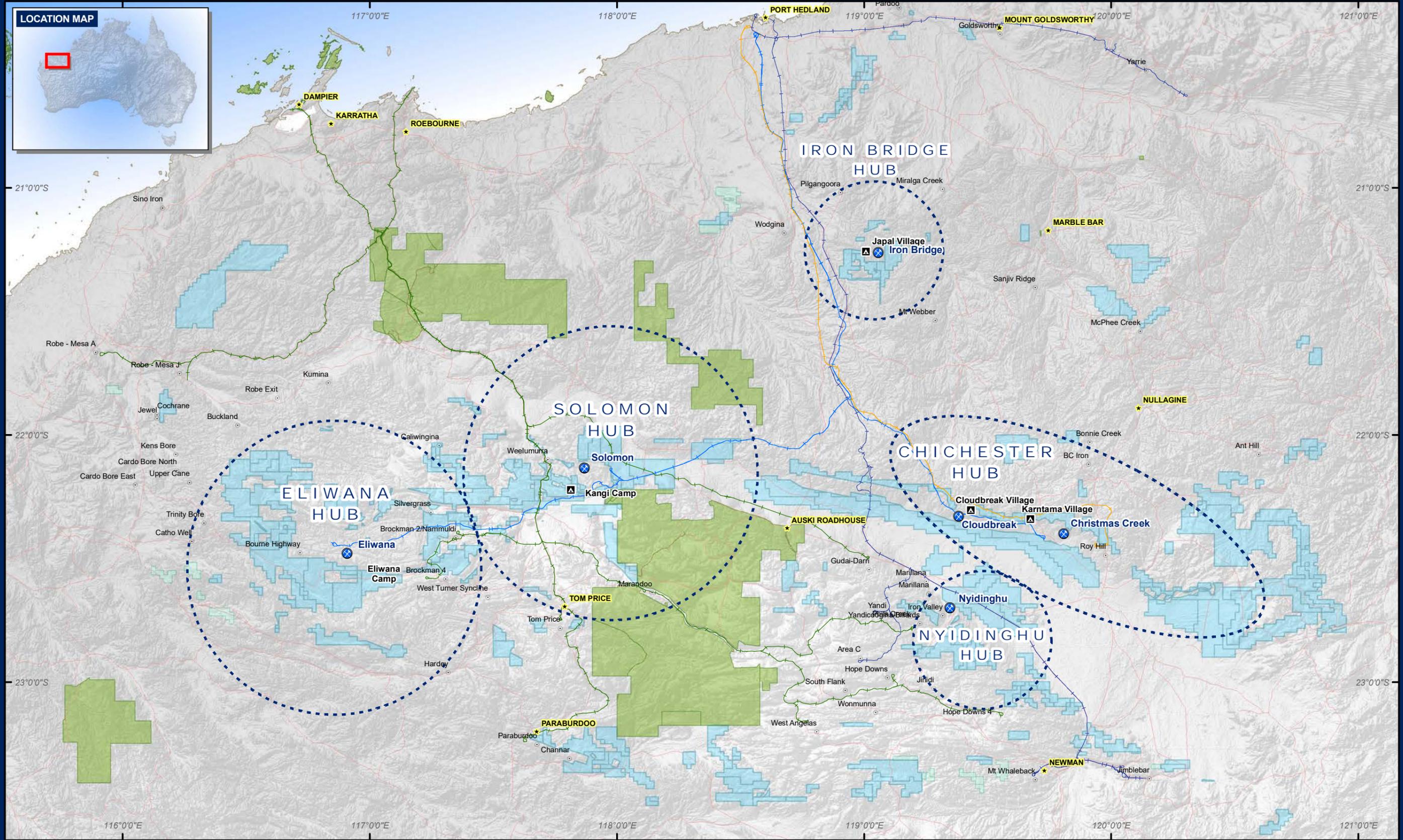


DOCUMENT CONTROL

Weed management plan		
Status	IFU - Issued for Use	6-Sep-24
Summary of Changes	Updates: <ul style="list-style-type: none">• Table 1 to include information on making the plan publicly available.• Table 8 to include information on weed monitoring• Table 11 to include information on stakeholder consultation	
Author	Jane Humphrey	_____ Signature
Checked or Squad Review# (if applicable)	Jared Nelson and James Waterhouse	_____ Signature
Approved	Todd Edwards	_____ Signature
Next Review Date (if applicable)	6-Sep-29	



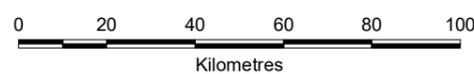
FIGURE 1 FORTESCUE TENEMENTS AND PROJECT AREAS



LEGEND

- ★ Towns
- ⊗ Project Area
- ▲ FMG Camp
- Other Mines & Prospects
- Roads
- FMG Rail Alignments
- BHP
- Rio Tinto
- Roy Hill
- FMG Non-managed Exploration Tenements
- FMG Managed Exploration Tenements
- Reserves

Data Sources:
 Tenements, sourced from DMIRS, 2024.
 Roads, Towns, Reserves, Landgate.
 3rd Rail, RTIO, BHPB, RHIO.
 DEM, GA.



Requested By: J. Humphrey
 Drawn By: S. Costello
 Revised By: scostello
 Approved By: N/A
 Scale: 1:1,600,000
 Coordinate System: GCS GDA 1994
 Document Name: 100_MP_OP_0058.010_r7

Date: 16/08/2024
 Size: A3L
 Revision: 7
 Confidentiality: 0

FMG Exploration Tenements and Project Areas
 August 2024



FMG accepts no liability and gives no representation or warranty, express or implied, as to the information provided including its accuracy, completeness, merchantability or fitness for purpose.



FIGURE 2 WEED RISK AREAS AND MONITORING SITES – PORT AND MAINLINE RAIL (MS 690)



LEGEND

- ▲ Indicative Impact
- ▲ Indicative Reference
- Priority Weeds
- Weed Risk Areas
- ▭ Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au

**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 1 of 6**

Requested By: O. Hertsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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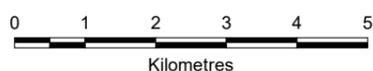
Fortescue Metals Group Ltd
The New Force in Iron Ore



LEGEND

- ▲ Indicative Impact
- ▲ Indicative Reference
- Priority Weeds
- Weed Risk Areas
- Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au



