

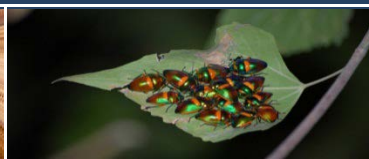


Appendix B

Cross Reference



Sherwin Iron (NT) Pty Ltd
Sherwin Creek Iron Ore Project
Environmental Impact Statement



2013



EIS guideline section	Detail requested in EIS	EIS Section / Appendix
General Advice on EIS (section2)	Executive summary to be written as a stand-alone document for those that may not wish to read the EIS as a whole	Executive Summary
	Glossary	Chapter 5
	Acronyms and abbreviations	Chapter 5
	Appendices including:	
	a table listing how these guidelines have been addressed in the EIS, cross referenced to chapters, page numbers and/or appendices	Appendix A
	List of persons and agencies consulted during the EIS	Chapter 5
	The names of, and work done by, the persons involved in preparing the EIS	Chapter 5
	The qualifications and experience of the people involved in work contributing to the EIS	Chapter 5
	A table listing commitments made by the proponent	Appendix C
	Technical information, studies and investigations to support main text	Chapter 5
	Introduction	Chapter 1
Description of the proposed development. Background Information	Provide background and context of the proposal including the title, full name and postal address of the proponent	Chapter 1
	explanation of the objectives, benefits and justification for the proposal	Chapter 1
	Proposal location in the region and its proximity to landmark features, sites of cultural/social significance, regional community centres, and sensitive environments such as major waterways, significant groundwater resources, significant natural features and conservation reserves	Chapter 1
	Climate and atmospheric characteristics relevant to the project e.g. air quality, seasonal temperatures, humidity, wind, evaporation, extreme events and rainfall	Chapter 1
	Terms of current agreement between the NT Government , Northern Land Council and the Proponent	Chapter 1

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Details of the proponents environmental record	Chapter 1
	Background to the development of the project including discussion of previous EIA and overview of any historic mining activities	Chapter 1
	Identification of areas under exploration which may be mined in future, or any other potential future activities being planned	Chapter 1
	How the project relates to any other proposals or actions (of which the proponent should reasonably be aware)	Chapter 1
Legislation	outline of the relevant legislation, codes, standards and guidelines applicable to the project	Chapter 1
	National and NT Standards, codes of practice and guidelines relevant to the project	Chapter 1
	overview of schedule for whole project - environmental approvals and construction and mining	Chapter 1
	current status	Chapter 1
Description of the proposal	EIS to identify all the processes and activities intended for the Sherwin Creek and Hodgson Downs Iron Ore Project	Chapter 2
	Outline of the geology of the area including:	Chapter 2.4
	A summary of the results of studies and surveys undertaken	Chapter 2.5
	Geological properties of the project site	Chapter 2.4
	Characterisation of the ore to be mined and waste material	Chapter 2.5 and 2.6
	Delineation of the project footprint using detailed maps and diagrams, including:	Chapter 2.7
	Location of the resources to be explored, developed or mined	Chapter 2.7
	Areas to be cleared or disturbed, both for life of mine and temporarily	Chapter 2.7
	Location of any works to be undertaken, structures to be built or elements of the proposed project	Chapter 2.7
	Any other infrastructure associated with the proposed project	Chapter 2.7
Project components - Mine	Provide specific details on the following aspects of construction:	Chapter 2

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Timetable for construction	Chapter 2.8
	vegetation clearing and disposal	Chapter 2.8
	methods of mine construction, volumes of materials required	Chapter 2.8
	plant and machinery requirements	Chapter 2.8
	Provide specific details on the following:	Chapter 2.8
	Mining types and methods - plus sequence	Chapter 2.8
	Handling/stockpiling of topsoil	Chapter 2.8
	Storage/disposal and use of mine waste material	Chapter 2.8
	Quantity of material to be mined annually, including any proposed ramping up of production or staging of development	Chapter 2.8
	Timetable for operation of the mine	Chapter 2.8
Crushing circuit	Provide relevant operational information with respect to the crushing plant, including but not limited to:	Chapter 2.8
	Indicative process flow sheet	Chapter 2.8
	Quantities and characteristics of the product and reject streams on an annual basis	Chapter 2.8
	Chemicals to be used	Chapter 2.8
	Methods for handling and disposal of fines rejects	Chapter 2.8
	Handling and storage of product	Chapter 2.8
	Blending of product	Chapter 2.8
Road transport	Provide a description of transport systems and methods to convey all site traffic to and from the site including:	Chapter 2.8
	Type, size and number of vehicles required during all phases of the proposal	Chapter 2.8
	The estimated volumes, tonnage, composition, origin and destination of traffic generated by the proposal	Chapter 2.8
	Estimated times of travel	Chapter 2.8
	Additional road infrastructure works required including site access and signage	Chapter 2.8
	Describe transport systems and methods to convey any product to proposed markets	Chapter 2.8

