GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

ENVIRONMENTAL SCOPING DOCUMENT

Proposal name:	**Eliwana Railway Project**
Proponent:	**Fortescue Metals Group Limited**
Assessment number:	**2129**
Location:	**The Eliwana Railway is located between the existing Hamersley Railway (located at the Solomon Iron Ore Mine, 60 km north of Tom Price) and the proposed Eliwana Iron Ore Mine (subject to a separate Referral), (located 90 km west-north-west of Tom Price) in the Pilbara region of Western Australia**
Local Government Area:	**Shire of Ashburton**
Public review period:	**Environmental Review Document – 4 weeks**
EPBC reference no:	**EPBC 2017/8025**

1. Introduction

The Environmental Protection Authority (EPA) has determined that the above proposal is to be assessed under Part IV of the *Environmental Protection Act 1986* (EP Act).

The purpose of the Environmental Scoping Document (ESD) is to define the form, content, timing and procedure of the environmental review, required by s. 40(3) of the EP Act. This ESD has been prepared by the EPA in consultation with the proponent, decision-making authorities and interested agencies consistent with the EPA's *Procedures Manual*.

Form

The EPA requires that the form of the report on the environmental review required under s. 40 (Environmental Review Document, ERD) is according to the Environmental Review Document template.

Content

The EPA requires that the environmental review includes the content outlined in sections 2 to 6 of this ESD.

Timing

Table 1 sets out the timeline for the assessment of the proposal agreed between the EPA and the proponent.

Table 1 Assessment timeline

Key assessment milestones	Completion Date
EPA approves Environmental Scoping Document	29 December 2017
Proponent submits first draft Environmental Review Document	8 February 2018
EPA provides comment on first draft Environmental Review Document *(6 weeks from receipt of ERD)*	14 March 2018
Proponent submits revised draft Environmental Review Document	28 March 2018
EPA authorises release of Environmental Review Document for public review *(2 weeks from EPA approval of ERD)*	9 May 2018
Proponent releases Environmental Review Document for public review for 4 weeks	23 May 2018
Close of public review period	20 June 2018
EPA provides Summary of Submissions *(3 weeks from close of public review period)*	11 July 2018
Proponent provides Response to Submissions	8 August 2018
EPA reviews the Response to Submissions *(4 weeks from receipt of Response to Submissions)*	5 September 2018
EPA prepares draft assessment report and completes assessment *(7 weeks from EPA accepting Response to Submissions)*	17 October 2018
EPA finalises assessment report (including two weeks consultation on draft conditions) and gives report to Minister *(6 weeks from completion of assessment)*	28 November 2018

Procedure

The EPA requires the proponent to undertake the environmental review according to the procedures in the *Administrative Procedures* and the *Procedures Manual,* including requirements for public review.

This ESD has not been released for public review. The ESD will be available on the EPA website (www.epa.wa.gov.au) upon endorsement and must be appended to the ERD.

Assessment under an accredited assessment
The proposal has been referred and determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* and is being assessed *as an accredited assessment. The relevant matters of national environmental significance (MN*ES) for this proposal are:

- Listed threatened species and communities (s18 and 18A)

This ESD includes work required to be carried out and reported on in the ERD document in relation to MNES. The ERD will also address the matters in Schedule 4 of the *Environmental Protection and Biodiversity Conservation Regulations 2000*

MNES that may be impacted by the proposal will be identified and the potential impacts on these matters addressed within each relevant preliminary environmental factor as identified in Table 2. The ERD will include a separate section which summarises the potential impacts on MNES and describes, to the extent practicable, any feasible alternatives to the proposed action and possible mitigation measures. Proposed offsets to address significant residual impacts on MNES are also to be discussed.

2. The proposal

The subject of this ESD is the Proposal by Fortescue Metals Group Limited (Fortescue) to develop a 120 km railway, connecting the proposed Eliwana Iron Ore Mine Project to Fortescue's existing railway network at the Solomon Iron Ore Mine, in the Pilbara region of Western Australia (Figure 1). The Eliwana Mine Project Area is located approximately 90 km west-north-west of Tom Price.

The regional location of the proposal is shown in Figure 1 and the development envelope encompassing the physical elements of the proposal is delineated in Figure 2.

The key characteristics of the proposal are set out in Tables 2 and 3. The key proposal characteristics may change as a result of the findings of studies and investigations conducted and the application of the mitigation hierarchy by the proponent.

