

Environmental Scoping Document



Sandy Ridge Project
Environmental Scoping Document

26 May 2016

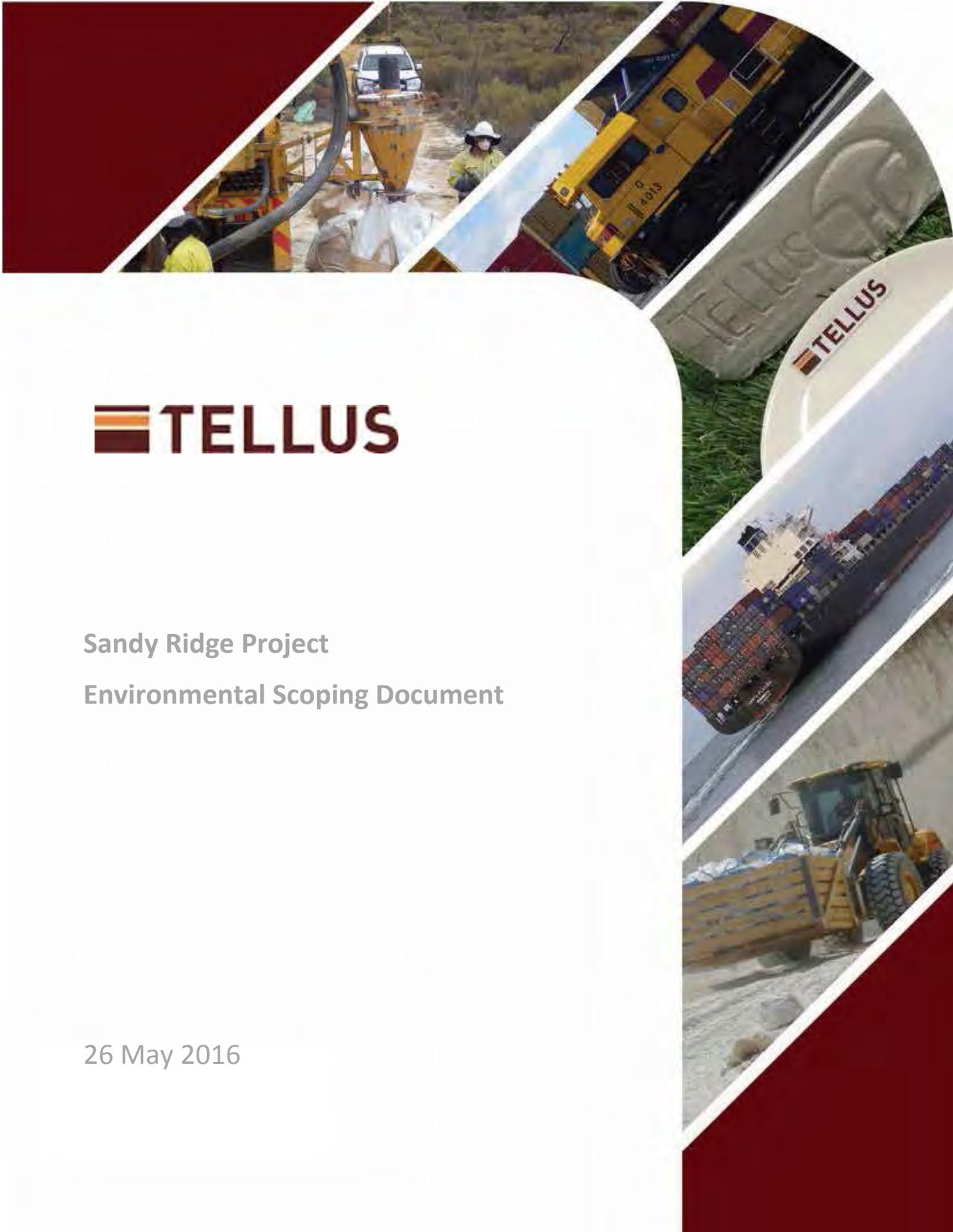




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ENVIRONMENTAL SCOPING DOCUMENT

PROPOSAL NAME: SANDY RIDGE PROJECT

ASSESSMENT NUMBER: 2057

LOCATION: APPROXIMATELY 75 KILOMETRES NORTH-EAST OF
KOOLYANOBING

LOCAL GOVERNMENT AREA: SHIRE OF COOLGARDIE

PROPONENT: TELLUS HOLDINGS LTD

PUBLIC REVIEW PERIOD: 10 WEEKS

EPBC REFERENCE NO.: 2015/7478

1 INTRODUCTION

The proposal is being assessed by the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986* (EP Act) at the level of Public Environmental Review (PER). This Environmental Scoping Document (ESD) sets out the requirements for the environmental review of the proposal. The purpose of an ESD is to:

- Provide proposal-specific guidelines to direct the proponent on the preliminary key environmental factors or issues that are to be addressed during the environmental review and preparation of the environmental review report.
- Identify the required work that needs to be carried out.
- Outline the timing of the environmental review.

The proponent must conduct the environmental review in accordance with this ESD and then report to the EPA in an environmental review report (PER document). As well as the proposal-specific requirements for the environmental review identified in this ESD, the PER document must also address the generic information requirements listed in section 10.2.4 of the EPA's *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012* (Administrative Procedures). When the EPA is satisfied that the PER document adequately addresses both of these requirements, the proponent will be required to release the document for a public review period of 10 weeks.

This ESD has been prepared by Aurora Environmental for Tellus Holdings Ltd (the proponent) in consultation with the EPA, decision-making authorities and interested agencies consistent with EPA *Environmental Assessment Guideline (EAG) 10 — Scoping a proposal*. This ESD is subject to a public review period of two weeks. The ESD will be available on the EPA website (www.epa.wa.gov.au) upon endorsement and must be appended to the PER document.

1.1 Assessment under bilateral agreement

The proposal has been referred and determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and is being assessed under the Bilateral Agreement between the Commonwealth of Australia and the State of Western Australia made under Section 45 of that Act. The relevant matters of national environmental significance (MNES) for this proposal are:

- The environment because the proposal is a nuclear action (s21 and 22A).

This ESD is inclusive of work required to be carried out and reported on in the PER document in relation to MNES. The PER will include a section identifying MNES and discussing how those matters have been addressed within the PER, including identifying any offsets that would be appropriate.

Schedule 4 of the *Environmental Protection and Biodiversity Conservation Regulations 2000* lists the matters to be addressed in a draft PER under the EPBC Act. The following requirements will be addressed in the PER:

General information

- The title of the action;
- The full name and postal address of the designated proponent;

- How the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action;
- The current status of the action; and
- The consequences of not proceeding with the action.

Environmental record of person proposing to take the action

- Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:
 - the person proposing to take the action; and
 - for an action for which a person has applied for a permit, the person making the application.

Information Sources

- For information given in a draft PER, the draft must state:
 - the source of the information;
 - how recent the information is;
 - how reliability of the information was tested and
 - what uncertainties (if any) are in the information.

2 THE PROPOSAL

2.1 Introduction

The subject of the ESD is the proponent's proposal to develop the Sandy Ridge Project (the Proposal) (Figure 1). The Proposal is to develop a kaolin open cut mine and use the mine voids for the secure storage and isolation of hazardous, intractable and low level radioactive waste using best practice storage and isolation safety case.

The Proposal is located approximately 75 kilometres (km) north-east of Koolyanobbing, Western Australia (Figure 1). Access is via a 100 km road to the Intractable Waste Disposal Facility (IWDF) Mount Walton East (Crown Reserve No. 44102) that extends northward from the Boorabbin Siding on Great Eastern Highway; a 4.5 km westwards section along an existing road; and a 5.3 km northwards section of new site access road into the development envelope (Figures 2 and 3).