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Describe proposed haul roads, including length, width during construction, final width for operation, location, land requirements, tenure and acquisition requirements	Chapter 2.8
	Describe any construction methods and timeframes for any proposed private and public haul roads	Chapter 2.8
	Consultation undertaken with relevant regulatory agencies	N/A
	Necessary approvals required	N/A
	Details of haul road construction should be provided, including:	N/A
	The preferred corridor alignments	N/A
	Length, width, location, land requirements, tenure and acquisition requirements	N/A
	Describe consultation undertaken with landowners, leaseholders and with relevant regulatory agencies and necessary approvals required	N/A
	Vegetation clearing methods and disposal of plant matter following clearing	N/A
	Provision of access, power, telecommunications, water supply and other infrastructure, if required	N/A
	Location of campsites for construction crews	N/A
	Source and extraction of construction inputs and materials, including water	N/A
	Methods and timeframes for road construction, including river crossing techniques and identification of creeks and landforms that require specific construction methods (provide cross section diagram/s)	N/A
	Details of potential disruption to flows of waterways during construction and any diversion works required, including changes in creek morphology and hydrology of surface water systems due to haul road construction	N/A
	Plant and machinery required	N/A
	Ongoing provisions for road maintenance, including source and extraction of maintenance inputs and materials	N/A
	Identify proposed routes for transport of construction materials, personnel and product for the Project, including use of the existing road network	N/A

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Details of road construction / upgrade should be provided, including:	N/A
	Maximum width of road corridors required for construction	N/A
	Plant and machinery required	N/A
	Vegetation clearing methods and disposal of plant matter following clearing	N/A
	Location of campsites for construction crews, if required	N/A
	Sources of water	N/A
	Sources of construction inputs and materials	N/A
	Methods including creek crossing techniques where relevant (provide cross section diagram/s)	N/A
	Timeframes for road construction/upgrade	N/A
	Ongoing provisions for road maintenance, including source and extraction of maintenance inputs and materials	N/A
	Details of road use should be provided including:	Chapter 2.8
	Type, size and number of vehicles required during all phases of the proposal	Chapter 2.8
	The estimated volumes, tonnage, composition, origin and destination of traffic generated by the proposal	Chapter 2.8
	Estimated frequency of Project vehicle use on public roads	Chapter 2.8
	Hours of operation	Chapter 2.8
Rail facility	Describe the proposed rail loading facility, including:	N/A
	Description of key plant and equipment, processes, inputs/outputs, capacities and raw materials used	N/A
	Stockpiling requirements prior to loading	N/A
	Requirements for construction of passing lanes (rail infrastructure)	N/A
	Buildings required and provision of worker facilities including ablutions, sewerage and sewage treatment, drinking water sources and water treatment.	N/A
Facilities at Port of Darwin	Provide an overview of the facilities required at Port of Darwin, including:	N/A

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	New infrastructure to be established	N/A
	Access and upgrade requirements to existing infrastructure	N/A
	Buildings required and provision of worker facilities including ablutions, sewerage and sewage treatment, drinking water sources and water treatment	N/A
	Indicative process flow-sheets and materials handling requirements and balances anticipated rates of inputs, wastes, and recycle streams (where relevant)	N/A
	Determine stockpiling requirements prior to loading	N/A
Water	Provide information on the quantity, quality, source (dam, surface water, groundwater), storage and infrastructure requirements for water use, including a water balance, for both construction and operational aspects of the Project. Include:	Chapter 2.8
	Dust suppression	Chapter 2.8
	Drinking water	Chapter 2.8
	Ablutions and sewage treatment	Chapter 2.8
	Processing/ crushing plant	Chapter 2.8
	Any wetting of ore materials prior to hauling	Chapter 2.8
	Any other uses	Chapter 2.8
	Discuss any mine pit dewatering requirements including expected water quality, predicted volumes and discharge points	Chapter 2.8
	Provide information on the proportion of water that will be recycled and if treatment is required, provide details of waste water treatment systems and effluent disposal	Chapter 2.8
	Describe stormwater drainage systems proposed at the Project site and disposal or re-use arrangements	Chapter 2.8
	Identify any requirements for additional clean water in the Dry season and Wet season discharge options for excess contaminated water if applicable	Chapter 2.8
	Describe the proposed water storage dam including:	N/A
	Location, size and area to be inundated	N/A
	Proposed design of dam wall, including identification of relevant safety standards and a description of how these will	N/A

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	be achieved	
	Creek flow volumes and seasonality, provision for flooding	N/A
	Expected fill time, extraction volumes, allowance for environmental flows	N/A
	Provisions for fish passage	N/A
AMD/PAF	AMD/PAF	AMDMP
Energy	Determine Project energy requirements, including mining fleet fuels and electricity demand	Chapter 2.8
	Provide details of proposed power plant (type of equipment, fuel use)	Chapter 2.8
	Provide details of energy infrastructure requirements, both on and off the site, including fuel storage	Chapter 2.8
Waste management	Describe predicted waste streams, both industrial and domestic, including solid wastes at the mine site, camp site and other relevant locations	Chapter 2.8
	Provide an inventory of any hazardous wastes requiring management during the Project	Chapter 2.8
Workforce and accommodation	Describe the number of people to be employed, skills base required, and likely sources (local, regional, overseas) for the workforce during construction, and operational phases	Chapter 2.8
	Discuss arrangements for transport of workers to and from project areas, including air services required	Chapter 2.8
	For the proposed mine camp, provide brief information on aspects of the facility such as:	Chapter 2.8
	Proximity of the camp to work sites	Chapter 2.8
	Requirements for food preparation and storage	Chapter 2.8
	Whether the premises will be licensed and include alcohol storage facilities	Chapter 2.8
Ancillary infrastructure	Provide construction and operational information regarding ancillary infrastructure, including, but not limited to:	Chapter 2.8
	Telecommunications	Chapter 2.8