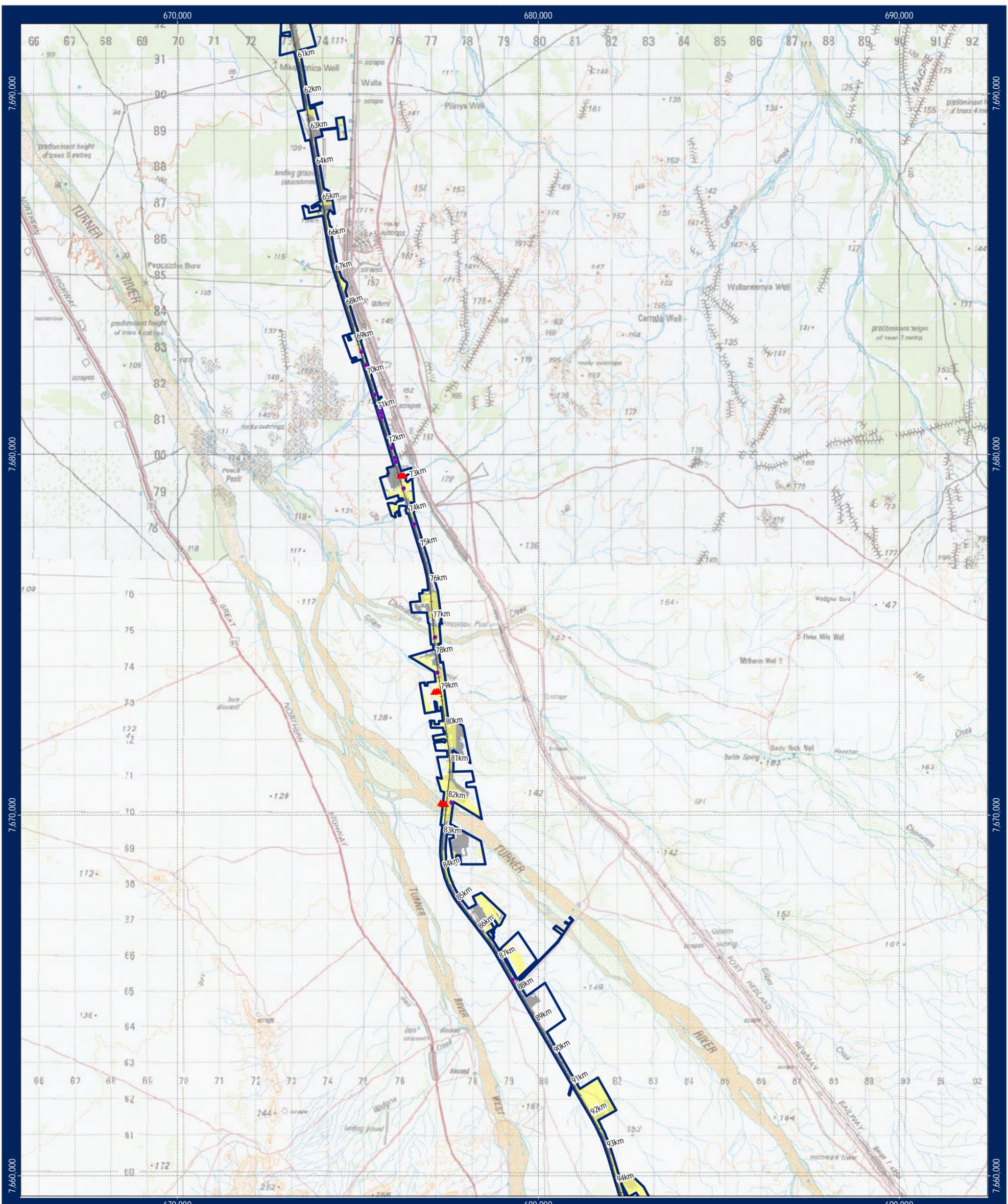
**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 2 of 6**

Requested By: O. Hertsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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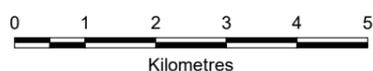
Fortescue Metals Group Ltd
The New Force in Iron Ore



LEGEND

- ▲ Indicative Impact
- Priority Weeds
- Weed Risk Areas
- Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au



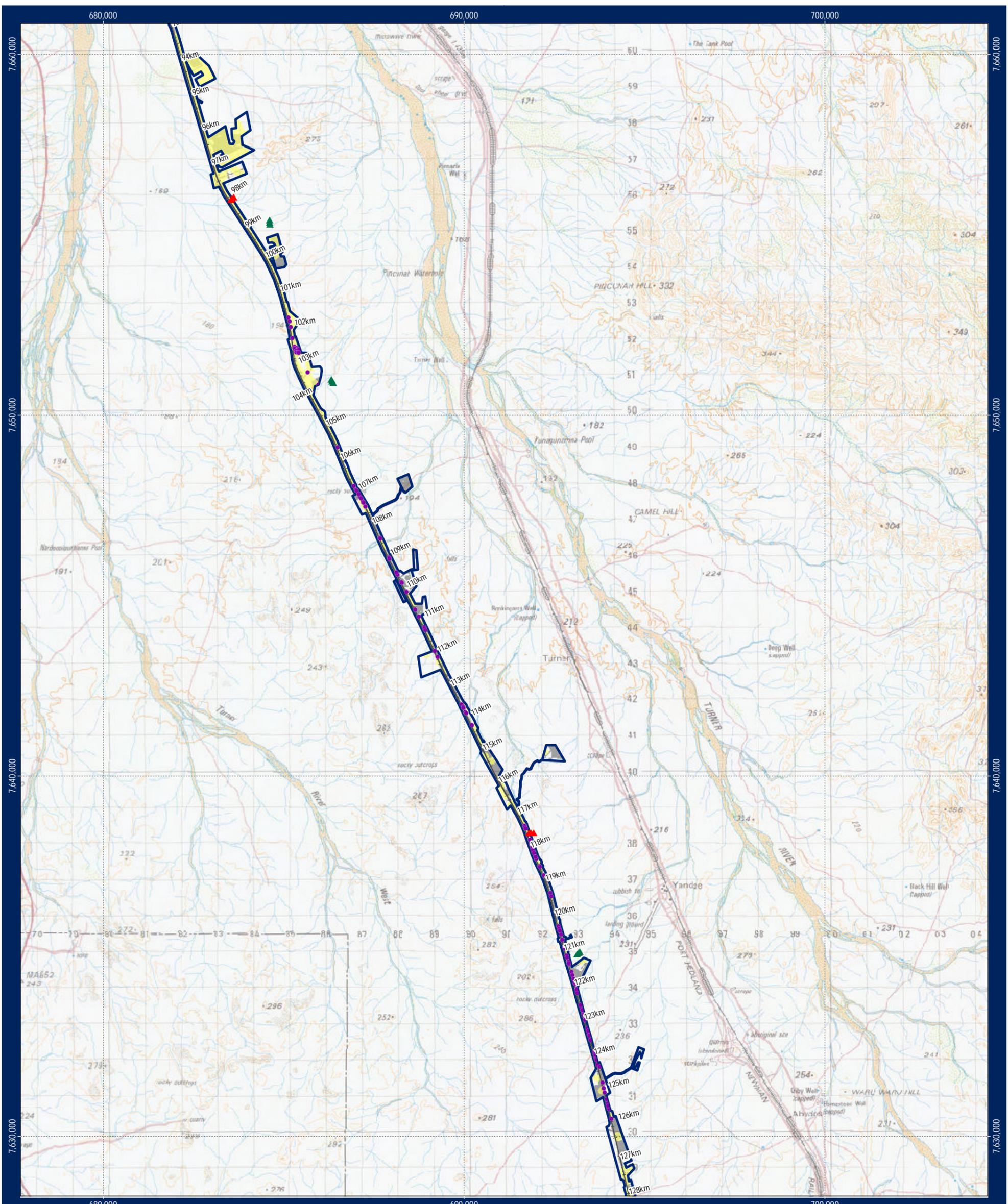
**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 3 of 6**

Requested By: O. Hertsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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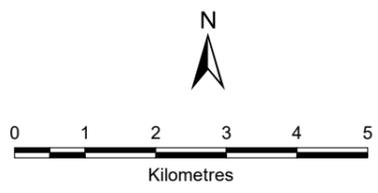
Fortescue Metals Group Ltd
The New Force in Iron Ore



LEGEND

- ▲ Indicative Impact
- ▲ Indicative Reference
- Priority Weeds
- Weed Risk Areas
- ▭ Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au



**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 4 of 6**

Requested By: O. Hertsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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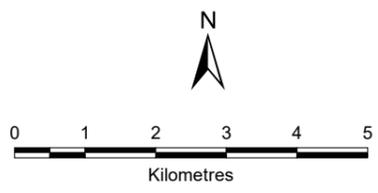




LEGEND

- ▲ Indicative Impact
- ▲ Indicative Reference
- Priority Weeds
- Weed Risk Areas
- Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au