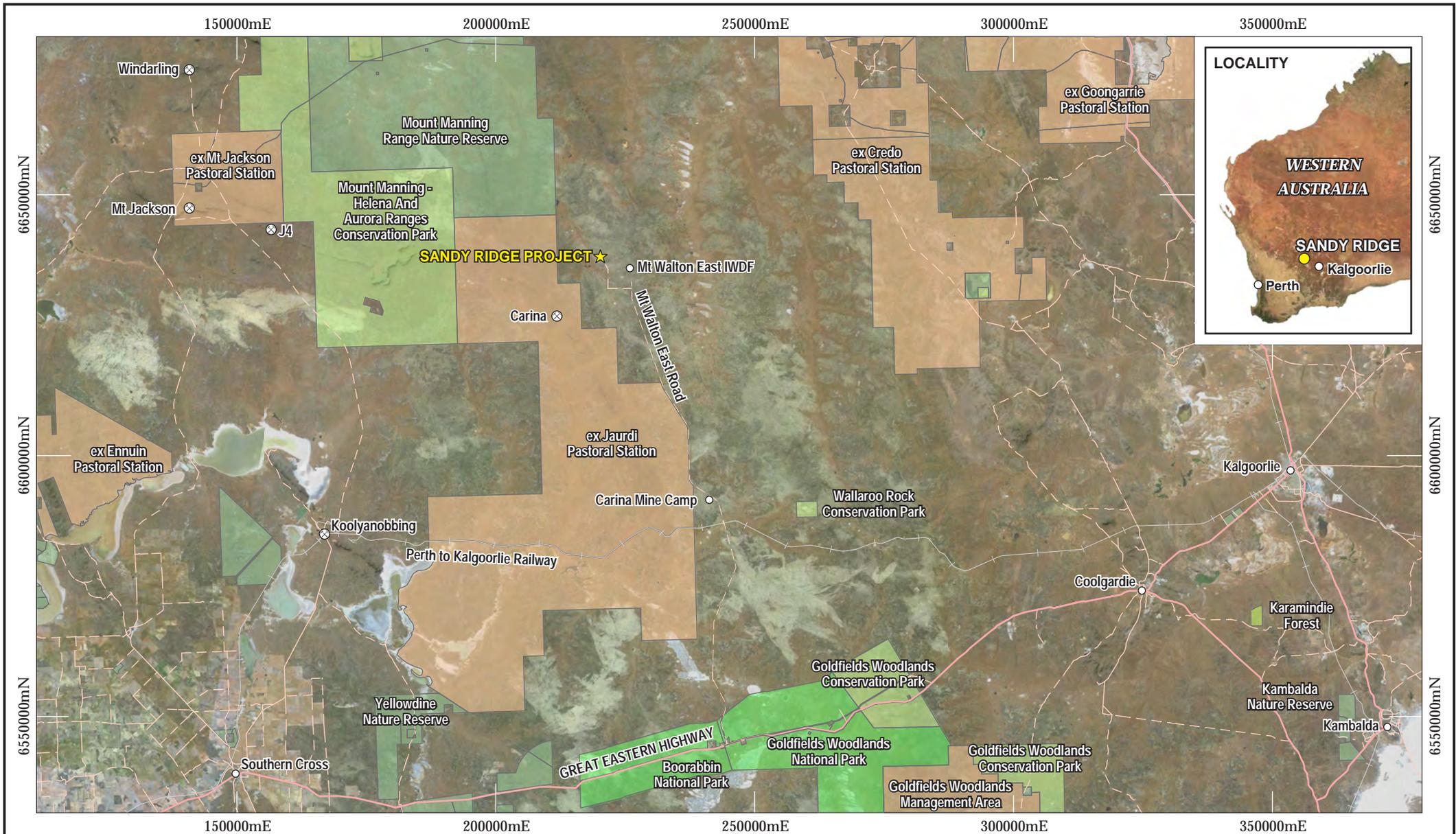
There are no sensitive receptors within 5 km of the location of the Proposal. The nearest operation is the Class V IWDF Mount Walton East located approximately 6 km to the east, which operates on a campaign basis and does not have permanent residents. The nearest mining camp is the Carina Iron Ore Mine Accommodation Camp located approximately 52 km to the south east of Sandy Ridge

The location of the Sandy Ridge Project has been specifically chosen to meet the requirements of International and National codes relating to the siting of a near surface geological repository. These site characteristics include:

- **Geologically stable** — the development envelope sits within the Archean Yilgarn Block and is geologically typical of areas overlying deeply weathered granite domes. It has very low seismicity (no earthquakes have been recorded at Sandy Ridge) and no volcanic or tectonic activity.
- **Natural geological barrier** — the clay bed is laterally extensive (80 km long and 40 km wide), has been stable for approximately 20 million years and is up to 36 m thick. This is capped by erosion resistant silcrete and laterite layers typically 4 to 6 metres thick in total.
- **Semi-arid desert Mediterranean climate** — averages just over 250 mm of rainfall per annum and evaporation is greater than 2,000 mm per annum. This means very little rainfall occurs across the site and generally water will evaporate before it infiltrates.
- **No surface water receptors** - there are no channels or creeks in the development envelope.
- **Very little (if any) surface water runoff** – Due to the low rainfall, high evaporation, permeable upper soil profile and gently sloping topography, significant rainfall events infiltrate quickly. There is a low likelihood of surface flows in the local catchments and any flows are short-lived and local in nature.
- **Lack of commercial mineral deposits** – there is no evidence to suggest that there is potential for economic mineral or hydrocarbon deposits beneath the kaolin deposit.
- **Topography** – the development envelope is flat to gently undulating and suitable for the construction of infrastructure and heavy vehicle movement.
- **Absence of Population** – located in an area with no population, the nearest population centre is a non-permanent camp approximately 52 km away.

- **Agricultural land use** – there is no potential for medium to high value agriculture.
- **Environmental values** – the environmental values of the development envelope are currently unknown and will be determined through investigation.
- **Heritage** –no special cultural or historical significance has been identified through a completed heritage study (undertaken in 2015) and consultation with stakeholders familiar with the area.
- **No flooding** – the development envelope is not subject to flooding, nor is it predicted to be in the future. The site is at very low risk of encountering cyclones.
- **Very low rates of erosion** – the development envelope is not subject to the erosive forces of high winds or rain due to the climate, soil types and topography and has been stable for thousands of years.

It can be concluded on the basis of the characteristics described above, that there is little credible risk to human health or the environment from suitably conditioned and packaged hazardous or intractable wastes that might be stored and isolated in appropriately designed disposal cell at Sandy Ridge.



- Legend:
- ⊗ Iron Ore Mine
 - Rail
 - Major Road
 - Minor Road

- DPaW Managed Lands:
- Conservation Park
 - Former Leasehold
 - National Park
 - Nature Reserve
 - State Forest

Client:

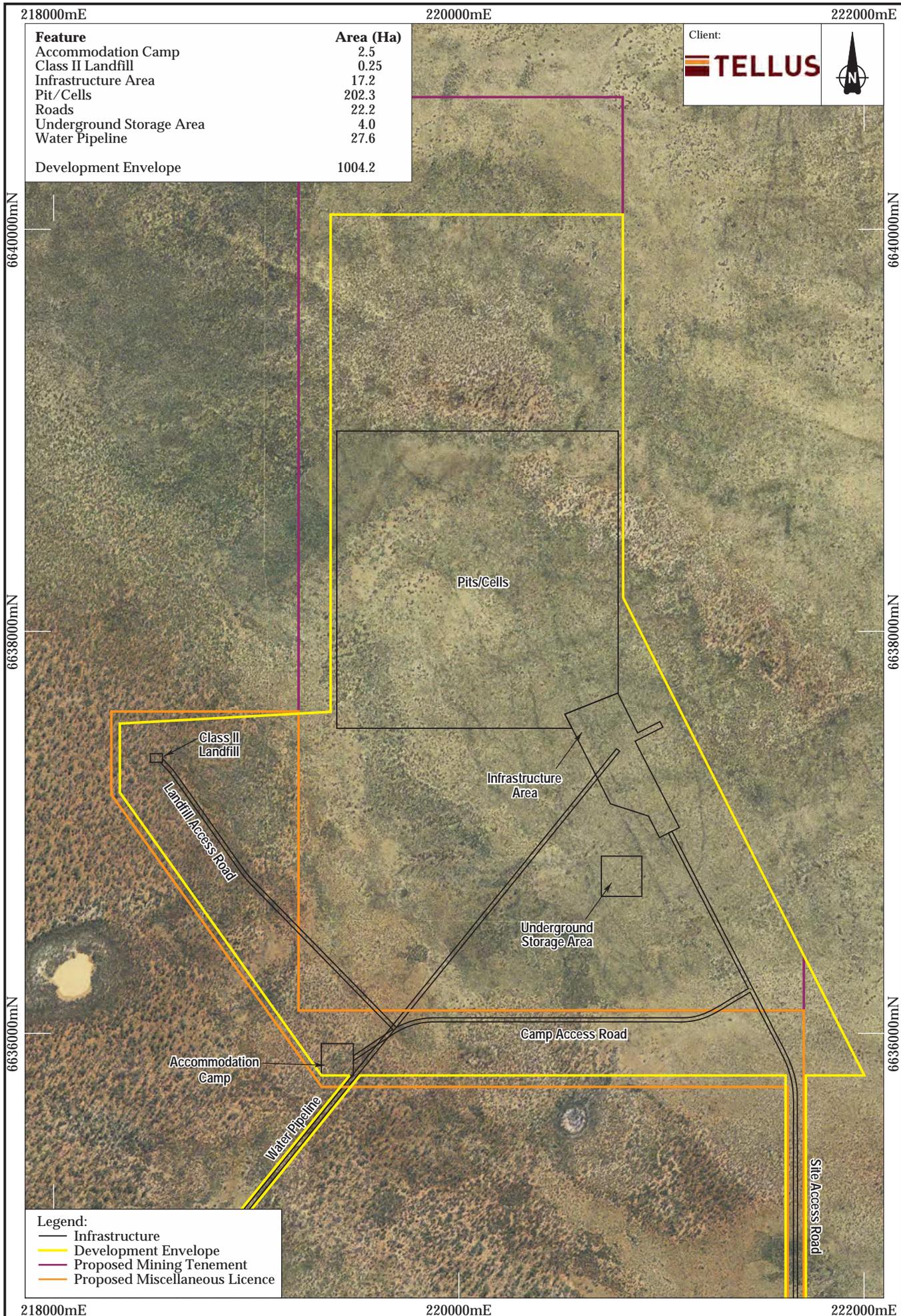


0 20km
 Scale 1:1,000,000
 MGA94 (Zone 51)
 CAD Ref: g2294_ESD_001.dgn
 Date: Dec 2015 Rev: B A4