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Information on potentially hazardous materials to be used or produced and methods for storage, transport, handling, containment, disposal and emergency management of these materials (including fuel)	Chapter 2.8
	Airfields to be used or upgraded	N/A
	Detail any existing ancillary infrastructure that could be used by the Project	Chapter 2.8
Closure and rehabilitation	Discuss the various aspects of proposed progressive and final rehabilitation of disturbed areas, including:	Chapter 2 & Appendix J
	Proposed staging / timing	Chapter 2 & Appendix J
	Infrastructure requirements for fines to be transported from the crushing circuit back to the pits	Chapter 2
	Conceptual pit design, stockpiling, and design of the mining pits to take fines rejects during the mining operation (e.g. bunding requirements)	Chapter 2
	Soil profile reconstruction	Chapter 2 & Appendix J
	Final landform design and any voids or landscape depressions to be left at cessation of mining	Chapter 2
	The rehabilitation techniques to be used and the final topographic and drainage morphology	Chapter 2 & Appendix J
	The proposed revegetation program, with selection and collection of local native species e.g. native grasses and other vegetation	Chapter 2 & Appendix J
	Other preparations required for successful rehabilitation (seed harvesting, seedling generation, etc.)	Chapter 2 & Appendix J
	Water supply	Chapter 2
	Describe mine closure plans including:	Chapter 2 & Appendix J
	Removal of plant, equipment, structures, hardstand and concrete footings, buildings, water storages, and methods proposed for stabilisation of affected areas	Chapter 2
	Reinstatement of creeks where diversion of creeks is proposed during operations	Chapter 2 & Appendix J
	Future land tenure arrangements	Chapter 2.8

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
Alternatives (3.3)	The EIS should describe any feasible alternatives to carrying out the proposed activity. These alternatives, including the 'no Project' option, should be discussed in sufficient detail to make clear the reasons for preferring certain options and rejecting others.	Chapter 2.9
	The choice of the preferred option(s) should be explained, including a comparison of the adverse and beneficial effects (direct and indirect) used as the basis for selection, and compliance with the principles and objectives of ecologically sustainable development.	Chapter 2.9
	Alternatives should include:	Chapter 2.9
	Not proceeding with the proposal	Chapter 2.9
	Options for ore haulage and export	Chapter 2.9
	Site selection for mine components	Chapter 2.9
	Mining methods and management of wastes	Chapter 2.9
	Rehabilitation methods	Chapter 2.9
	Alternative sources of water	Chapter 2.9
	Alternatives to discharge of waste to waterways	Chapter 2.9
	Energy sources for power generation	Chapter 2.9
	Alternative processes, methods and lifecycle	Chapter 2.9
	Consideration of alternative environmental management measures for key risks/impacts	Chapter 2.9
	Discussion should include:	Chapter 2.9
	Sufficient detail to make clear why a particular alternative is preferred to another	Chapter 2.9
	Adverse and beneficial effects of alternatives at national, territory, regional and local levels	Chapter 2.9
	The comparison of short (whilst operational), medium (post closure) and long term (> 1000 years) advantages and disadvantages of the options; and	Chapter 2.9
	A comparative description of the impacts of each alternative on the NES matters protected by controlling provisions of Part 3 of the EPBC Act for the action	Chapter 2.9

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
Risk assessment (4) Risk assessment approach (4.1)	The EIS should be undertaken with specific emphasis on the identification, analysis and treatment of risks through a whole-of-project risk assessment. Through this process, the EIS will:	Chapter 3.1
	Acknowledge and discuss the full range of risks presented by the project, including those of special concern to the public	Chapter 3.1
	Quantify and rank risks so that the reasons for proposed management responses are clear	Chapter 3.1
	Acknowledge levels of uncertainty about estimates of risk and the effectiveness of risk controls	Chapter 3.1
	Explicitly identify those members of the community expected to accept residual risks and their consequences, providing better understanding of equity issues	Chapter 3.1
	Statements about levels of uncertainty should accompany all aspects of the risk assessment. Steps taken to reduce uncertainty or precautions taken to compensate for uncertainty should be identified and their effect/s demonstrated.	Chapter 3.1
	Sufficient quantitative analysis should be provided to indicate whether risks are likely to be acceptable compared with similar ventures in Australia and Internationally. Assumptions used in the analyses should be explained. Relevant standards, codes and best practice methodologies that minimise risks should be discussed.	Chapter 3.1
	The risk assessment should be based on international best practice. Processes for risk management are formalised in Standards Australia / Standards New Zealand (e.g. AS/NZS ISO)	Chapter 3.1
	A number of key Project risks have been identified through a preliminary assessment of the Project. Each of the identified risks should be addressed by the Proponent in the risk assessment and management process.	Chapter 3.1
	it is expected that further risks will be identified through the comprehensive risk assessment process required for the EIS. These should also be addressed and appropriate management initiatives developed.	Chapter 3.1
Risks to human health and safety (4.2)	Risks to human health and safety (4.2)	Chapter 3.2

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
Management objectives	Environmental objectives, or overarching goals identifying environmental values to be protected, have been identified for each key risk.	Chapter 3.2
Key risks	The EIS should include an assessment of the risks to human health and safety associated with the construction, operation, maintenance and decommissioning of the various components of the Project, and the storage and transport of materials to and from the work sites.	Chapter 3.2
Information required	Aspects to be discussed include:	Chapter 3.2
	Safety risks for the workforce and the general public for the duration of the Project	Chapter 3.2
	Safety risks associated with the Project including:	Chapter 3.2
	Fire	Chapter 3.2
	Infections disease (including from biting insects)	Chapter 3.2
	Extreme weather and climatic conditions	Chapter 3.2
	Hazardous materials exposure	Chapter 3.2
	Safety risks to road users associated with increased traffic and use of the existing road networks	Chapter 3.2
Mitigation	Detailed human health, safety, emergency plans and response procedures need to be developed and provided in the final Environmental Management Plan as a contingency in the event of an emergency or accident. Responsibilities and liabilities in such an event should be described.	Chapter 3.2
Risks to hydrogeology and water quality (4.3)	Risks to hydrogeology and water quality (4.3)	Chapter 3.3
Management objectives	Environmental objectives, or overarching goals identifying environmental values to be protected, have been identified for each key risk.	Chapter 3.3
Key risks	The EIS should include a detailed assessment of the risks to demonstrate that:	Chapter 3.3
	The Proponent is fully aware of the risks to existing surface and groundwater resources and quality associated with all aspects of the Project	Chapter 3.3