Table 2 Summary of the proposal

Proposal title	Eliwana Railway Project
Proponent name	Fortescue Metals Group Ltd
Short description	The Proposal is to develop and operate a 120 km railway linking the proposed Eliwana Iron Ore Mine (subject of a separate referral) to Fortescue's existing rail network (Figure 1).

Table 3 Location and proposed extent of physical and operational elements

Element	Location	Proposed extent
Physical elements		
Railway and associated infrastructure	Figure 2	Clearing of up to 3,690 ha of native vegetation within the 57,000 ha Rail Development Envelope
Operational elements		
Construction Water Supply	N/A	Up to 4 GL, supplied from multiple local water supply borefields situated along the railway.
Operational Water Supply	N/A	Up to 200,000 kL/a, supplied from local water supply borefields.

Major infrastructure associated with the development envelope for the Proposal includes:

- rail loop
- train loadout
- railway and associated embankment
- crossing/passing loops
- banker sidings
- railway overpass
- borrow areas
- ballast quarries
- rail maintenance track
- access roads
- bridges
- culverts and surface water management infrastructure
- signalling infrastructure
- gas and water pipelines
- power transmission lines
- construction and potable water supply borefield, infrastructure and water storage facilities
- communications infrastructure (including towers and fibre optic cables)
- fuel storage
- wastewater treatment plants
- construction camps.

The Rail Development Envelope is defined in Figure 2. The Rail Development Envelope contains portions of Fortescue-managed mining tenure, third party mining tenure and unallocated crown land.

In order to construct and operate the railway, Fortescue will be seeking approval for a Special Railway Licence within the Rail Development Envelope, which will be managed in accordance with the *Railway and Port (The Pilbara Infrastructure) Agreement Act 2004.*

The Rail Development Envelope may be refined as the project progresses.

Pending receipt of all relevant approvals, and a final decision regarding Fortescue's Firetail Replacement Strategy, the company plans to commence broad scale construction of the Eliwana Railway Project in early 2019. The target date for first ore on train is June 2020. The Project is not a staged development and construction is considered complete when operations commence carting ore.

Fortescue anticipates that a number of activities associated with the implementation of the proposal, where potential impacts of the activities are not significant, may be progressed under s 41A(3) as minor or preliminary works. These may include (but are not limited to):

- accommodation camps and associated supporting infrastructure
- access roads
- fuel storage areas
- communications infrastructure
- construction laydown areas
- construction water supply borefields and associated infrastructure.

A formal request will be submitted to the EPA, in accordance with the Instructions and checklist for request for EPA consent to undertake minor or preliminary work under s 41A(3) of the EP Act.

3. Preliminary key environmental factors and required work

The preliminary key environmental factors for the environmental review are:

1. Flora and Vegetation
2. Terrestrial Fauna
3. Hydrological Processes
4. Inland Waters Environmental Quality
5. Social Surroundings

Table 3 outlines the work required for each preliminary key environmental factor and contains the following elements for each factor:

- EP**A factor** and EP**A objective** for that factor.
- **Relevant activities** – the proposal activities that may have a significant impact on that factor.
- **Potential impacts and risks** to that factor.
- **Required work** for that factor.
- **Relevant policy** and guidance – EPA (and other) guidance and policy relevant to the assessment.

Table 4 Preliminary key environmental factors and required work

Flora and Vegetation	
EPA objective	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.
Relevant activities	• clearing of native vegetation • groundwater abstraction • alteration of surface water flows
Potential impacts and risks	• Direct clearing of up to 3,690 ha of native vegetation. • Direct and/or indirect impacts to significant vegetation. • Direct and/or indirect impacts to significant flora (including MNES). • Direct and/or indirect impacts to Priority Flora species recorded within the Rail Development Envelope. • Direct and/or indirect impacts to Karijini National Park and areas excised from pastoral leases which are managed by DBCA for the purpose of conservation. Direct and/or indirect impacts to Threatened Ecological Community - Themeda grasslands on cracking clays and/or Priority Ecological Community - Brockman Iron Cracking Clay Communities of the Hamersley Range. • Indirect impacts to sheetflow/surface water dependent vegetation resulting from infrastructure placement (should any be identified during baseline surveys) • Fragmentation of significant vegetation • Introduction and spread of weeds and invasive species from activities as a potential impact and risk of the proposal
Required work	1. Identify and characterise flora and vegetation within the Rail Development Envelope in accordance with the requirements of Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment, December 2016. Demonstrate how surveys are relevant, representative and demonstrate consistency with current EPA policy. Include a summary of survey findings. Ensure species database searches and taxonomic identifications are up-to-date. 2. Conduct targeted surveys for significant flora species identified through database searches and/or found during quadrat-based vegetation surveys, to fully characterise the extent of the populations and the significance of the potential impact on these species. 3. Undertake weed mapping within the Rail Development Envelope. 4. Provide an analysis of the vegetation and significant flora species present and likely to be present within the Rail Development Envelope, including any indirect impact areas outside of the Rail Development Envelope. Include an assessment of the significance of flora and vegetation in a local and regional context (refer to Environmental