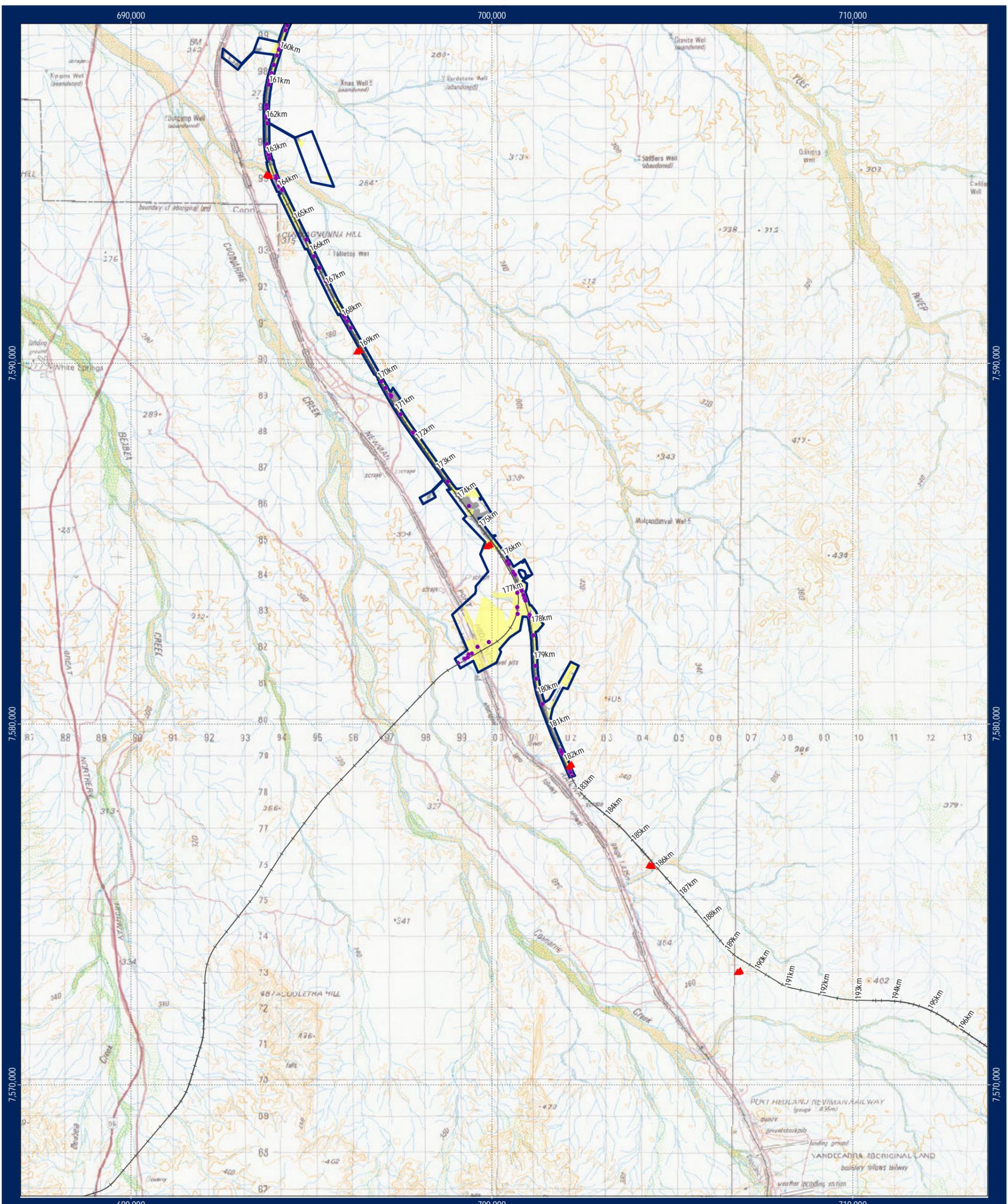


**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 5 of 6**

Requested By: O. Hertsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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LEGEND

- ▲ Indicative Impact
- Priority Weeds
- Weed Risk Areas
- Rail and Port Boundary
- Cleared Areas

Data Sources:
Topography: Geoscience Au



**Weed Risk Areas and Monitoring Sites
Port and Mainline Rail
Map 6 of 6**

Requested By: O. Herlsted	Date: 12/09/2018
Drawn By: B. Ralebala	Size: A3P
Revised By: bralebala	Revision: 0
Approved By: B. Ralebala	Confidentiality: 0
Scale: 1:100,000	
Coordinate System: GDA 1994 MGA Zone 50	
Document Name: 045_MP_EN_0092.002_r0	

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Fortescue Metals Group Ltd
The New Force in Iron Ore

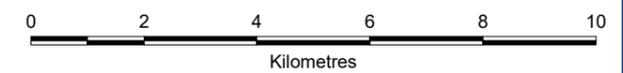


**FIGURE 3 WEED RISK AREAS AND MONITORING SITES –
HAMERSLEY RAIL (MS 1062)**



- LEGEND**
- ▲ Indicative Impact
 - ▲ Indicative Reference
 - Priority Weeds
 - FMG Rail Alignments
 - Hamersley Rail Boundary
 - Weed Risk Areas
 - Cleared Areas

Data Sources:
Topography; Geoscience Au



Requested By: O. Hertsted
 Drawn By: B. Ralebala
 Revised By: bralebala
 Approved By: P. Mastalir
 Scale: 1:125,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 045_MP_EN_0092.003_r0

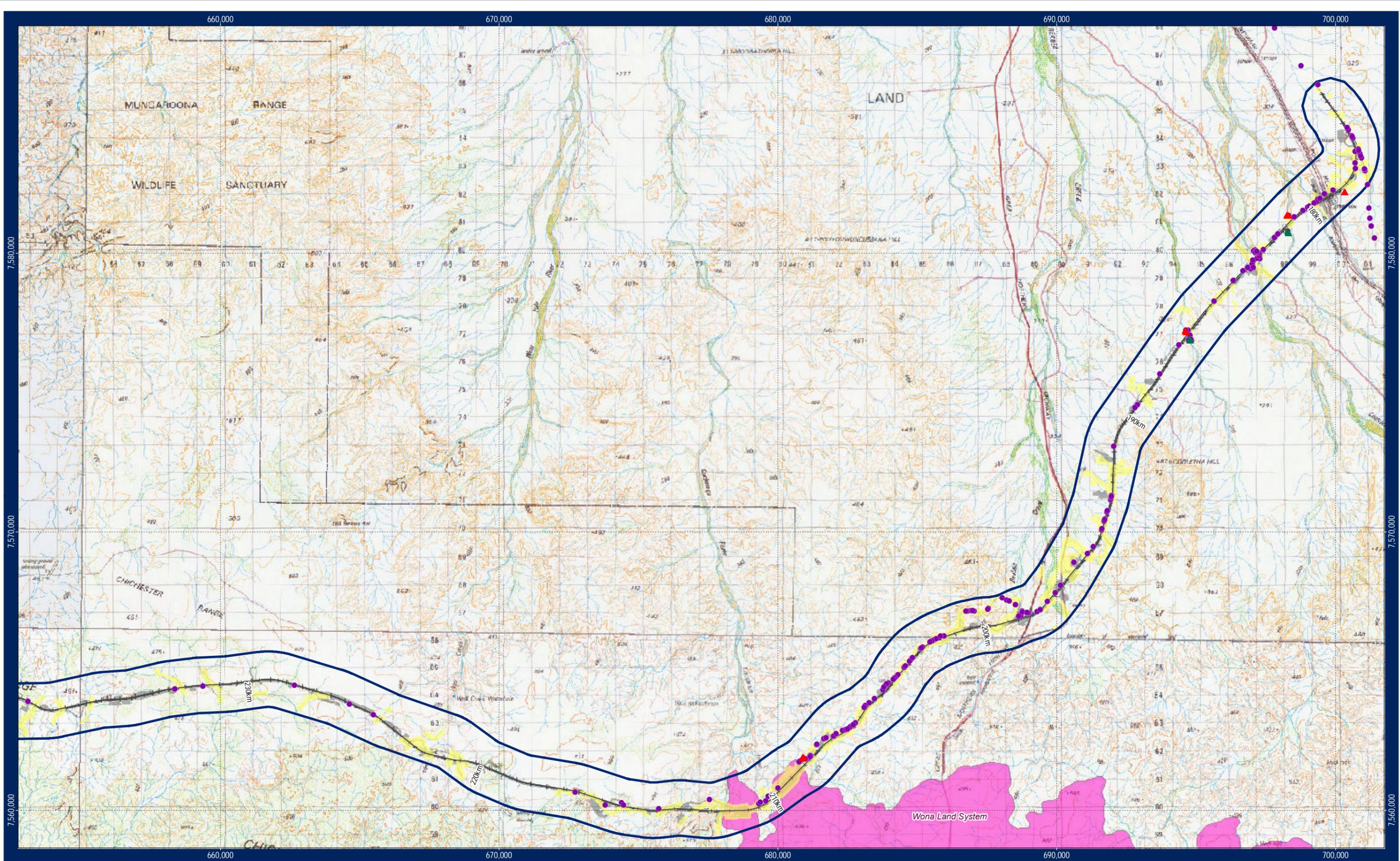
Date: 31/08/2018
 Size: A3L
 Revision: 0
 Confidentiality: 0