Author: C. Dorrington AE Ref: THO2014-003
 Drawn: CAD Resources ~ www.cadresources.com.au
 Tel: (08) 9246 3242 ~ Fax: (08) 9246 3202

Sandy Ridge Project
Regional Location
 Environmental Scoping Document

Figure:
1



Feature	Area (Ha)
Accommodation Camp	2.5
Class II Landfill	0.25
Infrastructure Area	17.2
Pit/Cells	202.3
Roads	22.2
Underground Storage Area	4.0
Water Pipeline	27.6
Development Envelope	1004.2

Client:

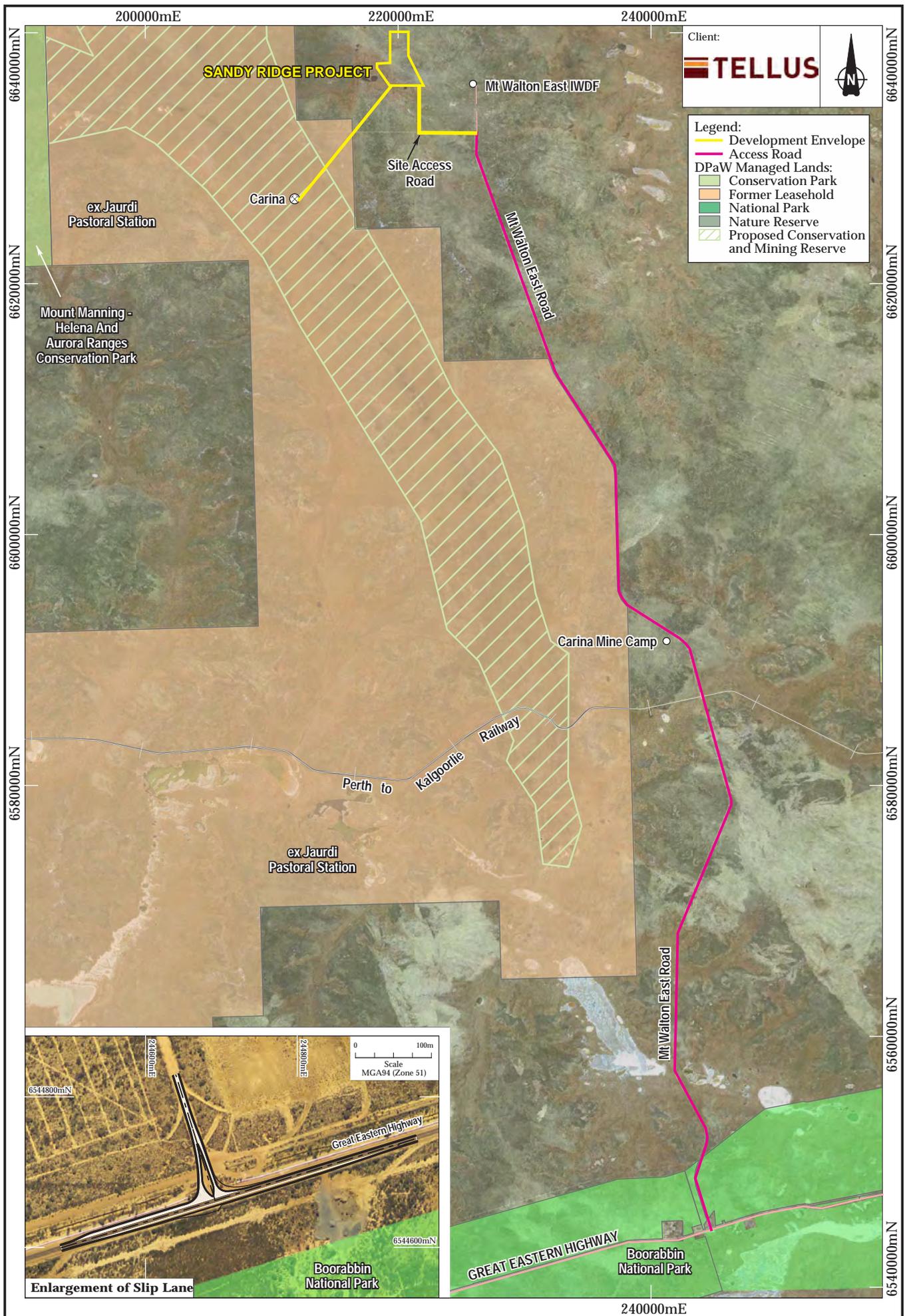


Legend:	
	Infrastructure
	Development Envelope
	Proposed Mining Tenement
	Proposed Miscellaneous Licence

0 400m
 Scale 1:25,000
 MGA94 (Zone 51)
 CAD Ref: g2294_ESD_F004.dgn
 Date: October 2015

Author: C. Dorrington AE Ref: THO2014-003
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Sandy Ridge Project
Development Envelope
Environmental Scoping Document



0 5km
 Scale 1:400,000
 MGA94 (Zone 51)
 CAD Ref: g2294_ESD_005.dgn
 Date: December 2015 Rev: B A4

Aurora
 environmental
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Sandy Ridge Project
Access to Sandy Ridge
Environmental Scoping Document

Figure:
3

2.2 Elements of the Proposal

The proposal would produce up to 290,000 tonnes per annum (tpa) of kaolin through the development and operation of open cut mine pits. The ore would be processed via an onsite processing plant and the kaolin products transferred from Sandy Ridge to the domestic market or to Fremantle Port for export overseas. All overburden would be returned to the pits, and topsoil returned and the surface revegetated.

The waste aspect of the proposal involves disposing of up to 100,000 tpa of intractable, hazardous and low level radioactive wastes in the mine voids (herein referred to as 'cells') over a 25 year period (i.e. 2,500,000 tonnes in total). Wastes would be accepted from across Australia with indicative transport routes into Western Australia shown on Figure 4. Waste acceptance criteria will be presented in the PER.

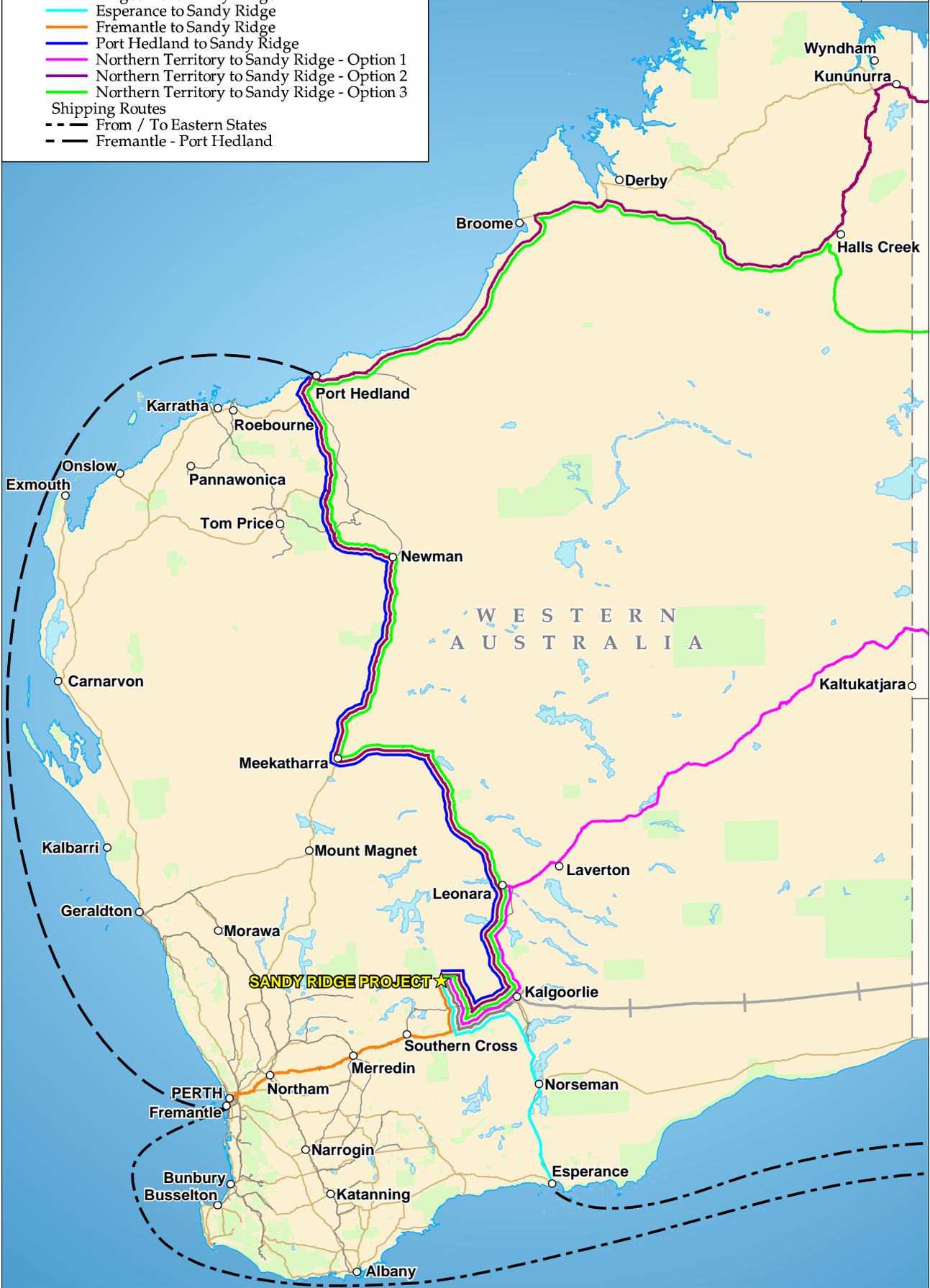
Transport of waste is not part of the proposal as it will be addressed under the appropriate legislation, guidelines and codes such as; *Radiation Safety (Transport of Radioactive Substances) Regulations 2002* (Western Australia), *Environmental Protection (Controlled Waste) Regulations 2004*, *Transport of Dangerous Goods by Road or Rail* (Commonwealth of Australia, 2014), *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998* and the Code for Safe Transport of Radioactive Material (ARPANSA, 2014).