Factor Guideline - Flora and Vegetation for definition of significance). Include a quantitative assessment of levels of impact on significant flora, priority ecological communities and all vegetation units.

a) For significant flora (including MNES), this includes:

i) numbers and proportions of individuals in a local and regional context,

ii) numbers and proportions of populations directly or potentially indirectly impacted, and

iii) numbers/proportions/populations currently protected within the conservation estate (where known).

b) For ecological communities and vegetation units this includes:

i) the area (in hectares) and proportions directly or potentially indirectly impacted, and

ii) proportions/hectares of the species, community or vegetation unit currently protected within conservation estate.

5. Provide a clear set of data, including tables and maps; that shows the proposed impact (direct and indirect) for the Proposal, including but not limited to impacts to:

a) Threatened and Priority Ecological Communities,

b) Vegetation units,

c) Significant flora (see Factor Guidelines Flora and Vegetation), and

d) Karijini National Park and areas excised from pastoral leases and managed by DBCA for the purpose of conservation.

6. Provide a detailed description of the cumulative impacts (direct and indirect) associated with the proposal. Discuss and determine significance of potential direct, indirect and cumulative impacts to flora and vegetation as a result of the Proposal at a local and regional level (including potential direct or indirect impacts to Karijini National Park).

7. Demonstrate that all practicable measures have been taken to reduce both the area of the proposed disturbance footprint and the Rail Development Envelope based on progress in the Proposal design and understanding of the environmental impacts.

8. Demonstrate application of the mitigation hierarchy to avoid and minimise impacts to flora and vegetation (including post-closure).

9. Describe rehabilitation and revegetation measures relevant to flora and vegetation, including relevant practice and demonstrated outcomes, as consistent with the Rehabilitation and Revegetation Management Plan (45-PL-EN-0023).

	10. Discuss management measures, outcomes/objectives sought to ensure impacts are not greater than predicted. 11. Update the Fortescue Significant Flora and Vegetation Management Plan (45-PL-EN-0017) to incorporate the proposal. 12. Describe the impacts for the Proposal and analyse these impacts to identify and detail any that are significant. 13. Create an offsets position following application of the 'mitigation hierarchy'. 14. Demonstrate and document in the ERD how the EPA's objective for this factor can be met. 15. Predict the inherent and residual impacts before and after applying the mitigation hierarchy and identify whether the residual impacts are significant by applying the Significant Residual Impact Model in the WA Environmental Offsets Guideline. 16. Quantify any significant residual impacts by completing the Offset Template, spatially defining the area of 'good' to 'excellent' native vegetation that will be disturbed as a result of this proposal and propose an appropriate offsets package that demonstrates application of the WA Environmental Offsets Policy and Guideline.
Relevant policy and guidance	***EPA Policy and Guidance*** • Environmental Factor Guideline: Flora and Vegetation (EPA 2016) • Advice of the Environmental Protection Authority to the Minister for Environment under Section 16 of the Environmental Protection Act 1986, Cumulative environmental impacts of development in the Pilbara region (EPA 2014) • Instructions on how to prepare an Environmental Review Document (EPA 2016) • Statement of Environmental Principals, Factors and Objectives (EPA 2016) • Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016) • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA 2016) ***Other policy and guidance*** • WA Environmental Offsets Policy (The Government of Western Australia 2011) • WA Environmental Offsets Guidelines (The Government of Western Australia 2014).