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	The prevention and mitigation of risks to surface and groundwater quality and the groundwater resource are adequately addressed	Chapter 3.3
Information required	Provide a detailed description of site and regional surface water catchments and waterways including size and seasonal flow rates of drainage lines and creeks, in the vicinity of the proposed Project area and along haul roads	Chapter 3.3
	Provide detailed soil and landscape information pertaining to erosion and sedimentation risks across the Project areas, including mining areas, proposed haul road alignments and rail siding location	Appendix E (ESCP) and Appendix Q (Soil Survey Report)
	Discuss the sensitivity and significance of site and regional surface water resources from an ecological, public/social and economic perspective, including a description of water quality and flows, beneficial uses and any existing surface water users in the Project area	Chapter 3.3
	Provide a description of site and regional groundwater resources, quality and significance in the vicinity of the deposits to be mined and their connectivity with surface waters	Chapter 3.3
	Describe site and regional hydrogeology to enable the prediction of potential impacts of the proposal on vegetation adjacent to mining areas, including drawdown cones and pollution pathways	Chapter 3.3
	Indicate the location of groundwater bores for the project with respect to any groundwater dependent natural features or users	Chapter 3.3
Assessment of risks	Provide an estimate of the risk to surface and groundwater resources in the vicinity of the site and regionally as a result of Project activities. In particular, discuss:	Chapter 3.3
	Potential impacts to adjacent areas and vegetation from groundwater drawdown as a result of pit dewatering and extraction	Chapter 3.3
	Impacts on environmental flows and fish passage within surface water systems as a consequence of the dam and any diversions to waterways	Chapter 3.3
	Potential impacts to groundwater and surface water systems from spills, leachate from potential acid forming waste material and sediment loads in stormwater runoff	Chapter 3.3

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Any other potential impacts from the Project on surface and groundwater quality and hydrological features described in Section 3.2.1	Chapter 3.3
Mitigation	Detailed preventative, management and treatment strategies used to minimise the impacts of the project on hydrological features. In particular, provide details on the following:	Chapter 3.3
	measures to safeguard surface and groundwater resources and their dependant ecological communities including options for minimising water use, management and treatment of clean and contaminated water including site stormwater, erosion and sediment control measures, and maintaining environmental flows	Chapter 3.3
	measures to minimise disturbance to, and erosion of, surface water bodies, particularly where haul roads cross wetlands and water courses; provide details of typical waterway crossings that would be constructed if required	Chapter 3.3
	strategies for ongoing geocharacterisation of waste rock and management of any potential acid forming material to prevent/minimise and manage acid and metalliferous mine drainage	Chapter 3.3
	emergency response to fuel spills, solid waste spills, product spills and other related incidents	Chapter 3.3
	Describe proposed domestic wastewater (sewage) treatment processes	Chapter 3.3
Monitoring	Provide details on proposed surface water and groundwater monitoring programmes	Chapter 3.3
Risks to biodiversity (4.4)	Risks to biodiversity (4.4)	Chapter 3.4
Management objectives	Environmental objectives, or overarching goals identifying environmental values to be protected, have been identified for each key risk.	Chapter 3.4
Key risks	The EIS should include an assessment of the risks to biodiversity to demonstrate that:	Chapter 3.4
	The Proponent is fully aware of the risks to biodiversity associated with all aspects of the Project	Chapter 3.4
	The prevention and mitigation of risks to biodiversity are	Chapter 3.4

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	adequately addressed	
	Risk assessment to biodiversity should focus on threats to the conservation significance of vegetation types, identified threatened species and areas of potential significance to listed migratory species.	Chapter 3.4
Information required	Vegetation communities within and adjacent to the Project area including:	Appendix H2
	A broad overview of the dominant vegetation communities and their conservation status (rare, endangered, vulnerable, threatened species according to specified listing)	Appendix H2
	Introduced and weed species, including those declared under the NT Weed Management Act	Appendix I
	Sensitive ecosystems, i.e. ecosystems that provide important ecological function e.g.	Appendix I & Chapter 3.4
	riparian vegetation, protected area buffer zones, important habitat corridors, monsoon forests, wetlands, areas of conservation significance or geological features which may support unique ecosystems	Appendix I & Chapter 3.4
	Identify groundwater dependant ecosystems in the vicinity of the Project area	Chapter 3.4
	Identify and discuss species of traditional Aboriginal cultural significance (particularly aquatic and terrestrial fauna species), based upon consultation with traditional owners and surveys of the Project area	Chapter 3.4
	The discussion on listed species should include species listed under both the Territory Parks and Wildlife Conservation Act (TPWC Act) and EPBC Act. Listed threatened fauna species to be considered in the EIS should include, but not be limited to:	Appendix H1 & Chapter 3.4
	Northern Brush-tailed Phascogale (<i>Phascogale pirata</i>)	Appendix H1
	Brush-tailed Rabbit-rat (<i>Conilurus penicillatus</i>)	Appendix H1
	Northern Spotted Quoll (<i>Dasyurus hallucatus</i>)	Appendix H1
	Greater Bilby (<i>Macrotis lagotis</i>)	Appendix H1
	Bare-rumped Sheath-tailed Bat (<i>Saccolaimus saccolaimus</i>)	Appendix H1
	Australasian Bittern (<i>Botaurus poiciloptilus</i>)	Appendix H1