Cells would be filled in layers with multiple sections in each layer. Each layer would be divided into sections containing wastes of similar characteristics. Each section will be backfilled, compacted and all air pockets/voids excluded. Each layer will be compacted, until approximately 7m below the ground surface, where a thick capping layer of low permeability clay will be installed to prevent water ingress into the cell. Following this more backfilling and a clay domed cap would be situated on the top of the cell, to shed any landing rainfall. During the waste disposal process a roof canopy is positioned over the cell to exclude rainfall prior to the thick capping layer being installed.

Likely chemical wastes to be disposed of in the cells include; arsenic or arsenic containing compounds, cyanide inorganic compounds, chromium (VI) compounds, lead or lead compounds, spent pot liners, soils contaminated with heavy metals, asbestos and pesticides, hydrocarbon wastes and phosphates from the agricultural industry. Likely radioactive wastes to be disposed of in the cells within specific shafts include those that can meet the <3,700 Becquerel per gram and < 30 years half-life criteria. These radioactive wastes are generally generated by; medical research and industry, operation of research facilities (e.g. laboratory coats, overshoes, gloves), Naturally Occurring Radioactive Materials (NORMs) occurring on pipework and scale from industry, oil spills containing NORMs and orphan sources (i.e. gauges and instrumentation). Wastes which will not be disposed of into cells include; infectious materials, nuclear material, uncertified waste, putrescible waste and gases. The Proposal does not include the acceptance of nuclear waste as defined by Part 3 of the *Nuclear Waste Storage and Transportation (Prohibition) Act 1999* (WA). This will be further clarified in the PER.

Infrastructure required to support the mining and waste disposal operation include; access roads, mine infrastructure (process plant, offices, warehouses, hardstands, weighbridges, explosives magazine etc.), water pipeline, Class II landfill (for putrescible waste generated at the site), accommodation camp, ore and overburden stockpiles, mobile plant, water tanks, power generators and sewerage treatment systems.

- Indicative Transport Routes:
- Railway
 - South Australia to Kalgoorlie
 - Roads
 - Kalgoorlie to Sandy Ridge
 - Esperance to Sandy Ridge
 - Fremantle to Sandy Ridge
 - Port Hedland to Sandy Ridge
 - Northern Territory to Sandy Ridge - Option 1
 - Northern Territory to Sandy Ridge - Option 2
 - Northern Territory to Sandy Ridge - Option 3
 - Shipping Routes
 - - - From / To Eastern States
 - - - Fremantle - Port Hedland



0 100km
 Scale 1:10,000,000
 MGA94 (Zone 52)
 CAD Ref: g2294_ESD_006.dgn
 Date: October 2015 Rev: A | A4

Aurora
 environmental
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Sandy Ridge Project
Indicative Transport Routes
 Environmental Scoping Document

Table 2–1 outlines the key physical and operational elements of the proposal.

Table 2–1: Key proposal characteristics

SUMMARY OF THE PROPOSAL		
Proposal title	Sandy Ridge Project	
Proponent name	Tellus Holdings Ltd	
Short description	The Proposal is to develop a kaolin open cut mine and use the voids resulting from mining for the secure storage and isolation of hazardous, intractable waste and low level radioactive waste using best practice storage and isolation safety case. The Proposal is located approximately 75 km north-east of Koolyanobbing, Western Australia (Figure 1).	
PHYSICAL ELEMENTS		
Element	Location	Proposed Extent Authorised
Pits/Cells	Figure 2	Clearing no more than 202.3 hectares (ha) within 1004.2 ha development envelope
Mine Infrastructure	Figure 2	Clearing no more than 17.2 ha within 1004.2 ha development envelope
Accommodation Camp	Figure 2	Clearing no more than 2.5 ha within 1004.2 ha development envelope
Class II Landfill	Figure 2	Clearing no more than 0.25 ha within 1004.2 ha development envelope
Underground storage area	Figure 2	Clearing no more than 4 ha within 1004.2 ha development envelope
Access Roads	Figure 3	Clearing no more than 22.2 ha within 1004.2 ha development envelope.
Water pipeline	Figure 2 and 3	Clearing no more than 27.6 ha within 1004.2 ha development envelope
Total disturbed area		Clearing no more than 276.05 ha within 1004.2 ha development envelope
OPERATIONAL ELEMENTS		
Element	Location	Proposed Extent Authorised
Ore Processing	Kaolin Plant, Figure 2, coordinates: 220800mE, 6637520mN	Processing of no more than 290,000 tpa
Class IV and Class V waste disposal	Pits/Cells, Figure 2 coordinates: 219920mE, 6638195mN	Disposal of no more than 100,000 tpa. Average amount per annum 66,000 t. Maximum amount disposed 2,500,000 t over a 25 year period.
Class II Landfill for waste generated on the site.	Class II Landfill, Figure 2 coordinates: 218507mE, 6637370mN	Disposal of no more than 500 tpa

SUMMARY OF THE PROPOSAL

Water Use	Water Tanks, Figure 2 coordinates: 220770mE, 6637430mN	0.18 GL/year sourced from water tanks onsite that are supplied via a water pipeline from the Mineral Resources Carina Iron Ore Mine.
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2.3 Potential Impacts of the Proposal

The aspects of the Proposal which pose potential significant risks to the environment include the handling and storage of hazardous, intractable and radioactive waste. The construction and operation of the mine and waste facility have the potential to impact; flora and vegetation, land and soils, terrestrial fauna, inland waters environmental quality and human health. Tellus plan to manage each aspect of the project to ensure any potential impacts to these key environmental factors are as low as reasonably practicable.

2.4 Operation and Closure

The project lifecycle includes mining and disposal of wastes until approximately year 25, monitoring and rehabilitation of waste cells until year 45, and following this an institutional control period (ICP) will apply. The ICP will ensure the wastes stored in the geological repository are undisturbed for a period of time until they no longer pose a risk to human activities conducted on the surface of the waste cells. The ICP is yet to be agreed with the Radiological Council of Western Australia.

Tellus will provide ample financial provisioning to the State to cover any environmental monitoring required during the ICP. It is envisaged that funding will be deposited into an Escrowed Fund established by Tellus through an impost built into waste charges. The level of funding will be determined based on the estimated cost of monitoring during the ICP with an allowance based on an independent risk assessment for rehabilitation works during the ICP.

3 PRELIMINARY KEY ENVIRONMENTAL FACTORS AND SCOPE OF WORK

The key proposal characteristics in Table 2–1 have informed the identification of the preliminary key environmental factors for the proposal, in accordance with *EAG 8 Environmental principles, factors and objectives*. The preliminary key environmental factors for this proposal and the EPA's objective for each of those factors are identified in Table 3–1.

To provide context to the preliminary key environmental factors, Table 3-1 also identifies the aspects of the proposal that cause the factors to be key factors, and the potential impacts and risks likely to be relevant to the assessment. All of this in turn has informed the work required to be conducted in the environmental review.