Terrestrial Fauna	
EPA objective	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained. Provide for the protection of the environment, especially matters of national environmental significance
Relevant activities	• clearing of native vegetation • groundwater abstraction • alteration of surface water flows • vehicle movements.
Potential impacts and risks	• Direct clearing, modification, and disturbance of up to 3,690 ha of fauna habitat (vegetated and non-vegetated). • Fragmentation of fauna habitat due to linear infrastructure or landforms within the Rail Development Envelope. • Mortality and/or indirect impacts to fauna due to infrastructure or landform placement, vehicle interactions, modification of water regimes and attraction of feral predators and/or exotic weeds into the surrounding area .
Required work	17. Conduct a Desktop and Level 1 survey for terrestrial fauna in accordance with relevant EPA policy. Demonstrate how surveys are relevant and representative, and demonstrate consistency with EPA policy. Provide a summary of the survey finding, including a comprehensive listing of: a) vertebrate fauna species known or likely to occur in the habitats present; b) identification of conservation significant fauna species known or likely to occur in the area; and c) identification of short-range endemic invertebrate fauna species known of likely to occur in the area. 18. Conduct a Level 2 terrestrial fauna survey (incorporating a desktop assessment) in areas that are likely to be directly or indirectly impacted. Surveys are to be undertaken in accordance with relevant EPA and DOEE policy and, where available, species-specific survey guidelines for relevant species listed under the *Wildlife Conservation Act 1950* and the *Environment Protection Biodiversity Conservation Act 1999*. Demonstrate how surveys are relevant and representative and demonstrate consistency with EPA policy. 19. Conduct a Level 2 short-range endemic fauna survey (incorporating a desktop assessment) in accordance with *Technical Guidance – Sampling of Short Range Endemic Invertebrate Fauna* (EPA 2016).

	Demonstrate how surveys are relevant and representative and demonstrate consistency with EPA policy. 20. Undertake a fauna habitat assessment. Identify fauna habitat types within the Rail Development envelope. Consider habitat types that provide important ecological function within the Proposal area (e.g. geological features that may support unique ecosystems). Map the extent of fauna habitat types within and outside of the Development Envelope in relation to the areas of impact and locations of conservation significant and short range endemic invertebrate fauna. 21. For each relevant conservation significant species known or likely to occur within the Proposal area, provide: a) baseline information on distribution (including known occurrences), ecology, and habitat preferences at both the site and regional levels; b) information on the conservation value of each habitat type from a local and regional perspective, including the percentage representation of each habitat type on site in relation to its local and regional extent; c) size and the importance of the population from a local and regional perspective and potential percentage loss of the conservation significant species locally due to loss of habitat; d) maps illustrating the known recorded locations of conservation significant species in relation to fauna habitat and the proposed disturbance and areas to be impacted e) discussion of known existing threats to the species, with reference to relevant impacts from the proposed action (including taking into consideration any relevant guidelines, policies, plans and statutory provisions); f) detailed description of the potential direct, indirect and cumulative impacts to the species within the Proposal area and on a regional scale. 22. Specify any MNES being assessed as part of the accredited assessment. For specific MNES species, address the following: a) Pilbara Leaf-nosed Bat and Ghost Bat 23. Provide a review of bat populations and habitat in the local and regional area. 24. Investigate and provide a description of any potential bat populations and habitat in the Rail Development Envelope, and potential impacts from the proposal.

	25. Detail the extent to which clearing will remove foraging/hunting habitat for these species and the likely impacts of this on the local population. a) Pilbara Olive Python: 26. Provide a review of python populations and habitat in the local and regional area. 27. Detail the extent to which clearing will remove critical habitat for these species and the likely impacts of this on the local population. a) Northern Quoll: 28. Provide a review of quoll populations and habitat in the local and regional area. 29. Detail the extent to which clearing will remove critical habitat and be expected to impact the species a) Night Parrot: 30. Provide a review of Night Parrot records and potentially suitable habitat in the local and regional area. 31. Detail the extent to which clearing will remove critical habitat and be expected to impact this species. 32. Assess direct and indirect impacts on MNES fauna, and fauna habitats. Provide figures showing the likely extent of loss of habitat types and the extent of habitat areas expected to recover from both direct and indirect impacts and provide information on the potential outcome of clearing habitat on the fauna populations. 33. Update the Fortescue Conservation Significant Fauna Management Plan (100-PL-EN-0022) to incorporate the proposal. 34. Demonstrate application of the mitigation hierarchy to avoid and minimise impacts to terrestrial fauna (including post-closure). 35. Describe the impacts for the Proposal and analyse these impacts to identify and detail any that are significant. 36. Create an offsets position following application of the 'mitigation hierarchy'. 37. Demonstrate and document in the ERD how the EPA's objective for this factor can be met. 38. Discuss management measures, outcomes/objectives sought to ensure residual impacts (direct and indirect) are not greater than predicted. 39. Predict the inherent and residual impacts before and after applying the mitigation hierarchy and identify whether the residual impacts are significant by applying the Significant Residual Impact Model in the WA Environmental Offsets Guidelines.