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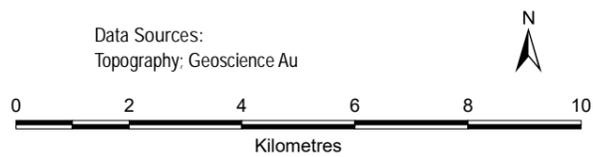
Weed Risk Areas and Monitoring Sites
 Hamersley Rail
 Map 1 of 2



Fortescue Metals Group Ltd
 The New Force in Iron Ore



- LEGEND**
- ▲ Indicative Impact
 - ▲ Indicative Reference
 - Priority Weeds
 - FMG Rail Alignments
 - ▭ Hamersley Rail Boundary
 - ▭ Weed Risk Areas
 - ▭ Cleared Areas
 - ▭ PEC Site



Requested By: O. Hertsted
 Drawn By: B. Ralebala
 Revised By: bralebala
 Approved By: P. Mastalir
 Scale: 1:125,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 045_MP_EN_0092.003_r0

Date: 31/08/2018
 Size: A3L
 Revision: 0
 Confidentiality: 0

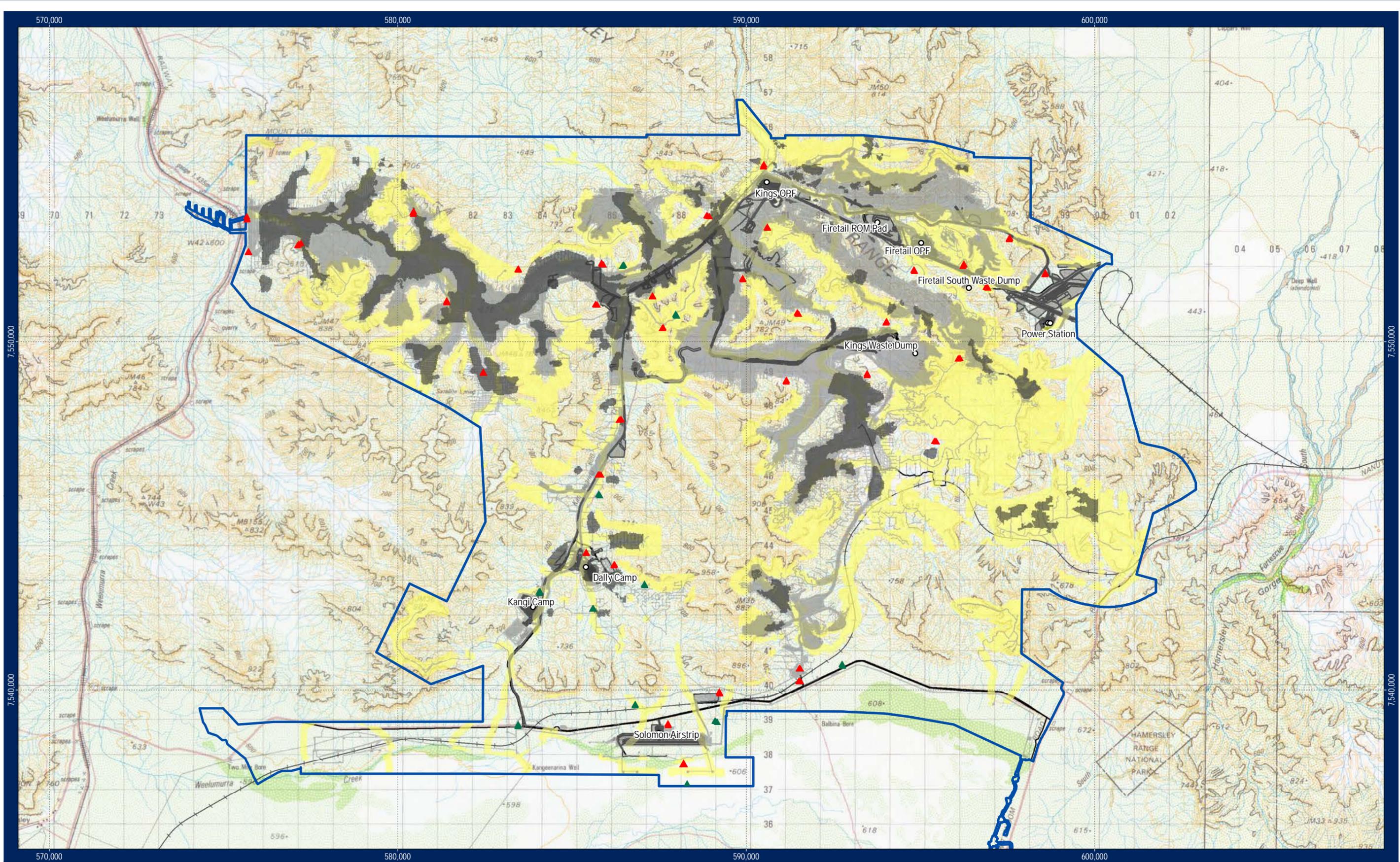
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Weed Risk Areas and Monitoring Sites
 Hamersley Rail
 Map 2 of 2

Fortescue Metals Group Ltd
 The New Force in Iron Ore



**FIGURE 4 WEED RISK AREAS AND MONITORING SITES –
SOLOMON MINE (MS 1062)**



LEGEND

- MS 1062
- Weed Risk Areas
- Cleared Areas
- LOM Pit Outlines
- Weed Monitoring**
- ▲ Impact Site
- ▲ Reference Site
- Solomon Infrastructure

Data Sources:
 Topography: Geoscience Au
 All other data FMG, 2023

N

 0 1 2 3 4 5
 Kilometres

Requested By: T. Edwards
 Drawn By: N. Rappa
 Revised By: pmastalir
 Approved By: P. Mastalir
 Scale: 1:100,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 045_MP_EN_0092.005_r1

Date: 6/10/2023
 Size: A3L
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 Confidentiality: 0