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Red Goshawk (<i>Erythrotriorchis radiatus</i>)	Appendix H1
	Gouldian Finch (<i>Erythrura gouldiae</i>)	Appendix H1 & Chapter 3.4
	Crested Shrike-tit (northern) (<i>Falcunculus frontatus whitei</i>)	Appendix H1
	Australian Painted Snipe (<i>Rostratula australis</i>)	Appendix H1
	Gulf Snapping Turtle (<i>Elseya lavarackorum</i>)	Appendix H1
	Freshwater Sawfish (<i>Pristis microdon</i>)	Appendix H3
	Additionally, listed migratory species potentially occurring in the area should be considered in the EIS, specifically including:	Appendix H1
	White-bellied Sea-Eagle (<i>Haliaeetus leucogaster</i>)	Appendix H1
	Fork-tailed Swift (<i>Apus pacificus</i>)	Appendix H1
	Great Egret (<i>Ardea alba</i>)	Appendix H1
	Cattle Egret (<i>Adrea ibis</i>)	Appendix H1
	Derby White-browed Robin (<i>Poecilodryas superciliosa cerviniventris</i>)	Appendix H1
	Barn Swallow (<i>Hirundo rustica</i>)	Appendix H1
	Rainbow Bee-eater (<i>Merops ornatus</i>)	Appendix H1
	Rufous Fantail (<i>Rhipidura rufifrons</i>)	Appendix H1
	Oriental Plover (<i>Charadrius veredus</i>);	Appendix H1
	Oriental Pratincole (<i>Glareola maldivarum</i>)	Appendix H1
	The listed Threatened Ecological Community known as the Arnhem Plateau Sandstone Shrubland Complex, which could occur in the Project area, and all listed flora species potentially occurring in the area should be considered in the EIS.	Appendix H2
	For each of the species identified, the following information must be provided as a minimum:	Appendix H2
	Information on the abundance, distribution, ecology, and habitat preferences of listed species and communities	Appendix H2
	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	Chapter 3.4

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	If a population of a listed species is present on the site, its size and the importance of that population from a local and regional perspective	Appendices H1 & H2
	Details of the scope, timing (survey season/s) and methodology for studies or surveys used to provide information on the listed species/community/habitat at the site (and in areas that may be impacted by the Project). Where surveys are proposed for the above species and here survey methods are provided by the Australian Government, these should be used or an explanation as to why alternate methodology has been used. The survey methods are available at www.environment.gov.au/epbc/guidelines-policies.html	Appendices H1 & H2
	Other details required for site-specific species should be included here	Chapter 3.4
	Discussion of known existing threats to the species, whether or not attributable to the proposed action, with reference to relevant impacts from the proposed action (including taking into consideration any relevant guidelines, policies, plans and statutory provisions)	Appendices H1 & H2
	Baseline information and maps identifying at both the site and regional levels:	Appendices H1 & H2
	Known occurrences of the species	Appendices H1 & H2
	Potential habitat for species or communities (differentiating where relevant on the basis of use e.g. breeding habitat, migration pathways, feeding habitat)	Appendices H1 & H2
Assessment of risks	Identify and discuss the risks of impacts associated with the proposed vegetation clearing with particular focus on significant habitats and habitats supporting species of conservation significance	Chapter 3.4
	Discuss the risks of impacts to species, communities and habitats of local, regional or national significance from indirect Project effects, including impacts to downstream environments and habitat connectivity	Chapter 3.4
	Assess the potential for the Project to introduce or increase the spread of weed species, including weed species declared under the NT Weed Management Act	Appendix I
	Discuss potential impacts on aquatic habitat	Chapter 3.4

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	For all listed threatened or migratory species for which suitable habitat is present but to which impacts from the proposed action are considered unlikely, include detailed information to demonstrate that a relevant impact on the species is unlikely to occur.	Appendices H1 & H2
Mitigation	Discuss ways in which impacts on sensitive ecosystems, and listed species, communities and habitats will be minimised (e.g. timing of works, minimising disturbance area) and managed, including an assessment of the expected effectiveness of the mitigation measures, any statutory or policy basis for the mitigation measures and the cost of the mitigation measures	Chapter 3.4
	Detailed biodiversity management plans, with clear and concise methods, need to be developed in the final Environmental Management Plan. Mitigation should be in accordance with best practice advice from relevant NT and Australian Government Advisory agencies and focus on:	Chapter 3.4
	Potentially significant impacts to biodiversity as a whole	Chapter 3.4
	Potentially significantly impacted vegetation types, threatened species, migratory species and the biology of these entities	Appendices H1 & H2
Monitoring	Provide a monitoring plan which outlines clear and concise methods, based on best practice advice, to assess the effectiveness of each mitigation method	Chapter 3.4
Rehabilitation and mine closure (4.5)	Rehabilitation and mine closure (4.5)	Chapter 3.5
Key risks	The mine may be forced to close earlier than expected leaving the site exposed if closure planning is inadequate at any stage of the development	Chapter 3.5 / Appendix J
	Rehabilitation of the mine site may not be successful leading to erosion, significant contaminant seepage and degradation of ecosystems important for listed threatened and migratory species	Chapter 3.5
	Ongoing management of the site could be required well after mining is completed	Chapter 3.5
Information required	Investigate the physical, geo-mechanical and chemical properties of the ore body with respect to rehabilitation characteristics such as slope stability, presence of potential acid forming material and vegetation establishment	Chapter 2.2