	40. Quantify any significant residual impacts by completing the Offset Template, spatially defining the habitat area for each significant fauna species that will be disturbed as a result of this proposal and propose an appropriate offsets package that demonstrates application of the WA Environmental Offsets Policy and Guideline. Demonstrate how the project has considered the WA guidance for offsets.
Relevant policy and guidance	***EPA Policy and Guidance*** • Advice of the Environmental Protection Authority to the Minister for Environment under Section 16 of the Environmental Protection Act 1986, Cumulative environmental impacts of development in the Pilbara region (EPA 2014) • Instructions on how to prepare an Environmental Review Document (EPA 2016) • Statement of Environmental Principals, Factors and Objectives (EPA 2016) • Environmental Factor Guideline: Terrestrial Fauna (EPA 2016) • Technical Guidance – Terrestrial Fauna Surveys (EPA 2016) • Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna (EPA 2016) • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA 2016) • WA Environmental Offsets Policy (The Government of Western Australia 2011) • WA Environmental Offsets Guidelines (The Government of Western Australia 2014). ***Other policy and guidance*** • Approved Conservation Advice for *Liasis olivaceus barroni* (Olive Python – Pilbara subspecies) (Commonwealth of Australia 2008) • Conservation Advice *Macroderma gigas* (ghost bat) (Commonwealth of Australia 2016) • Conservation Advice *Rhinonicteris aurantia* (Pilbara form) (Pilbara Leaf-nosed Bat) (Commonwealth of Australia 2016) • Conservation Advice *Pezoporus occidentalis* night parrot (Commonwealth of Australia 2016) • EPBC ACT— Environment assessment process (Commonwealth of Australia 2010) • EPBC Act Referral guideline for the endangered northern quoll; EPBC Act Policy Statement (Department of the Environment 2016) • Interim guideline for preliminary surveys of night parrot (Pezoporus occidentalis) in Western Australia (Department of Parks and Wildlife 2017) • Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth of Australia 2013)

	• National Recovery Plan for the Northern Quoll (*Dasyurus hallucatus)* (Department of Natural Resources, Environment, The Arts and Sport 2010) • Survey guidelines for Australia's threatened mammals. EPBC Act survey guidelines 6.5 (Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) 2011), • Survey Guidelines for Australia's Threatened Bats. EPBC Act survey guidelines 6.1 (Department of the Environment, Water, Heritage and the Arts (DEWHA) 2010) • Survey guidelines for Australia's threatened reptiles. EPBC Act survey guidelines 6.6 ((DSEWPaC 2011). • Threat abatement plan for predation by the European red fox (DEWHA 2008) • Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads (DSEWPaC 2011) • Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses (DSEWPaC 2012) • Threat abatement plan for predation by feral cats (Commonwealth of Australia 2015) • Threat abatement plan for competition and land degradation by rabbits (Department of the Environment and Energy 2016) • WA Environmental Offsets Policy (The Government of Western Australia 2011) • WA Environmental Offsets Guidelines (The Government of Western Australia 2014).
Hydrological Processes and Inland Environment Water Quality	
EPA objective	To maintain the hydrological regimes of groundwater and surface water so that environmental values are protected. To maintain the quality of groundwater and surface water so that environmental values are protected.
Relevant activities	• Groundwater abstraction for rail construction and maintenance activities • Placement of infrastructure • Hydrocarbon or chemical spills during rail construction and operation.
Potential impacts and risks	• Groundwater abstraction for water supply resulting in localised groundwater drawdown • Placement of infrastructure resulting in modifications to existing catchments and associated impacts to flow paths of surface water streamflows, such as intermittent pools. • Impacts to surface or groundwater quality associated with hydrocarbon or chemical spills.

	• Changes to the hydrological regimes of the Ashburton River catchment and the Duck Creek sub-catchment. • Changes to the hydrological regimes of the Lower Fortescue River Catchment and the Weelumurra Creek sub-catchment, recognising the importance of the Millstream water source. • Groundwater abstraction drawdown resulting in impacts to groundwater dependent vegetation. • Impacts to sheet flow and surface water dependent vegetation. • Interruptions to flow paths of surface water, stream flows and permanent/semi-permanent pools. • Risk of mineral spills obstructing natural flows during operations, in emergency/disaster events (e.g. train derailments).
Required work	41. Characterise the baseline hydrological and hydrogeological regimes and water quality, both in a local and regional context, including, but not limited to: a) water levels b) stream flows c) flood patterns d) water quality (including potential for acid drainage/acid sulphate soils) 42. Provide a conceptual plan (map) detailing the location of waterway crossings, bridges and landforms and the potential impacts these landforms may have on surface water flows – including any temporary and permanent surface water diversions. 43. Analyse, discuss and assess surface water and groundwater impacts. The analysis should include, but not be limited to: a) changes in groundwater levels and changes to surface water flows associated with the proposal; b) the nature, extent, and duration of impacts; c) cumulative impacts with other projects and referred proposals, for which relevant information is publicly available; and d) impacts on the environmental values of significant receptors. e) Impacts on Public Drinking Water Source areas. 44. Provide a preliminary/conceptual site water balance, including a description of the proposed water management strategy for the Proposal. 45. Characterise any (water) sensitive receptors within the proposed disturbance footprint that may be directly or indirectly impacted as a result of the proposal in accordance with EPA Environmental Factor Guideline: Inland Waters Environmental Water Quality (EPA 2016).