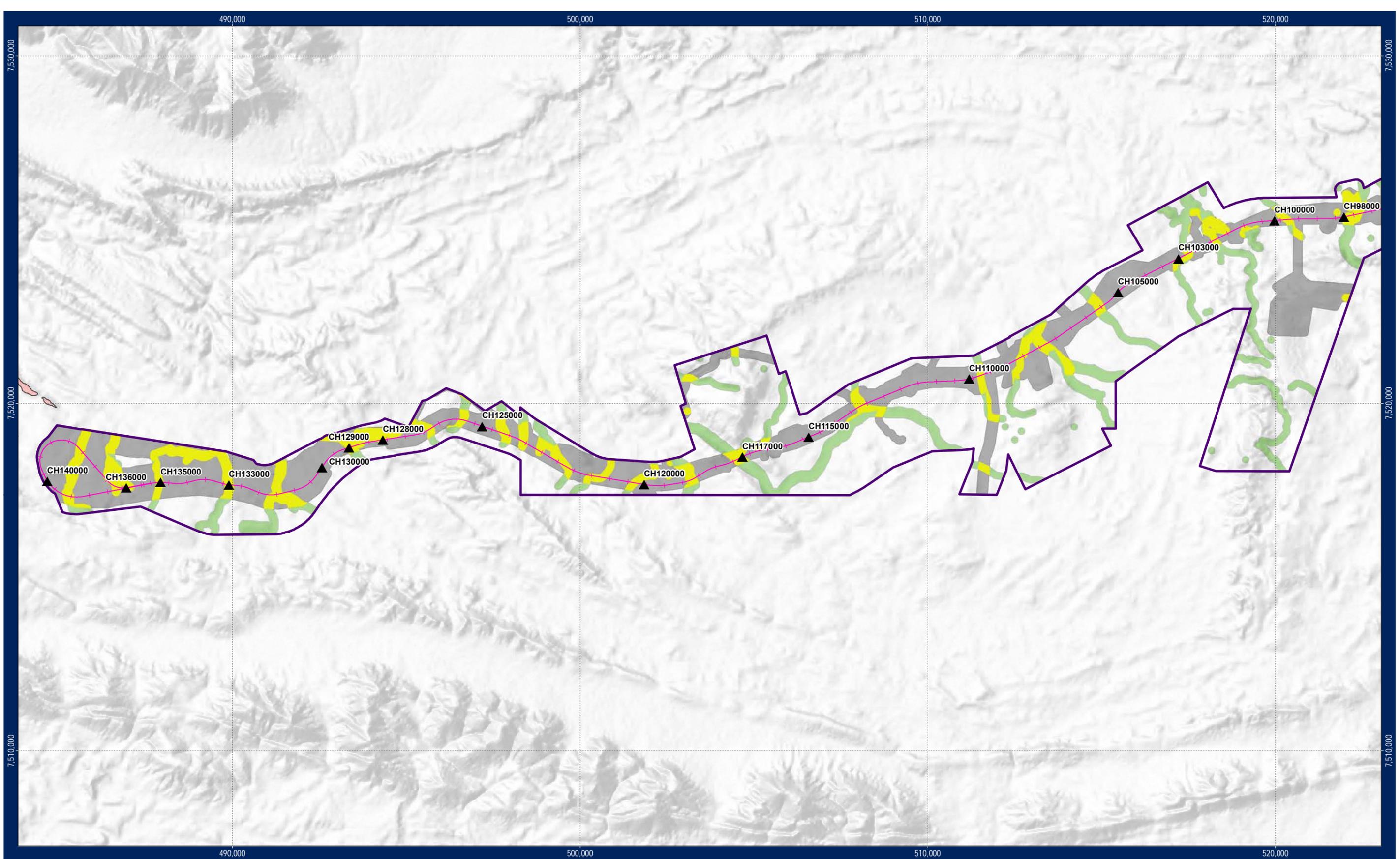
FMG accepts no liability and gives no representation or warranty, express or implied, as to the information provided including its accuracy, completeness, merchantability or fitness for purpose.

Weed Risk Areas and Monitoring Sites
 Solomon Mine

Fortescue Metals Group Ltd
 The New Force in Iron Ore

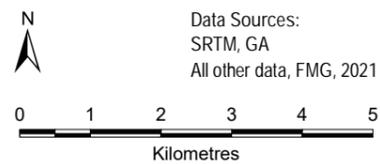


**FIGURE 5 WEED RISK AREAS AND MONITORING SITES –
ELIWANA RAILWAY (MS 1108)**



LEGEND

- ▲ Weed Grid Locations
- Eliwana Proposed Rail Alignment
- ▭ Eliwana Railway Boundary
- ▭ Weed Risk Areas
- ▭ Infrastructure Risk Areas
- ▭ Environmental Risk Areas
- ▭ Conservation Significant Vegetation
- ▭ PEC



Data Sources:
SRTM, GA
All other data, FMG, 2021

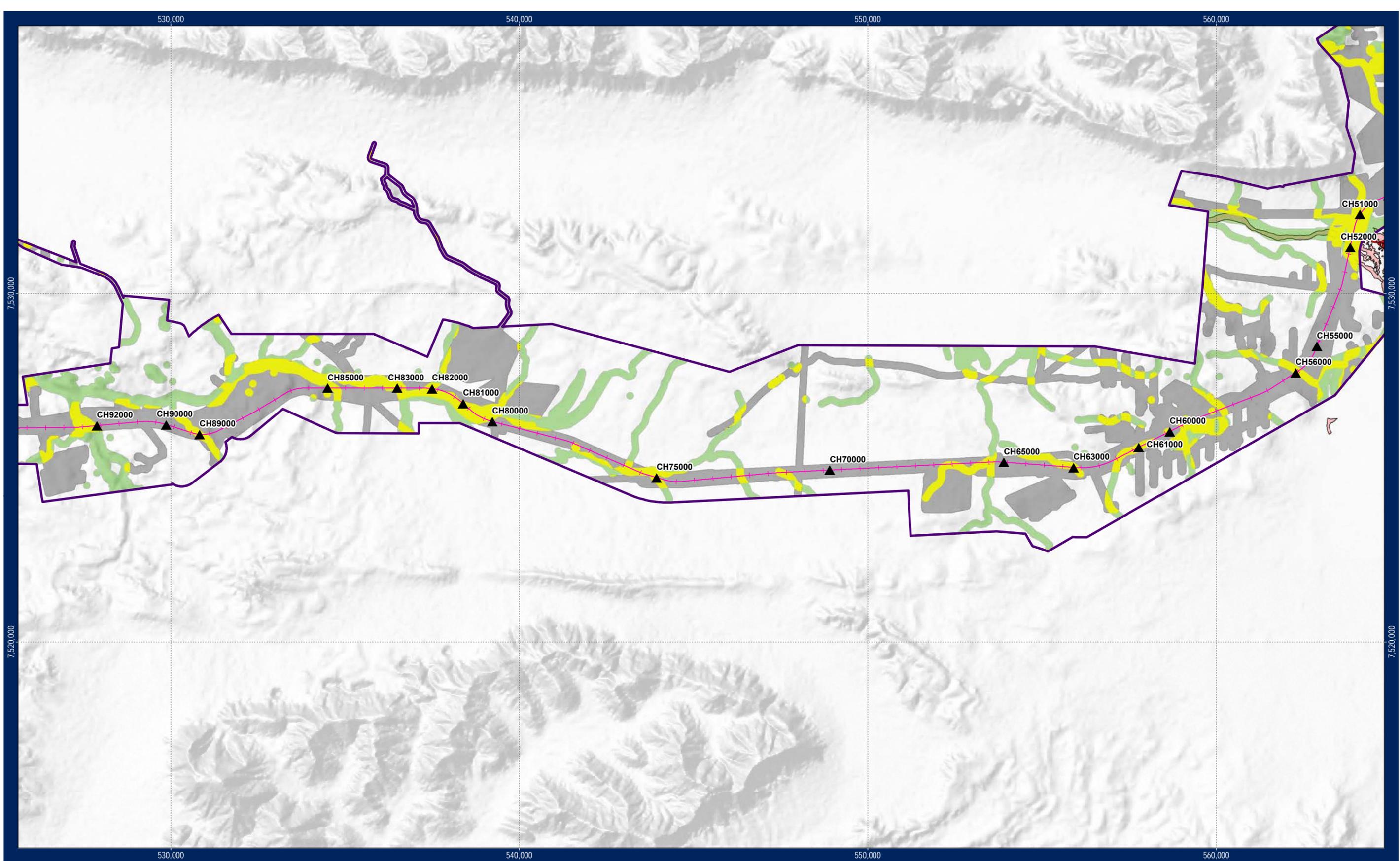
Requested By: O. Hertsted
 Drawn By: P. Kulkarni
 Revised By: pkulkarni
 Approved By: P. Mastalir
 Scale: 1:100,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 751ES_MP_EN_0010.003_r4

Date: 12/10/2021
 Size: A3L
 Revision: 4
 Confidentiality: 1

**Weed Monitoring Grid
Eliwana Railway (MS 1108)**



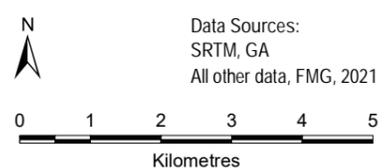
FMG accepts no liability and gives no representation or warranty, express or implied, as to the information provided including its accuracy, completeness, merchantability or fitness for purpose.