Finally Table 3–1 identifies the policy documents that establish how the EPA expects the environmental factors to be addressed in the environmental review and the PER document that follows. In addition to these policy documents, the following EPA policies apply to the proposal and environmental impact assessment process:

- EAG 1 *Defining the key characteristics of a proposal* (EPA, 2012)
- EAG 8 *Environmental principles, factors and objectives* (EPA, 2015)
- EAG 9 *Application of a significance framework in the environmental impact assessment process* (EPA, 2013)
- EAG 17 *Preparation of Management Plans under Part IV of the Environmental Protection Act 1986* (EPA, 2015).

The EPA expects that the proponent will consider all relevant contemporary policy documents, including revisions or updates of the policy documents listed and any new, relevant policy that is published during the development of the PER.

Impacts associated with proposals are to be considered at a local and regional scale, including evaluation of cumulative impacts, and provide details of proposed management/mitigation measures. This includes whether environmental offsets are required by application of the mitigation hierarchy, consistent with the Government of Western Australia (2014) WA Environmental Offsets Guidelines.

The PER document will explicitly demonstrate and document, how the relevant considerations of the principles of the *Environmental Protection Act 1986*, Section 4A, and the policies and guidelines listed in Table 3–1 are considered in the PER.

Table 3–1: Preliminary key environmental factors and required work

FLORA AND VEGETATION	
EPA objective	To maintain representation, diversity, viability and ecological function at the species, population and community level.
Relevant aspects	<ul style="list-style-type: none"> • Handling and storage of hazardous and intractable waste. • Creation of development elements including mine pits. • Fire protection measures. • Blasting generating dust. • Use of saline water for dust suppression. • Introduction of weeds. • Failure of waste cell containment and generation of leachate. • Construction and operation of a water pipeline from Carina pit to the infrastructure area.
Potential impacts and risks	<ul style="list-style-type: none"> • Direct clearing of native vegetation. • Gamma radiation exposure to flora and vegetation. • Radon emanating from waste cells. • Altered fire regime, and lack of flowering. • Changed hydrology (quality and quantity of surface water) and effects on downstream vegetation. • Dust deposition on vegetation and subsequent smothering inducing death. • Uptake of saline water from dust suppression. • Introduction and spread of weeds that compete with native vegetation. • Transpiration of leachate from waste cell and the subsequent death of vegetation. • Potential for fire and loss of vegetation. • The construction and operation of the water pipeline could directly (e.g. clearing) and indirectly (e.g. leak of saline water) impact native flora and vegetation.
Required work	<ol style="list-style-type: none"> 1. Undertake flora and vegetation surveys in accordance with the requirements of EPA Guidance Statement No. 51 in areas that are likely to be directly or indirectly impacted as a result of the proposal. This should include a description of the surveys undertaken, the baseline data collected, and the environmental values identified. 2. Describe the existing flora and vegetation within the development envelope including its relevance within a wider regional context. The development envelope includes: pit/cells area, mine infrastructure area, underground storage area, accommodation camp, Class II landfill, water pipeline corridor and access roads. 3. Assess the direct and indirect impacts associated with the proposal on the flora and vegetation within the development envelope. A quantitative analysis of the likely extent of these impacts on vegetation units and conservation significant flora species (as defined in Guidance Statement 51, page 29). Analysis of impacts on vegetation to include: <ul style="list-style-type: none"> • The area (in ha) of each vegetation unit to be impacted (directly and indirectly) in a ‘worst case’ scenario.

	<ul style="list-style-type: none"> • The total area (in ha) of each vegetation unit within the development envelope. • A summary of the known regional distribution of vegetation units. • Identification of vegetation units which may be a component of Threatened or Priority Ecological Communities. • Identification of any significant species and if present, an analysis of impacts on conservation significant species to include: <ul style="list-style-type: none"> - The number of plants, and number of populations of plants, to be impacted (directly and indirectly) in a 'worst case' scenario. - The total number of plants and populations within the local area/study area. - A summary of the known populations of the species including distribution, number of populations and the number of plants or an estimate of the number of plants. <ol style="list-style-type: none"> 4. Address the potential for environmental impacts on Department of Parks and Wildlife managed lands and values including; Former Jaurdi Pastoral Lease, Mount Manning Range Nature Reserve and Mount Manning — Helena–Aurora Ranges Conservation Park. 5. Provide figure(s) showing the extent of clearing or predicted extent of loss of vegetation and conservation significant flora species from both direct and indirect impacts (including, but not limited to, changed hydrology and dust). 6. Assess potential radiation impacts on flora and vegetation using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. 7. Provide a discussion of the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts (direct and indirect) on flora and vegetation and consideration of alternatives. 8. Outline the outcomes/objectives, management, monitoring, trigger and contingency actions, to ensure impacts (direct and indirect) are not greater than predicted. 9. Complete EPA's checklist for documents submitted for Environmental Impact Assessment (EIA) on terrestrial biodiversity. 10. To the extent that significant residual impacts cannot be avoided, reduced, mitigated, or subsequently restored – identify appropriate offsets. 11. Provide a statement of how the proponent considers the EPA's objective for this factor has been addressed.
<p>Relevant policies</p>	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Checklist for documents submitted for EIA on marine and terrestrial biodiversity. • Position Statement 2: Environmental Protection of Native Vegetation in Western Australia, Perth, Western Australia (EPA, 2000). • Position Statement 3: Terrestrial Biological Surveys as an Element of Biodiversity Protection, Perth, Western Australia (EPA, 2002). • Guidance Statement No. 51: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia June 2004, Perth, Western Australia (EPA, 2005). • Environmental Offsets Policy, Perth, Western Australia (Government of Western Australia, 2011). • Environmental Offsets Guidelines, Perth, Western Australia (Government of Western

	<p>Australia, 2014).</p> <ul style="list-style-type: none"> • Technical Guide – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA and Department of Parks and Wildlife, 2015). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • <i>Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy</i> (DSEWPAC, 2012). • <i>Outcomes-based Conditions Policy Environment Protection and Biodiversity Conservation Act 1999 – Draft</i> (Commonwealth of Australia, 2015).
Relevant technical guidelines	<p>The following relevant technical guidelines and any future revisions apply:</p> <ul style="list-style-type: none"> • A review of existing Australian radionuclide activity concentration data in non-human biota inhabiting uranium mining environments. Technical Report 167 (Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), 2014).
TERRESTRIAL ENVIRONMENTAL QUALITY	
EPA objective	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.
Relevant aspects	<ul style="list-style-type: none"> • Handling and storage of hazardous and intractable waste. • Creation of mine pits. • Rehabilitation.
Potential impacts and risks	<ul style="list-style-type: none"> • Sterilisation of minerals beneath the cells. • Degradation of stockpiled soils over time. • Gamma radiation exposure on surrounding soils. • Radon emanating from waste cells. • Soil contamination from leaks/spills. • Subsidence and instability of waste cell allowing infiltration of water and generation of leachate. • Change in landform to surrounding landscape.
Required work	<ol style="list-style-type: none"> 12. Conduct a baseline soils assessment of the development envelope which includes recommendations for soil handling to minimised degradation of stockpiled soils. 13. Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events. 14. Assess potential impacts on the surrounding environment if leachate was generated from the waste cells. 15. Assess potential radiation impacts on surrounding soils/land using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. 16. Provide details of the engineering design of waste cells to minimise risk of environmental exposure to as low as reasonably achievable. The design of waste cells would ensure long term encapsulation of wastes that reduces any risks to the environment and environmental values to an acceptable level. 17. Provide a graphical conceptual representation of the final landform within the pit/cells

	<p>area once all cells have been filled and capped.</p> <p>18. Provide evidence of the stability of the site from a geotechnical and geochemical perspective. Include a subsidence monitoring program upon closure of a cell.</p> <p>19. Show how the proposal will meet the requirements of the National Waste Policy, and State Waste Strategy, including but not limited to:</p> <ul style="list-style-type: none"> • The need for a large class V facility in Western Australia; • The benefit and risks of the facility receiving waste from all of Australia; • How the facility would not result in an increased production of hazardous waste; • The volumes and types of waste it will receive and if other treatment options are available for these wastes; • The potential for recycling of wastes at the facility; and • Reducing the viability of the site for future disposal of Class V wastes through the disposal of Class IV waste. <p>20. Describe the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts (direct and indirect) on soils/land.</p> <p>21. Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA.</p> <p>22. Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells.</p> <p>23. Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste.</p> <p>24. Outline the outcomes/objectives, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted.</p> <p>25. Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed.</p>
<p>Relevant policy</p>	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Guidance for the Assessment of Environmental Factors. Rehabilitation of Terrestrial Ecosystems. No. 6 (EPA, 2006). • Environmental Protection Bulletin No. 19 EPA involvement in mine closure (EPA, 2015). • Guidelines for Preparing Mine Closure Plans, Perth, Western Australia (EPA & DMP, 2015). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • National Waste Policy: Less Waste, More Resources (Department of the Environment, Water, Heritage and the Arts, 2009). • Outcomes-based Conditions Policy Environment Protection and Biodiversity Conservation Act 1999 — Draft (Commonwealth of Australia, 2015).
<p>Relevant technical guidelines</p>	<p>The following relevant technical guidelines and any future revisions apply:</p> <ul style="list-style-type: none"> • Leading practice sustainable development program for the mining industry (DRET, 2008).