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Provide an assessment of soil and landscape properties at appropriate scales to inform any risks and constraints to rehabilitation success of landform and cover design	Chapter 3.5
	Determine availability and volumes of key materials required for rehabilitation	Chapter 3.5
	Provide relevant scheduling information with respect to material stockpiling and deployment	Chapter 2.4.1
	Describe proposed post-mining land uses which have been identified and agreed upon through consultation with stakeholders	Appendix J
Assessment of risks	Provide an assessment of the risks to the environment associated with closure of the mine and ancillary infrastructure prior to scheduled closure	Chapter 3.5
	Identify and discuss environmental risks associated with potentially acid forming materials	Appendix G
	Identify any other risks that may interfere with successful closure and rehabilitation of the Project	Chapter 3.5
Mitigation	Describe contingencies to make landforms secure and non-polluting in the event of unexpected or temporary closure	Chapter 3.5
	Demonstrate potential success of proposed rehabilitation plans through either a pilot scale demonstration or by reference to other Project sites which have similar geographical and geological characteristics and support similar vegetation types	Chapter 3.5
	Include measures for protection from fauna, including feral animals	Chapter 3.5 / Appendix I
	Discuss fire management	Chapter 3.5
Monitoring	Develop a protocol for measuring site rehabilitation success through appropriate ecological indices	Chapter 3.5 / Appendix J
	Identify contingency measures in the event that monitoring demonstrates that management measures have not been effective	Chapter 3.5

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Provide a conceptual Mine Closure Plan (MCP) referring to the information requirements in the West Australian Environment Protection Authority and Department of Mines and Petroleum mine closure guidelines http://edit.epa.wa.gov.au/EPADocLib/Guidelines-for-preparing-mineclosure-plans-210611.pdf . The MCP must provide an understanding of the issues that require management at closure and that all relevant issues have been identified and appropriately managed.	Appendix J
Historic and cultural heritage impacts (4.6)	Historic and cultural heritage impacts (4.6)	Chapter 3.6
Key risks	Operations associated with the life of the Project and increased human activities in the Project area have the potential to disturb or damage areas of historic and/or cultural heritage.	Chapter 3.6
	The EIS should include a detailed assessment of the risks to demonstrate that the Proponent is fully aware of the risks and mitigation measures to existing areas of historic and cultural heritage value	Chapter 3.6
Information required	Baseline information should be provided regarding cultural heritage sites in the region, in the form of an archaeological / heritage survey report which includes:	Chapter 3.6 / Appendix O1
	A description of Indigenous and non-Indigenous sites, places or objects of historic or contemporary cultural heritage significance, including:	Chapter 3.6
	Areas nominated for listing or listed on Commonwealth and Northern Territory Heritage registers and Commonwealth and Northern Territory registers of Indigenous cultural heritage	Chapter 3.6 / Appendix O1
	Sacred sites - provision of evidence of an Aboriginal Areas Protection Authority (AAPA) Authority Certificate under the Northern Territory Aboriginal Sacred Sites Act	Chapter 3.6 / Appendix O1 sub appendix C
	Traditional and historic Aboriginal archaeological and heritage places and objects protected under relevant Territory and/or Commonwealth legislation	Chapter 3.6 / Appendix O1
	European historic sites	Chapter 3.6 / Appendix O1
	A description of areas with special values to Indigenous and non-Indigenous people (e.g., traditional land use)	Chapter 3.6 / Appendix O1

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
Assessment of risks	The identification of Indigenous cultural heritage impact is to take place in consultation with relevant Indigenous groups. Provide:	Chapter 3.6
	An assessment of the Project's (mine, transport and export operations) potential effects on sacred sites, heritage places, and any potential impacts on Indigenous culture generally, including impacts on Traditional Ecological Knowledge and Land Management Practices	Chapter 3.6
	Details of any requirements to apply to, or applications already made to, the NT Minister for Lands, Planning and the Environment to disturb or destroy a prescribed archaeological place and/or object under the Heritage Act	Chapter 3.6
Mitigation	The Proponent should describe the prevention and mitigation of risks to existing areas of historic and cultural heritage. A management plan should be developed to address matters including:	Chapter 3.6
	Procedures to avoid significant areas	Chapter 3.6 / Appendix O2
	Protection of key sites during construction, operation and decommissioning work	Chapter 3.6 / Appendix O2
	Ongoing protection measures	Chapter 3.6 / Appendix O2
	Procedures for the discovery of surface or sub-surface materials during the course of the Project	Chapter 3.6 / Appendix O2
Monitoring	The EIS should identify the monitoring program to be implemented for each potential cultural heritage impact and should provide outcome and assessment criteria that will give early warning that management and mitigation measures are failing	Chapter 3.6 / Appendix O2
Socio-economic risks (4.7)	Socio-economic risks (4.7)	Chapter 3.7
Key risks	Mining operations and increased human activities in the region have the potential to alter the regional economy and social demographic.	Chapter 3.7 / Appendix K1
	Assessment and monitoring is required to ensure local communities receive a net benefit from the Project	Chapter 3.7