- LEGEND**
- ▲ Weed Grid Locations
 - Eliwana Proposed Rail Alignment
 - ▭ Eliwana Railway Boundary

- ▭ Weed Risk Areas
- ▭ Infrastructure Risk Areas
- ▭ Environmental Risk Areas

- Conservation Significant Vegetation**
- ▭ TEC
 - ▭ PEC



Data Sources:
SRTM, GA
All other data, FMG, 2021

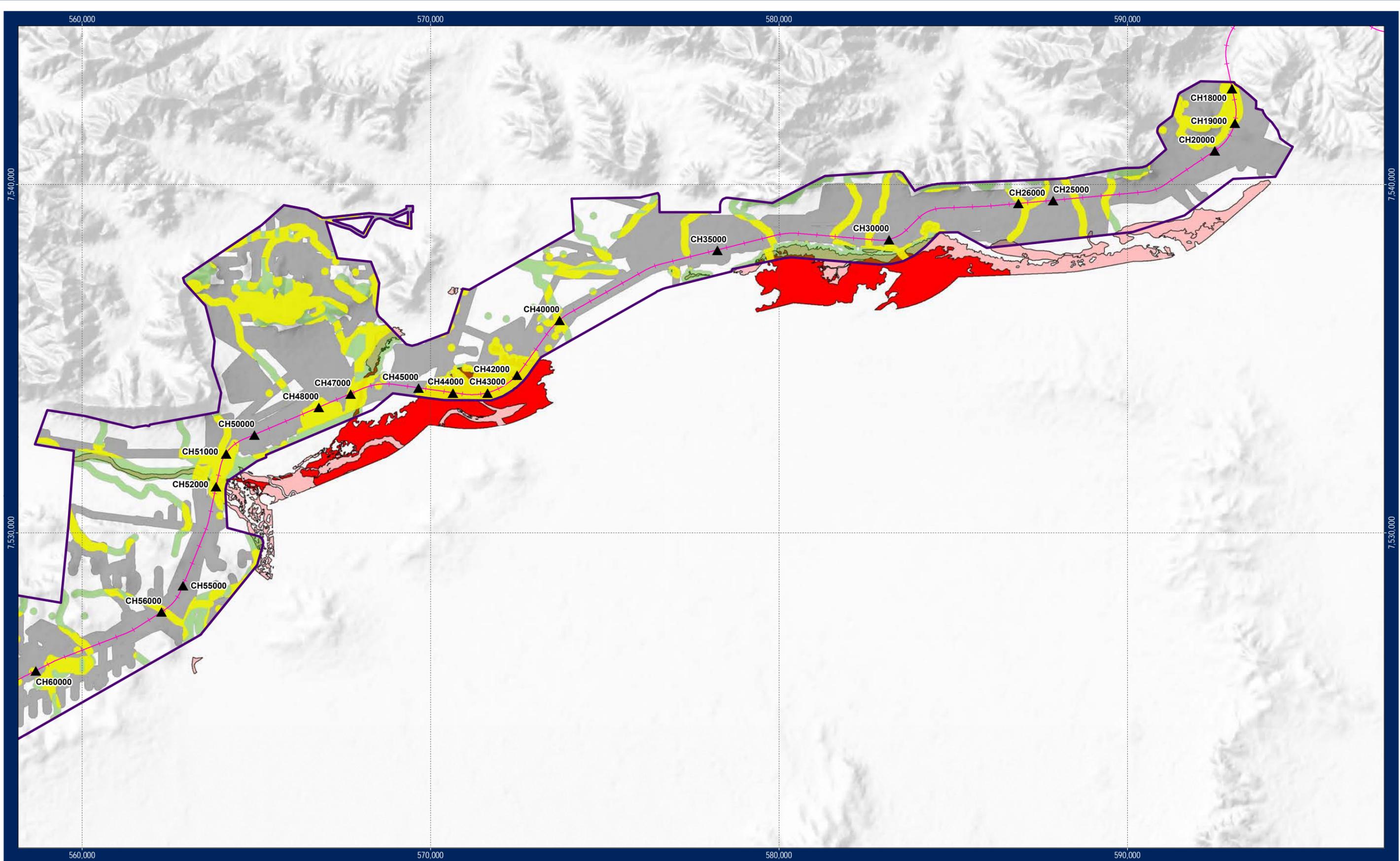
Requested By: O. Hertsted
 Drawn By: P. Kulkarni
 Revised By: pkulkarni
 Approved By: P. Mastalir
 Scale: 1:100,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 751ES_MP_EN_0010.002_r4

Date: 12/10/2021
 Size: A3L
 Revision: 4
 Confidentiality: 1

FMG accepts no liability and gives no representation or warranty, express or implied, as to the information provided including its accuracy, completeness, merchantability or fitness for purpose.

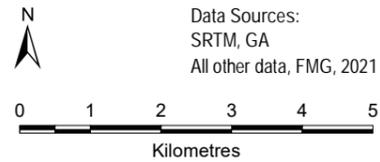
Weed Monitoring Grid
Eliwana Railway (MS 1108)





LEGEND

- ▲ Weed Grid Locations
- Eliwana Proposed Rail Alignment
- ▭ Eliwana Railway Boundary
- Weed Risk Areas
- Infrastructure Risk Areas
- Environmental Risk Areas
- Conservation Significant Vegetation**
- TEC
- PEC