	46. Demonstrate application of the mitigation hierarchy to avoid and minimise impacts to Hydrological Processes and Inland Waters Environmental Quality (including post-closure). 47. Discuss the proposed outcomes/objectives, management strategies and monitoring framework for surface water. 48. Update the Fortescue *Surface Water Management Plan* (100-PL-EN-1015) and Groundwater Management Plan (100-PL-EN-1009) to incorporate the proposal and provide a site-specific Groundwater Management Plan. 49. Demonstrate and document in the ERD how the EPA's objective for this factor can be met.
Relevant policy and guidance	***EPA Policy and Guidance*** • Instructions on how to prepare an Environmental Review Document (EPA 2016) • Statement of Environmental Principals, Factors and Objectives (EPA 2016) • Environmental Factor Guideline: Hydrological Processes (EPA 2016) • EPA Environmental Factor Guideline: Inland Waters Environmental Water Quality (EPA 2016). • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA 2016) • Western Australian Water in Mining Guideline (DoW 2013) ***Other policy and guidance*** • Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ 2000) • *Guidelines for Preparing Mine Closure Plans (DMP and EPA 2015)* • Western Australian Water in Mining Guideline (DoW 2013)
Social Surroundings	
EPA objective	To protect social surroundings from significant harm.
Relevant activities	• Clearing of native vegetation • Abstraction of groundwater • Alteration of surface water flows.
Potential impacts and risks	• Disturbance of aboriginal heritage places and sites of cultural significance. • Prevention or change to access to an Aboriginal heritage places. • Changes to the attributes of the environment which may impact on Aboriginal heritage places.
Required work	50. Characterise the heritage and cultural values of proposed disturbance areas and any other areas that may be indirectly impacted to identify

	places of significance and their relevance within a wider regional context. 51. Conduct Aboriginal heritage surveys to identify Aboriginal heritage places. 52. Undertake consultation to identify concerns in regard to impacts from proposed rail operations on Aboriginal heritage places and Karijini National Park. 53. Provide a description of the known heritage values within the Rail Development Envelope and provide a figure(s) of the native title determination areas, heritage locations and proposed disturbance. 54. Assess the impacts of the Proposal on Aboriginal heritage places and/or cultural associations as a result of implementation of the Proposal, including those arising from changes to the environment 55. Demonstrate application of the mitigation hierarchy to avoid and minimise impacts to social surroundings. 56. Demonstrate and document in the ERD how the EPA's objective for this factor can be met. 57. Describe potential regulation for each aspect associated with social surroundings.
Relevant policy and guidance	***EPA Policy and Guidance*** • Instructions on how to prepare an Environmental Review Document (EPA 2016) • Environmental Factor Guideline: Social Surrounds (EPA 2016) • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA 2016). ***Other policy and guidance*** • Department of Aboriginal Affairs and Department of Premier and Cabinet, 2013, Due Diligence Guidelines, Version 3.0. Perth, Western Australia.

4. Other environmental factors or matters

It is also important that the proponent be aware that other factors or matters may be identified during the course of the environmental review that were not apparent at the time that this ESD was prepared. If this situation arises, the proponent must consult with the EPA to determine whether these factors and/or matters are to be addressed in the ERD, and if so, to what extent.

5. Stakeholder consultation

The proponent must consult with stakeholders who are affected by, or are interested in the proposal. This includes the decision-making authorities (see section 6), other relevant state and Commonwealth government agencies and local government authorities, the local community and environmental non-government organisations.

The proponent must document the following in the ERD:

- identified stakeholders
- the stakeholder consultation undertaken and the outcomes, including decision-making authorities' specific regulatory approvals and any adjustments to the proposal as a result of consultation
- any future plans for consultation.