TERRESTRIAL FAUNA

EPA objective	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
Relevant aspects	<ul style="list-style-type: none"> ● Handling and storage of hazardous and intractable waste. ● Creation of development elements including mine pits. ● Fire protection measures. ● Generation of noise from blasting. ● Presence of infrastructure (e.g. water pond, landfill, mine voids). ● Failure of waste cell containment and generation of leachate.
Potential impacts and risks	<ul style="list-style-type: none"> ● Direct clearing of habitat resulting in the loss or fragmentation of fauna habitat. ● Gamma radiation exposure to fauna. ● Radon emanating from waste cells. ● Temporary or permanent hearing loss to fauna in the vicinity of blasting. ● Displacement of fauna, increased predation and competition for resources. ● Increase in feral fauna and pests attracted to the water and food resources at the site. ● Injury or death from fauna ingress into pit/cell. ● Injury or death of fauna from collision (i.e. vehicle strike) with waste carrier, vehicles and equipment. ● Generation of void space and subsequent collapse/instability of the waste cell, leading to exposure of fauna on the waste cell surface. Exposure may range from injury to death. ● Potential for fire and loss of fauna/fauna habitat.
Required work	<ol style="list-style-type: none"> 26. Conduct a Level 1 Fauna Survey in accordance with the requirements of Guidance Statement 56 to provide a comprehensive listing of fauna known or likely to occur in the habitat present, and identification of conservation significant fauna species likely to occur in the development envelope. 27. A Level 2 Fauna Survey will be conducted in accordance with Guidance Statement 56 (EPA, 2004) if the Level 1 Survey indicates that a survey at this level is justified. 28. Conduct a Targeted Malleefowl Survey. 29. Describe the terrestrial fauna within the development envelope including its relevance within a wider regional context. 30. Provide a description of all direct and indirect impacts including fire. 31. Assess potential radiation impacts on terrestrial fauna using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. 32. Discussion of the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has minimised impacts on terrestrial fauna and habitat. 33. Outline the outcomes/objectives, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted. 34. Complete EPA's checklist for documents submitted for Environmental Impact Assessment (EIA) on terrestrial biodiversity.

	<p>35. To the extent that significant residual impacts cannot be avoided, reduced, mitigated, or subsequently restored – identify appropriate offsets.</p> <p>36. Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed.</p>
<p>Relevant policy</p>	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Checklist for documents submitted for EIA on marine and terrestrial biodiversity. • EPA Position Statement No. 3 Terrestrial Biological Surveys as an Element of Biodiversity Protection (EPA, 2002). • Guidance Statement No. 56 Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia June 2004 (EPA, 2004). • Guidance Statement No. 20 Sampling of Short Range Endemic Invertebrate Fauna for Environmental Impact Assessment (EPA, 2009). • Technical Guide – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment. Technical report of the Environmental Protection Authority and the Department of Environment and Conservation (Hyder et al., 2010). • Environmental Offsets Policy, Perth, Western Australia (Government of Western Australia, 2011). • Environmental Offsets Guidelines, Perth, Western Australia (Government of Western Australia, 2014). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • <i>Environment Protection and Biodiversity Conservation Act 1999</i> Environmental Offsets Policy (DSEWPAC, 2012). • Outcomes–based Conditions Policy Environment Protection and Biodiversity Conservation Act 1999 — Draft (Commonwealth of Australia, 2015). • Guide for Radiation Protection of the Environment. RPS G–1 (ARPANSA, 2015). • National Recovery Plan for Malleefowl <i>Leipoa ocellata</i> (Benshemesh, 2007). • Survey Guidelines for Australia's Threatened Birds. EPBC Act survey guidelines 6.2 (Department of the Environment, Water, Heritage and the Arts, 2010). • Outcomes–based Conditions Policy Environment Protection and Biodiversity Conservation Act 1999 — Draft (Commonwealth of Australia, 2015).

INLAND WATERS ENVIRONMENTAL QUALITY

EPA objective	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
Relevant aspects	Handling and storage of hazardous and intractable waste.
Potential impacts and risks	<ul style="list-style-type: none"> • Leak/spill from waste package may contaminate surface water runoff and groundwater. • Generation of leachate from waste package may contaminate surface water runoff and groundwater.
Required work	<p>37. Conduct a hydrogeological assessment to determine the presence of an aquifer.</p> <p>38. Conduct a hydrology assessment to assess impacts to surface water runoff and surface water bodies.</p> <p>39. Conduct modelling to assess the potential for a leachate plume to develop.</p> <p>40. Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events.</p> <p>41. Describe the existing hydrogeological and hydrological setting of the development envelope.</p> <p>42. Describe how waste will be contained within the cells.</p> <p>43. Describe the impacts from this proposal on the associated inland water quality including direct and indirect impacts.</p> <p>44. Assess the impacts to water quality from sourcing water from the Carina Iron Ore Mine over 25 years.</p> <p>45. Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped.</p> <p>46. Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA.</p> <p>47. Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells.</p> <p>48. Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste.</p> <p>49. Outline the outcomes/objectives, management, monitoring, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted.</p> <p>50. Provide a statement of how the proponent considers the EPA's objective for this factor has been addressed.</p>
Relevant policy	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Guidance for the Assessment of Environmental Factors. Rehabilitation of Terrestrial Ecosystems. No. 6 (EPA, 2006). • Guidelines for Preparing Mine Closure Plans, Perth, Western Australia (EPA & DMP, 2015)

	<ul style="list-style-type: none"> Environmental Protection Bulletin No. 19 EPA involvement in mine closure (EPA, 2015). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> Outcomes-based Conditions Policy <i>Environment Protection and Biodiversity Conservation Act 1999</i> — Draft (Commonwealth of Australia, 2015).
Relevant technical guidelines	<p>The following relevant technical guidelines and any future revisions apply:</p> <ul style="list-style-type: none"> Leading practice sustainable development program for the mining industry (DRET, 2008). Water Quality Protection Notes, Perth, Western Australia (DoW, various published dates). Operational Policy No.5.12 – Hydrogeological reporting associated with a groundwater well licence, Perth, Western Australia (DoW, 2009).
HUMAN HEALTH	
EPA objective	To ensure that human health is not adversely affected.
Relevant aspects	<ul style="list-style-type: none"> Handling and storage of hazardous and intractable waste. Failure of waste cell containment structures.
Potential impacts and risks	<ul style="list-style-type: none"> Leak/spill during; unpacking of waste, temporary storage, handling or placement in cell. Radiation exposure (internal exposure pathways and external exposure pathways) to workers during unpacking of waste, temporary storage, handling or placement in cell. Radon emanating from waste cells. Generation of void space and subsequent collapse/instability of the waste cell, leading to exposure of humans on the waste cell surface. Exposure may range from injury to death. Dust emission from kaolin mining and subsequently the handling and processing of materials on site. Potential for fire and loss of life.
Required work	<p>51. Define and model the radiation exposure pathways (internal exposure pathways and external exposure pathways); provide exposure estimates of the workforce and any other identified critical groups, during operation and post closure.</p> <p>52. Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events.</p> <p>53. Conduct a desktop assessment of the radionuclides and metals likely to be present in the geology of the development envelope, based on an interpretation of the site geology, exploration drilling data previously collected, and publically available geophysical mapping. The assessment should explain if naturally occurring radionuclides and metals are likely to be of environmental significance or detrimental to human health during the development of the project and throughout operations.</p> <p>54. Conduct an assessment of potential impacts to human health.</p> <p>55. Conduct an assessment of risks to human health from bush tucker consumption in the region from radiological sources and other contaminants. This should be based upon local diet, determined through consultation with the local community.</p> <p>56. Discuss the proposed management (including fire management measures), monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts on human health.</p> <p>57. Outline the outcomes/objectives, management, monitoring, trigger and contingency</p>