Data Sources:
SRTM, GA
All other data, FMG, 2021

Requested By: O. Hertsted
 Drawn By: P. Kulkarni
 Revised By: pkulkarni
 Approved By: P. Mastalir
 Scale: 1:100,000
 Coordinate System: GDA 1994 MGA Zone 50
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Date: 12/10/2021
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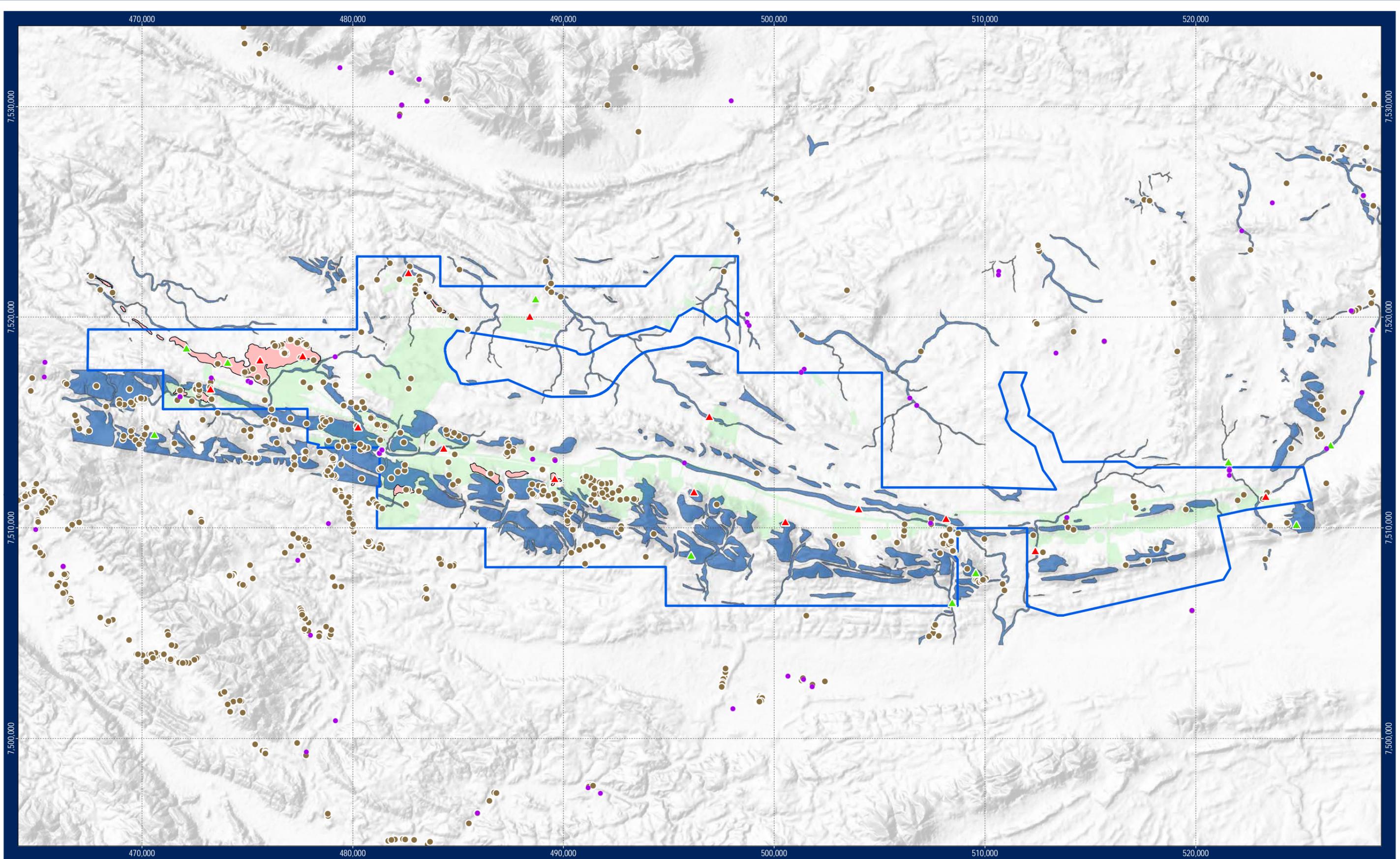
**Weed Monitoring Grid
Eliwana Railway (MS 1108)**



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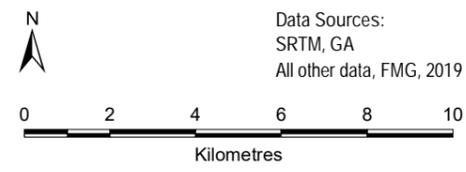


**FIGURE 6 WEED RISK AREAS AND MONITORING SITES –
ELIWANA MINE (MS 1109)**



LEGEND

- FMG Priority Weeds
- Priority Flora
- Mine Development Envelope
- Eliwana Indicative Mine Footprint
- Significant Fauna Habitat
- Indicative Monitoring Sites**
- ▲ Impact
- ▲ Reference
- Conservation Significant Vegetation**
- PEC



Data Sources:
SRTM, GA
All other data, FMG, 2019

Requested By: O. Hertsted
 Drawn By: P. Kulkarni
 Revised By: pkulkarni
 Approved By: P. Mastalir
 Scale: 1:165,000
 Coordinate System: GDA 1994 MGA Zone 50
 Document Name: 751EW_MP_EN_0033_r1

Date: 3/09/2019
 Size: A3L
 Revision: 1
 Confidentiality: 1

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**Weed Monitoring Sites
Eliwana Mine (MS 1109)**





APPENDIX A COMMONWEALTH AND STATE LEGISLATION RELATING TO WEEDS

Legislation	Application
Biosecurity and Agriculture Management Act 2007 and Regulations 2013	Prevents new animal and plant pests and diseases from entering the state and manages the impact and spread of those pests already present in the State.
Biodiversity Conservation Act 2016 (WA)	Conservation and protection of biodiversity and biodiversity components. This Act repeals the Wildlife Conservation Act 1950.
Conservation and Land Management Act 1984 (WA)	Provides for the vesting or reservation of land for conservation purposes, and the ability to enter into agreements with private landholders and pastoral leases. It establishes a number of statutory bodies including the Conservation and Parks Commission.
Environment Protection and Biodiversity Conservation Act 1999 (Cwth)	Protection on environmental matters of national significance.
Environment Protection Act 1986 (WA)	Prevention, control and abatement of pollution and conservation protection and enhancement of environment.
Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA)	Regulates the clearing of native vegetation.
Rights in Water and Irrigation Act 1914 (WA)	Relates to rights in water resources, to make provisions for the regulation, management, use and protection of water resources, to provide for irrigation schemes and for related purposes.



APPENDIX B ACRONYMS AND DEFINITIONS

Acronym / Term	Definition
CAR	Compliance Assessment Report
DBCA	Department of Biodiversity, Conservation and Attractions
Declared pests	<p>The Western Australian Organism List (WAOL) classifies organisms under the <i>Biosecurity and Agriculture Management (BAM) Act 2007</i>, into four categories:</p> <ul style="list-style-type: none"> • Declared Pests (section 22) • Permitted (section 11) • Declared pest - Prohibited (section 12) • Permitted Requiring a Permit (73, BAM Regulations 2013). <p>Under this Act, Declared Pests are listed as one of three categories:</p> <ul style="list-style-type: none"> • The C1 category (Exclusion) – Pests will be assigned to this category if they are not present in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State. • The C2 category (Eradication) – Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still feasible. • The C3 category (Management) – Pests will be assigned to this category if they are established in Western Australia but is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest. <p>Unlisted organisms have not been declared by the Minister for Agriculture and Food, and therefore permission is required before they can be brought into the State for assessment.</p>
DPAW	Department of Parks and Wildlife Service (part of DBCA)
DPIRD	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
Environmental exclusion zone	Geospatial locations of features that have legislative or other assigned protection (e.g., areas that are not permitted by Ministerial Statement to be disturbed).
Environmental weeds	<p>DBCA rank weeds for each region through the <i>Weed Prioritisation Process for DPAW – “An integrated approach to Weed Management on DPaW-managed lands in WA”</i> (2013). The process ranks weeds based on their current and potential distribution, survey effort, abundance, ecological impact, impact attributes, invasiveness, feasibility of control, general trend and status. Within each region each species has been ranked by ecological impact, as one of the following:</p> <ul style="list-style-type: none"> • A – Alert • H – High • M – Medium • L – Low • U – Unknown <p>Alert refers to those species identified through the regional weed prioritisation process as being either not found in Western Australia, not found in the DBCA Pilbara Region but known to exist in an adjacent region or found in the region but not on DBCA managed lands or water.</p> <p>Within each region each weed species have also been ranked by invasiveness, which is the rate of spread in native vegetation, encompassing factors of establishment, reproduction and long-distance dispersal (>100 m). Invasiveness rankings include:</p> <ul style="list-style-type: none"> • R – Rapid