6. Decision-making authorities

At this stage, the EPA has identified the authorities listed in Table 4 as decision-making authorities (DMAs) for the proposal. Additional DMAs may be identified during the course of the assessment.

Table 5 Decision-making authorities

Decision-making authority	Relevant legislation
1. Minister for State Development	*Railway and Port (The Pilbara Infrastructure) Agreement Act 2004*
2. Minister for Water	*Rights in Water and Irrigation Act 1914*
3. Minister for Environment	*Environmental Protection Act 1986* *Wildlife Conservation Act 1950*
4. Minister for Aboriginal Affairs	*Aboriginal Heritage Act 1972*
5. Minister for Lands	*Land Administration Act 1997*
6. Acting Chief Executive Officer, Shire of Ashburton	*Health Act 1911 & Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulation 1974.*

7. Chief Executive Officer, Department of Water and Environmental Regulation.	*Environmental Protection Act 1986; Rights in Water and Irrigation Act 1914.*

7. Regulation

A consolidated summary of potential regulation will be provided in a separate chapter with a view to optimising regulatory efficiency for environmental protection, along with a set of draft conditions for the consideration of stakeholders, DMAs, the public and the EPA.

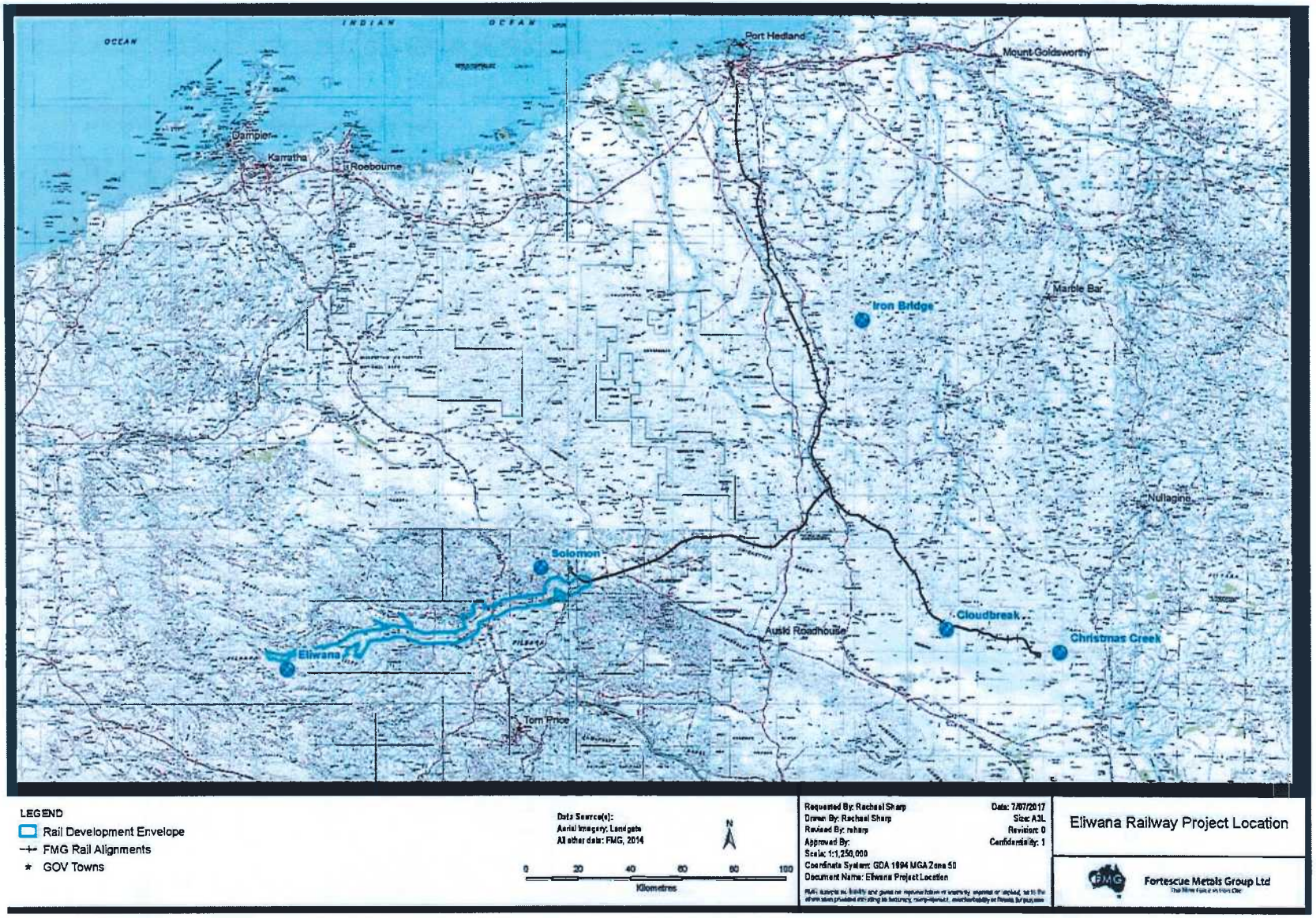

Figure 1 – Regional location

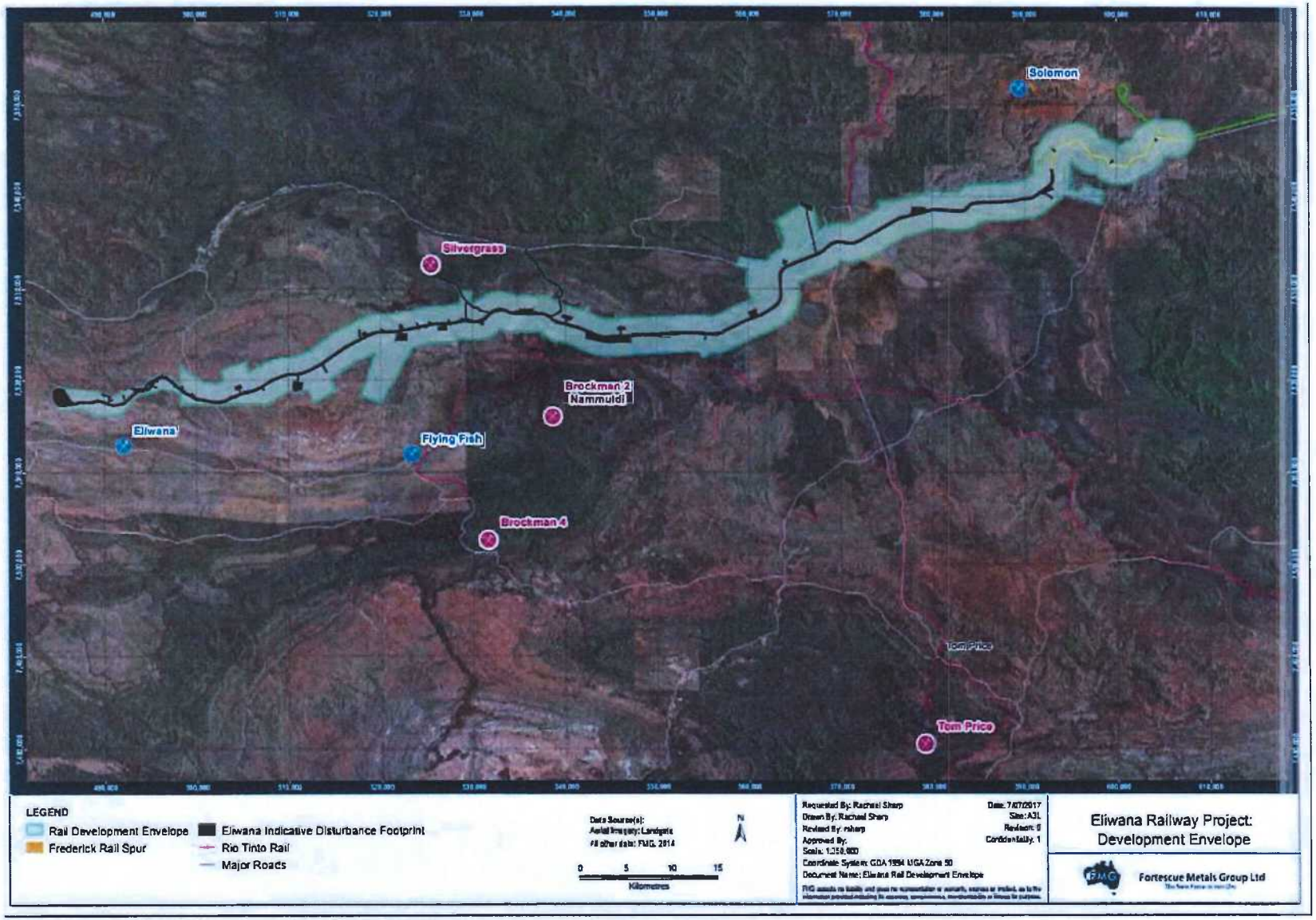

Figure 2 – Development Envelope