	<p>actions to ensure impacts (direct and indirect) are not greater than predicted.</p> <p>58. Provide information on how the proposal will be compliant with the <i>Food Act 2008</i> and Australian Drinking Water Quality Guidelines and prepare a Drinking Water Quality monitoring and compliance plan.</p> <p>59. Provide information on management of asbestiform materials should they be found during construction of the proposal, or if they are received at the site.</p> <p>60. Provide details of the engineering design of waste cells to minimise risk of human exposure to as low as reasonably achievable. The design of waste cells would ensure long term encapsulation of wastes that reduces any risks to human health, the environment and environmental values to an acceptable level.</p> <p>61. Provide details of the engineering design of waste cells to show best practice design for containment of wastes. This will draw on international best practice and expertise in encapsulating similar wastes around the world.</p> <p>62. Undertake an independent peer review of the engineering design of waste cells to confirm best practice design has been met.</p> <p>63. Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped.</p> <p>64. Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA.</p> <p>65. Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells.</p> <p>66. Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste. This will include details of how radioactive waste is handled, stored, monitored in accordance with relevant legislation and policies.</p> <p>67. Prepare and provide an Operating Strategy for the proposal. The Operating Strategy will be prepared to an appropriate level and include a high level description of components and where necessary detail elements such as waste acceptance criteria to facilitate environmental assessment. The Operating Strategy will provide details of how waste is handled, stored, monitored accordance with <i>Environmental Protection (Controlled waste) Regulations 2004</i>.</p> <p>68. Provide information on wastewater management on site.</p> <p>69. Provide an Emergency Response and Management Plan as an Appendix to the PER to describe the management actions to be implemented to respond to an emergency.</p> <p>70. Provide a statement of how the proponent considers the EPA's objective for this factor has been addressed.</p>
<p>Relevant policy</p>	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> ● Guidance Statement No. 55: Guidance for the assessment of environmental factors – Implementing best practice in proposals submitted to the environmental impact assessment process, Perth, Western Australia (EPA, 2003). ● Guidance Statement No. 3 Separation Distances between Industrial and Sensitive Land Uses (EPA, 2005). ● Guidance for the Assessment of Environmental Factors. Rehabilitation of Terrestrial

	<p>Ecosystems. No. 6 (EPA, 2006).</p> <ul style="list-style-type: none"> • Consideration of environmental impacts from noise (EAG13) (EPA, 2014). • Guidelines for Preparing Mine Closure Plans, Perth, Western Australia (EPA & DMP, 2015). • Environmental Protection Bulletin No. 19 EPA involvement in mine closure (EPA, 2015). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • Outcomes-based Conditions Policy <i>Environment Protection and Biodiversity Conservation Act 1999</i> — Draft (Commonwealth of Australia, 2015). • National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998 (as amended) (NEPC, 1998).
Relevant technical guidelines	<p>The following relevant technical guidelines and any future revisions apply:</p> <p><u>National</u></p> <ul style="list-style-type: none"> • Code of Practice for the near-surface disposal of radioactive waste in Australia (NHMRC, 1992). • Classification and Disposal of Radioactive Waste in Australia – Consideration of Criteria for Near Surface Burial in an Arid Area. Technical Report Series No. 152 (ARPANSA, 2010). • Leading practice sustainable development program for the mining industry (DRET, 2008). • Australian Drinking Water Guidelines (NHMRC, as amended 2015). <p><u>State</u></p> <ul style="list-style-type: none"> • Landfill Waste Classification and Waste Definitions (DEC, 1996 as amended 2009). • Assessment and Management of Contaminated Sites (DER, 2014). • Managing naturally occurring radioactive material (NORM) in mining and mineral processing – Guidelines: <ul style="list-style-type: none"> - NORM–4.1 Controlling dust strategies - NORM–5 Dose assessment. (DMP, 2010). • Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (Department of Health, 2009). • Guidance Note on Public Health Risk Management of Asbestiform Materials Associated with Mining (Department of Health, 2013).
HERITAGE	
EPA objective	To ensure that historical and cultural associations, and natural heritage, are not adversely affected.
Relevant aspects	<p>Clearing of vegetation of cultural significance.</p> <p>Excavating land of cultural significance.</p> <p>Storage of waste underground.</p>
Potential impacts and risks	Disturbance to aboriginal heritage sites and / or cultural associations within the development envelope.
Required work	<p>71. Identify sites of cultural significance.</p> <p>72. Assess potential impacts on any heritage sites and / or cultural associations in accordance with EPA (2004) <i>Assessment of Aboriginal Heritage guidelines</i>.</p>

	<p>73. If heritage sites and/or cultural associations are identified, and are likely to be impacted, propose management measures to avoid or minimise impacts. If this is not possible propose restoration measures or offset any impacts.</p> <p>74. Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed.</p>
Relevant policy	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Guidance Statement No. 41 Assessment of Aboriginal Heritage (EPA, 2004). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • Outcomes–based Conditions Policy <i>Environment Protection and Biodiversity Conservation Act 1999</i> — Draft (Commonwealth of Australia, 2015).
Relevant technical guidelines	<p>The following relevant technical guidelines and any future revisions apply:</p> <ul style="list-style-type: none"> • Aboriginal Heritage – Due Diligence Guidelines. Version 3.0. (DAA & DPC, 2013).
OFFSETS (INTEGRATING FACTOR)	
EPA objective	To counterbalance any significant residual environmental impacts or uncertainty through the application of offsets.
Relevant aspects	Residual environmental impacts or uncertainty resulting from implementation of proposal and subsequent application of mitigation hierarchy to reduce impacts and/or uncertainty.
Potential impacts and risks	<ul style="list-style-type: none"> • Waste will be buried underground in perpetuity. • Disturbance to native vegetation (direct and indirectly). • Impacts to significant species or communities. • Loss or alteration of terrestrial fauna habitat. • Changes in fauna movement as a result of changes in habitat connectivity. • Alterations to hydrological processes, quality and quantity associated with surface and/or groundwater that may sustain conservation significant terrestrial fauna.
Required work	<p>75. All residual (following management) risks and impacts from the proposal to be considered in terms of their significance, and whether the proposal will result in significant residual impacts that require offsetting in accordance with the Western Australian Government’s offset policy and guidelines.</p> <p>76. Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed.</p>
Relevant policy	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Environmental Offsets Policy, Perth, Western Australia (Government of Western Australia, 2011) • Environmental Offsets Guidelines, Perth, Western Australia (Government of Western Australia, 2014). • Environmental Protection Bulletin No. 1 – Environmental offsets (EPA, 2014).

	<p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • <i>Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (DSEWPAC, 2012).</i> • <i>Outcomes-based Conditions Policy Environment Protection and Biodiversity Conservation Act 1999 — Draft (Commonwealth of Australia, 2015).</i>
REHABILITATION AND DECOMMISSIONING (INTEGRATING FACTOR)	
EPA objective	To ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner.
Relevant aspects	<ul style="list-style-type: none"> • Rehabilitation of the site. • Decommissioning of the site. • Revegetation of clay caps. • Long-term management of the site.
Potential impacts and risks	<ul style="list-style-type: none"> • Waste cell subsides allowing infiltration of water and generation of leachate. • Topsoil is degraded and unable to support a functioning ecosystem. • Erosion/ gullies/ deep rooted vegetation create cracks in the clay capping which allows water to infiltrate and generate leachate from the stored waste. • Vegetation does not grow and is unable to support a functioning ecosystem. • Fauna does not return to the vegetation and therefore a functioning ecosystem is not achieved. • Long term impacts to Human Health, Terrestrial Environmental Quality and Inland Waters Environmental Quality.
Required work	<p>77. Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events.</p> <p>78. Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped.</p> <p>79. Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA.</p> <p>80. Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells.</p> <p>81. Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste.</p> <p>82. Provide a statement of how the proponent considers the EPA's objective for this factor has been addressed.</p>
Relevant policy	<p>The following relevant policies and any future revisions apply:</p> <p><i>Relevant EPA policies and guidelines</i></p> <ul style="list-style-type: none"> • Guidance for the Assessment of Environmental Factors. Rehabilitation of Terrestrial Ecosystems. No. 6 (EPA, 2006)

	<ul style="list-style-type: none"> • Guidelines for Preparing Mine Closure Plans (EPA & DMP, 2015). • Environmental Protection Bulletin No. 19 EPA involvement in mine closure (EPA, 2015). <p><i>Relevant Commonwealth policies and guidelines</i></p> <ul style="list-style-type: none"> • Outcomes-based Conditions Policy <i>Environment Protection and Biodiversity Conservation Act 1999</i> — Draft (Commonwealth of Australia, 2015).
<p>Relevant technical guidelines</p>	<p>The following relevant technical guidelines and any future revisions apply:</p> <ul style="list-style-type: none"> • Leading practice sustainable development program for the mining industry (DRET, 2008).

4 STAKEHOLDER CONSULTATION

The EPA expects that the proponent will consult with stakeholders who are interested in, or affected by, the Proposal. This includes decision-making authorities (DMAs), other relevant State government departments and local government authorities, environmental non-government organisations and the local community.

The proponent must document the stakeholder consultation undertaken and the outcomes, including any adjustments to the proposal and any future plans for consultation. This is to be addressed in a specific section of the PER document and, in addition, key outcomes of consultation are to be reported against the preliminary key environmental factors as relevant.

It is expected that as a part of the consultation with DMA's there will be discussion around each agency's specific regulatory approvals, and a demonstration that other factors can be managed by another regulatory body.