	<ul style="list-style-type: none">• M - Moderate• S - Slow• U - Unknown <p>The full Pilbara ranking for environmental weeds can be accessed at https://www.dbca.wa.gov.au/parks-and-wildlife-service/threat-management/plant-diseases/weeds.</p>
EPA	Environmental Protection Authority
Fortescue controlled site	Sites that are under the legislative control of Fortescue including exploration sites, sites under construction, operational sites (sites that are managed and operated by Fortescue and sites that are managed by Fortescue but operated by contractors) and the Perth offices
GIS	Geographic information system
LUC	Land Use Certificate. A certificate issued through a web-based system to confirm that proposed land use activities adhere to the correct approvals granted by Government departments. A LUC is required whenever any work (e.g., access, ground disturbance, maintenance, rehabilitation) is undertaken. The LUC has sensitivity checks against GIS spatial data to determine if the area proposed for works intersects with any mapped constraints, including conservation significant flora/vegetation, weeds and environmental exclusion zones datasets. Depending on the type of constraint, proposed works will be referred for assessment or blocked. The LUC is then assessed by key Fortescue stakeholders (e.g., Tenure, Environment, Heritage, Water Infrastructure) to determine if the activities can be approved. Approval may be unconditional, or subject to conditions (i.e., implement weed hygiene measures).
MS	Ministerial Statement
PEC	Priority Ecological Community
TEC	Threatened Ecological Community
WAOL	Western Australian Organism List
WONS	<p>Weeds of National Significance</p> <p>The Australian and State/Territory governments have agreed on a list of 32 Weeds of National Significance, based on the weed species' invasiveness, impacts, potential to spread and socio-economic and environmental values. The full list of WONS can be accessed at https://weeds.org.au/weeds-profiles/.</p> <p>The WONS list is currently managed by the DPIRD.</p> <p>The WoNS list is complimented by the National Environmental Alert List, a list of 28 non-native weeds that have established populations in the wild. Species were identified for the Alert List based on three criteria: posing a high or serious potential threat to the environment; having limited distribution within Australia at present; and being amenable to successful eradication or containment programs.</p>



APPENDIX C ENVIRONMENTAL WEEDS NOT RECORDED AT FORTESCUE CONTROLLED SITES

Species ²⁹	Common name	WONS	Declared pests - WOAL	Environmental weeds	Fortescue weed classification
<i>Agave americana</i> var. <i>americana</i>	Century Plant		Permitted	H (S)	Other
<i>Arctotheca calendula</i>	Cape Weed		Permitted	L (S)	Other
<i>Arundo donax</i>	Giant Reed		Permitted	H (S)	Other
<i>Asclepias curassavica</i>	Redhead Cottonbush		Permitted	L (S)	Other
* <i>Asphodelus fistulosus</i>	Onion Weed		Permitted	U (R)	Other*
* <i>Bidens pilosa</i>	Cobbler's Peg		Permitted	U (R)	Other* (Pastoral exclusion areas only)
<i>Brassica tournefortii</i>	Prickly Turnip		Permitted	H (R)	Other*
<i>Catharanthus roseus</i>	Madagascar Periwinkle		Permitted	U (U)	Other
* <i>Cenchrus setaceus</i>	Fountain Grass		Permitted	Not listed	Other
<i>Ceratopteris thalictroides</i>	Water Fern, Indian water fern		Permitted	H (R)	Other*
<i>Chenopodium murale</i>	Green Fat Hen		Permitted	L (U)	Other
* <i>Citrullus lanatus</i>	Pie Melon		Permitted	U (M)	Other*
<i>Crotalaria incana</i> subsp. <i>incana</i>			Declared Pest	U (U)	Other*
<i>Cucumis myriocarpus</i>	Prickly Paddy Melon		Permitted	L (R)	Other
<i>Cylindropuntia fulgida</i>	Boxing Glove or Coral Cactus		Declared Pest	H (S)	Other*
<i>Cyperus rotundus</i>	Nut Grass		Permitted	U (U)	Other
<i>Dactyloctenium australe</i>	Durban Grass, Sweet Smother Grass		Permitted	U (U)	Other
<i>Datura metel</i>	Angel's Trumpet, Downy Thornapple		Permitted	L (S)	Other
<i>Emex australis</i>	Double Gee, Doublegee		Permitted	L (S)	Other
<i>Emex spinosa</i>			Permitted	L (S)	Other
<i>Eragrostis barrelieri</i>	Pitted Lovegrass		Permitted	U (U)	Other
<i>Eragrostis curvula</i>	African Love Grass, African Lovegrass		Permitted	H (R)	Other*
<i>Eragrostis pilosa</i>			Permitted	U (U)	Other
<i>Erodium aureum</i>			Permitted	U (S)	Other

²⁹ Pilbara impact and invasiveness ranking Environmental weeds as classed by DBCA. Excludes species no longer considered a weed based on taxonomy (i.e., *Cucumis melo*, *Eucalyptus camaldulensis* and *Portulaca oleracea*).



Species ²⁹	Common name	WONS	Declared pests - WOAL	Environmental weeds	Fortescue weed classification
<i>Erodium cicutarium</i>	Common Storksbill		Permitted	U (S)	Other
<i>Euphorbia prostrata</i>			Not Listed	U (U)	Other
<i>Gomphrena celosioides</i>	Gomphrena Weed		Permitted	L (U)	Other
<i>Hypochaeris glabra</i>	Flatweed		Permitted	L (R)	Other
<i>Lavatera trimestris</i>	Lavatera		Permitted	L (S)	Other
<i>Lepidium didymum</i>	Lesser Swinecress		Permitted	U (U)	Other
<i>Lolium loliaceum</i>	Stiff Ryegrass		Permitted	U (U)	Other
<i>Lolium multiflorum</i>	Italian Ryegrass		Permitted	U (U)	Other
<i>Lolium rigidum</i>	Annual Ryegrass		Permitted	U (U)	Other
<i>Malva parviflora</i>	Small-flowered Mallow, Marshmallow		Permitted	L (S)	Other
<i>Malvastrum coromandelianum</i>	Prickly Malvastrum		Permitted	U (U)	Other
<i>Medicago polymorpha</i>	Burr Medic		Permitted	L (M)	Other
<i>Medicago sativa</i>	Lucerne, Alfafa		Permitted	L (S)	Other
<i>Medicago trunculata</i>			Not Listed	L (S)	Other
<i>Merremia dissecta</i>			Permitted	H (R)	Other*
<i>Mesembryanthemum crystallinum</i>	Ice Plant, Iceplant		Permitted	L (M)	Other
<i>Momordica balsamina</i>	Balsam Apple		Permitted	H (U)	Other
<i>Nymphaea macrosperma (gigantea)</i>	Giant Waterlily		Permitted	H (U)	Other
<i>Phoenix dactylifera</i>	Date Palm		Permitted	H (R)	Other*
<i>Phyla nodiflora</i>	Fogfruit, Lippia		Permitted	H (R)	Other*
<i>Physalis angulata</i>	Wild Gooseberry		Permitted	U (U)	Other
<i>Polycarpon tetraphyllum</i>	Fourleaf Allseed		Permitted	L (U)	Other
<i>Prosopis spp</i>	Mesquite		Prohibited	H (R)	Other*
<i>Raphanus raphanistrum</i>	Wild Radish		Permitted	U (U)	Other
<i>Setaria italica</i>	Italian Millet		Permitted	L (R)	Other
<i>Setaria sphacelata</i>	South African Pigeon Grass		Permitted	L (R)	Other
<i>Sisymbrium erysimoides</i>	Smooth Mustard		Permitted	L (U)	Other
<i>Sisymbrium irio</i>	London Rocket		Permitted	L (U)	Other
<i>Sisymbrium orientale</i>	Indian Hedge Mustard		Permitted	L (U)	Other
<i>Solanum hoplopetalum</i>	Afghan Thistle		Permitted	L (S)	Other



Species ²⁹	Common name	WONS	Declared pests - WOAL	Environmental weeds	Fortescue weed classification
<i>Spergularia diandra</i>	Small Sand Spurrey		Permitted	L (U)	Other
<i>Spergularia rubra</i>	Red Sand Spurrey		Permitted	L (U)	Other
<i>Tamarindus indica</i>	Tamarind		Permitted	L (S)	Other
<i>Washingtonia filifera</i>	Cotton Palm		Permitted	H (R)	Other*

* If recorded at Fortescue site will be classed as a priority weed