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
Information required	The EIS should include a balanced summary of the project's economic value (positive and negative) to the regional, state and national economies, in terms of direct and indirect effects on employment, income and production. The following are suggestions that may assist with highlighting the economic value of the project and are not intended to result in the inappropriate disclosure of confidential information. It should be noted in the EIS if data are not available or unsuitable.	Chapter 3.7 / Appendix K2
	Aspects to be covered include:	
	The project's contribution to the NT and Australian economy	Chapter 3.7 / Appendix K2
	A summary of project feasibility	Chapter 3.7 / Appendix K2
	Estimated total project revenue for the duration of the project (to provide the economic scale of the project)	Chapter 3.7
	Total contribution to Gross State Product (GSP) and Gross Domestic Product (GDP) over the economic life of the project	Chapter 3.7
	Opportunities available to regional centres based on the activity generated by the project (construction, rehabilitation and operation)	Chapter 3.7
	Estimated overall tax	Chapter 3.7
	Estimated capital expenditure for the whole project	Chapter 3.7
	Expected annual operational expenditure	Chapter 3.7
	Estimated workforce and contractor numbers by occupational classification	Chapter 3.7 / Appendix K2
	Overall employment training proposed during commencement, construction and operations	Chapter 3.7 / Appendix K2
	Planned Indigenous employment, training and other project participation	Chapter 3.7 / Appendix K2
	Expected level of overseas recruitment (if appropriate)	N/A

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Availability of goods and services	Chapter 3.7 / Appendix K1 & K2
	Community and economic value of any residual infrastructure, such as roads, following the life of the project	Chapter 3.7 / Appendix K1
	Other contributions to local communities, including traditional owners	Chapter 3.7 / Appendix K1
	The EIS should include a balanced summary of the project's social value (positive and negative) on a regional, state and national scale.	Chapter 3.7 / Appendix K2
	A brief description of the current population, demography and social aspects of the region affected by the Project should be provided in the EIS. This should be done through community consultation, historic research and field survey.	Chapter 3.7 / Appendix K2
	Existing social aspects, and their components, to be discussed must include:	
	Key stakeholders	Chapter 3.7 / Appendix K3
	Regional community structures and vitality (e.g. demography, health, education and social well being, access to services, housing)	Chapter 3.7 / Appendix K2
	Social amenity	Chapter 3.7 / Appendix K2
	The number and capacity of existing human services to support the construction work force:	Chapter 3.7 / Appendix K2
	Skills audit of affected communities	Chapter 3.7 / Appendix K2
	Workforce characteristics	Chapter 3.7 / Appendix K2
	Accommodation type and quantity	Chapter 3.7 / Appendix K2
Assessment of risks	An Economic and Social Impact Assessment (ESIA) should be conducted. The ESIA should include consideration of the following:	Chapter 3.7 / Appendix K2

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Estimates of the quantity and value of production/exports relating to the mine, including expected reduction in revenue should the proposal not proceed	Chapter 3.7 / Appendix K2
	An estimate of the value to the local economy associated with expenditure during the construction phase and the annual expenditure on regional goods and services as it relates to the mine and associated infrastructure	Chapter 3.7 / Appendix K2
	Benefits to the local community, during and beyond the life of the mine, such as development of new skills and facilities, economic development and opportunities for local and regional business and employment opportunities	Chapter 3.7 / Appendix K2
	The risks of the mine, related infrastructure and associated workforce negatively impacting on identified social issues in the region	Chapter 3.7 / Appendix K2
	The risks to services and infrastructure in regional centres, including Katherine, from the mining activity and workforce. In particular, consideration should be given to potential impacts on demand for industrial support services, office space, accommodation, retail services such as food suppliers, entertainment, and health services	Chapter 3.7 / Appendix K2
	The risk of mining related activities to:	Chapter 3.7
	Stuart Hwy traffic flows, particularly at intersections with mine haul roads	Chapter 3.7 / Appendix K2
	The Ghan rail services particularly as a result of construction and operation of a new rail siding	N/A
	Road access to local communities in the region and the Limmen National park	Chapter 3.7 / Appendix K2
Mitigation	A Social Impact Management Plan (SIMP) should be prepared to address any identified risks associated with the ESIA. The SIMP should:	
	Describe how Sherwin Iron proposes to manage any identified economic, social, cultural or spiritual risks from the Project, or its associated workforce, in the region	Chapter 3.7 / Appendix K1
	Describe how potential local and regional business and employment opportunities related to the mine will be identified and managed	Chapter 3.7 / Appendix K1

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Provide a stakeholder communications strategy including identification of, and ongoing consultation and negotiations with, all relevant stakeholders, ensuring the full range of community viewpoints are sought	Chapter 3.7 / Appendix K1 & K3
Monitoring	The SIMP should:	
	Establish a mechanism for monitoring any identified potential socio-economic and cultural impacts	Chapter 3.7 / Appendix K1
	Provide outcome and assessment criteria that will give early warning that management and mitigation measures are failing.	Chapter 3.7 / Appendix K1
Transport	Describe how the project will, or has the potential to, impact on transport infrastructure during construction and operational phases.	Chapter 3.8
	Describe possible transport impacts as a result of the proposal including issues such as dust and road traffic noise.	Chapter 3.8
	Describe proposed safeguards, management and monitoring strategies that will be implemented to minimise potential transport impacts during construction and operation including, but not limited to:	Chapter 3.8
	Methods for complying with any relevant road vehicle axle limits	Chapter 3.8
	Methods for securing loads	Chapter 3.8
	Measures to reduce any road traffic noise impacts	Chapter 3.8
	Consultation with local communities affected by transport impacts	Chapter 3.8
	Traffic management	Chapter 3.8
	Management of driver fatigue	Chapter 3.8
Other issues (4.8)	Other issues (4.8)	Chapter 3.9
Cumulative impacts	An assessment of cumulative environmental impacts should be undertaken that considers the potential impact of a proposal in the context of existing developments and future developments to ensure that any potential environmental impacts are not considered in isolation. The extent of cumulative impacts to be considered depends upon the nature of the environmental issue. Cumulative Impact Assessment accounts for impacts on a regional scale, such as:	Chapter 3.9

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Landscape-scale change originates not only from single projects and management actions, but also from complex and dynamic interactions of multiple past, present and future management actions	Chapter 3.9
	Biophysical, social and economic change accumulates through additive or interactive (or synergistic) processes. The aggregate impact of multiple actions on the environment can be complex and may result in impacts that are more significant because of interactive processes	Chapter 3.9
	Any given action does not operate in isolation. The most significant changes are often not the result of the direct effects of an individual action, but from the combination of multiple minor effects over the accumulation of time.	Chapter 3.9
	The cumulative impacts of the project, in combination with the other proposed mining projects, on the biodiversity and ecological function should be assessed within the EIS. Specific issues that should be covered include impacts on:	Chapter 3.9
	Regional ecosystems within the Roper region	Chapter 3.9
	Perception of the region as remote or wilderness	Chapter 3.9
	Key habitats (e.g. riparian, wetland, threatened species habitat) which retain connections with adjacent vegetation and habitat	Chapter 3.9
	Hydrologically connected surface water and groundwater systems that support wetlands and base flows in rivers and creeks.	Chapter 3.9
Bushfires	The Proponent should be aware of sections of the Bushfires Act and Regulations that may apply to the Project and address risk and management of fires occurring both within the mine site (e.g. during site clearing operations) and outside the mine site.	Chapter 3.9
Biting insects	A 12 month baseline mosquito assessment should be conducted at both the proposed accommodation village site and the mine site, to determine the risk of transmission to workers of mosquito borne diseases such as Ross River virus, Barmah Forest virus and the potentially fatal Murray Valley encephalitis virus.	Chapter 3.9
Noise and vibration	Describe the expected noise levels and vibration associated with the Project construction and operation, including timing and duration, in comparison to background levels, sensitivity of receptors and nominated performance indicators and standards.	Chapter 3.9

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Describe the management of noise and vibration impacts.	Chapter 3.9
Air	Describe the sources (including land clearing) and projected quantities of greenhouse gases emitted by the Project.	Chapter 3.9
	Discuss dust suppression strategies and monitoring of dust impacts.	Chapter 3.9
Waste	Identify the Project's waste disposal facility and describe the associated leachate management systems	Chapter 3.9
	Discuss the opportunities for waste minimisation and recycling in the Project.	Chapter 3.9
Environmental Management (5.0)	Specific safeguards and controls proposed to be employed to minimise or remedy environmental impacts identified in previous sections are to be included in an Environmental Management Plan (EMP), which would become part of the Mining Management Plan.	Appendix D
	The EMP should be strategic, describing a framework for environmental management of the project. However, as much detail as is practicable should be provided to enable adequate assessment of the proposal during the public exhibition phase. Specific management practices and procedures should be included in the EMP, where possible.	Appendix D
	The EMP should include:	Appendix D
	The proposed management structure of the operation and its relationship to the environmental management of the site	Appendix D
	Management targets and objectives for relevant environmental factors	Appendix D
	The proposed measures to minimise adverse impacts and maximise opportunities, including environmental protection outcomes	Appendix D
	Performance indicators by which all anticipated and potential impacts can be measured	Appendix D
	Proposed monitoring programs to allow early detection of adverse impacts	Appendix D
	Contingencies for events such as hydrocarbon and other hazardous chemical spills or natural disasters	Appendix D

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	The EMP needs to address the Project phases (construction, operation, decommissioning) separately. It must state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing for each environmental issue	Appendix D
	The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program	Appendix D
	A summary table listing the undertakings and commitments made in the EIS, including clear timelines for key commitments and performance indicators, with cross-references to the text of the EIS	Appendix D
	Provision for the periodic review of the EMP	Appendix D
	Reference should be made to relevant legislation, guidelines and standards, and proposed arrangements for necessary approvals and permits should be noted.	Appendix D
	Proposed reporting procedures on the implementation of the plan, independent auditing or self-auditing and reporting of accidents and incidents should also be included.	Appendix D
	The agencies responsible for overseeing implementation of the EMP should be identified.	Appendix D
Environmental offsets (6.1)	The Australian Government Environmental Offsets Policy, October 2012, requires residual significant impacts (after avoidance and mitigation measures have been implemented) to be offset, with a focus on direct offsets. The Offsets assessment guide, which accompanies this policy, has been developed to give effect to the policy's requirements, utilising a balance sheet approach to quantify impacts and offsets. It applies where the impacted protected matter is a threatened species or ecological community. These documents are available at: http://www.environment.gov.au/epbc/publications/environmental-offsets-policy.html	Chapter 4
	Any identified impacts or detriments that cannot be avoided, reduced or mitigated at reasonable costs and whether these impacts could be considered as 'significant' under the EPBC Act	Chapter 4
	Risks of failure of management actions (such as rehabilitation, weed control, etc.) and uncertainties of management efficacy should be identified	Chapter 4

EIS guideline section	Detail requested in EIS	EIS Section / Appendix
	Proposed offsets for residual significant impacts to listed threatened species or ecological communities and listed migratory species and an explanation as to how these proposed offsets meet the requirements of the Environmental Offsets Policy and Offsets assessment guide, where relevant	Chapter 4