The first phase of stakeholder consultation for the Proposal has been completed which included providing information to key government stakeholders including the following:

- Government Departments; Mines and Petroleum, Finance, Lands, Environment Regulation, State Development, Aboriginal Affairs, Fire and Emergency Services, and Health (Radiation Health Branch).
- Principal Policy Advisors to the; Minister for Finance and Mines and Petroleum, Minister for Environment and Heritage.
- Chairman of the EPA and Office of the EPA personnel.
- Commonwealth Department of the Environment.
- Australian Radiation Protection and Nuclear Safety Agency (ARPANSA).
- Regional politicians (of all political parties).
- Local governments; Coolgardie, Southern Cross and Kalgoorlie-Boulder.
- The local communities of Coolgardie and Kalgoorlie (February 2016).
- Local aboriginal families, Goldfields Land and Sea Council and local politicians.

A specific focus meeting regarding the ESD was held on 14 October 2015 and attended by the; Department of Lands, Department of Environment Regulation, Department of Mines and Petroleum and the Commonwealth Department of the Environment. Several other departments were invited to this meeting but were unable to attend; Radiation Health Branch of the Department of Health, Department of Parks and Wildlife, Department of Water and Department of Aboriginal Affairs. Tellus will continue consulting all key decision making authorities and interested parties throughout the preparation of the PER and post submission of the PER. Information will be provided via the Tellus website (<http://www.tellusholdings.com/>) and regular news updates will be emailed to interested people.

5 OTHER FACTORS OR MATTERS

During assessment of proposals, other factors or matters will be identified as relevant to the proposal, but not of significance to warrant further assessment by the EPA, or impacts can be regulated by other statutory processes to meet the EPA's objectives.

These factors do not require further work as part of the environmental review, or detailed discussion and evaluation in the PER document, although they must be included in the PER document in a summarised, tabular format noting that the PER document will be subject to public review.

In some circumstances other factors, while not being considered as preliminary key environmental factors, may require greater emphasis in the PER document. This may be due to high public interest or at the request of another stakeholder, so that the potential impacts and management measures associated with the other factor are sufficiently articulated for the public review. For this assessment, the other factor of Amenity, in relation to noise, dust and visual, needs to be concisely described and discussed in the PER document.

Impacts to visual amenity of people utilising the existing and proposed reserve system (including the Mount Manning Range Nature Reserve, Mount Manning — Helena–Aurora Ranges Conservation Park and the Former Jaurdi Pastoral Lease) will be assessed in terms of:

- Impacts to nature based tourism, that is travel routes and the use of public viewpoints in the existing and proposed reserve system; and
- Impacts to scientific study in the existing and proposed reserve system.

Furthermore following consultation with Department of Health and Department of Lands on health and land matters, Tellus will make the following commitment in the PER:

Prior to ground disturbance Tellus will conduct detailed baseline soil sampling in accordance with Department of Health and Department of Lands requirements.

Matters in relation to the water source and viability of this source for the project life will be described in the PER specifically addressing:

- the site water demand, and agreements in place to secure the water source over the project life.
- assess the viability of using the Carina Iron Ore Mine as a water source for 25 years.

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 PER document, and if so, to what extent.

6 AGREED ASSESSMENT TIMELINE

Table 6–1 sets out the timeline for the assessment of the proposal agreed between the EPA and the proponent. Proponents are expected to meet the agreed timeline, and in doing so, provide adequate, quality information to inform the assessment.

Table 6–1: Assessment timeline

Key Stages of Assessment	Agreed Completion Date
EPA approval of ESD	May meeting
Proponent submits first adequate draft PER document	6 June 2016
Office of the Environmental Protection Authority (OEPA) provides comment on first adequate draft PER document	20 July 2016
Proponent submits adequate revised draft PER document	18 August 2016
EPA authorises release of PER document for public review	1 September 2016
Public review of PER document	2 September 2016 – 11 November 2016
EPA provides Summary of Submissions	1 December 2016
Proponent provides Response to Submissions	29 December 2016
OEPA reviews the Response to Submissions	13 February 2017
OEPA assesses proposal for consideration by EPA	3 April 2017
Preparation and finalisation of EPA assessment report (including two weeks consultation on draft conditions with proponent and key Government agencies)	19 May 2017

If any stage in the agreed timeline is not met or inadequate information is submitted by the proponent, the timing for the completion of subsequent stages of the process will be revised. Equally, where the EPA is unable to meet an agreed completion date in the timeline, the proponent will be advised and the timeline revised.

The proponent should refer to EPA's EAG 6 — Timelines for environmental assessment of proposals for information regarding the responsibilities of proponents and the EPA for achieving timely and effective assessment of proposals.

7 DECISION-MAKING AUTHORITIES

At this stage the authorities listed in Table 7–1 have been identified as DMAs for the proposal. Additional DMAs may be identified during the course of the assessment.

Table 7–1: Decision-making authorities

Authority	Legislation
Minister for Environment	<i>Environmental Protection Act 1986</i> <i>Wildlife Conservation Act 1950</i>
Minister for Water	<i>Rights in Water and Irrigation Act 1914</i>
Minister for Mines and Petroleum	<i>Mining Act 1978</i>
Minister for Health	<i>Radiation Safety Act 1975</i>
Minister for Lands	<i>Land Administration Act 1997</i>
Commonwealth Minister for Environment	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
Department of Environment Regulation	<i>Part V of the Environmental Protection Act 1986</i> <i>Environmental Protection (Controlled Waste) Regulations 2004</i> <i>Environmental Protection Regulations 1987</i>
Department of Mines and Petroleum	<i>Mining Act 1978</i> <i>Dangerous Goods and Safety Act 2004</i> <i>Dangerous Goods Safety (Storage and handling of non-explosives) Regulation 2007</i> <i>Mines Safety and Inspection Act 1994</i> <i>Mines Safety and Inspection Regulations 1995</i>
Radiological Council of Western Australia	<i>Radiation Safety Act 1975</i> <i>Radiation Safety (Transport of Radioactive Substances) Regulations 2002</i>
Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i>
Shire of Coolgardie	<i>Planning Development Act 2005</i>

8 PARALLEL PROCESSING

The EP Act constrains DMAs from making any decision that could have the effect of causing or allowing the proposal to be implemented. However, the proponent is encouraged to pursue other approvals in parallel with the EPA's assessment noting that the constraint only relates to making an approval decision.

9 PER DOCUMENT

When the EPA is satisfied with the standard of the PER document (refer to section 4.4 of EAG 6) it will provide written authorisation for the release of the document for public review. The proponent must not release the PER document for public review until this authorisation is provided.

The proponent is responsible for advertising the release and availability of the PER document in accordance with instructions that will be issued to the proponent by the EPA. The EPA must be consulted on the timing and details for advertising.



REGULATORY COMPLIANCE CHECKLIST

Environmental Scoping Document Checklist

ESD category	Work required for the PER	PER reference
<p>Flora and vegetation</p>	<ul style="list-style-type: none"> • Undertake flora and vegetation surveys in accordance with the requirements of EPA Guidance Statement No. 51 in areas that are likely to be directly or indirectly impacted as a result of the proposal. This should include a description of the surveys undertaken, the baseline data collected, and the environmental values identified. • Describe the existing flora and vegetation within the development envelope including its relevance within a wider regional context. The development envelope includes: pit/cells area, mine infrastructure area, accommodation camp, Class II landfill, water pipeline corridor and access roads. • Assess the direct and indirect impacts associated with the proposal on the flora and vegetation within the development envelope. A quantitative analysis of the likely extent of these impacts on vegetation units and conservation significant flora species (as defined in Guidance Statement 51, page 29). • Analysis of impacts on vegetation to include: <ul style="list-style-type: none"> - The area (in ha) of each vegetation unit to be impacted (directly and indirectly) in a ‘worst case’ scenario. - The total area (in ha) of each vegetation unit within the development envelope. - A summary of the known regional distribution of vegetation units. - Identification of vegetation units which may be a component of Threatened or Priority Ecological Communities. - Identification of any significant species and if present, an analysis of impacts on conservation significant species to include: 	<ul style="list-style-type: none"> • Section 9.1. • Section 9.1. • Section 10.2.33. • Section 10.2.33. • Table 10-2. • Table 9-1. • Section 9.1.2. • Section 9.1.2. • Section 10.2.3. • Section 10.2.3.



ESD category	Work required for the PER	PER reference
	<ul style="list-style-type: none"> - The number of plants, and number of populations of plants, to be impacted (directly and indirectly) in a ‘worst case’ scenario. - The total number of plants and populations within the local area/study area. • A summary of the known populations of the species including distribution, number of populations and the number of plants or an estimate of the number of plants. • Address the potential for environmental impacts on Department of Parks and Wildlife managed lands and values including; Former Jaurdi Pastoral Lease, Mount Manning Range Nature Reserve and Mount Manning — Helena–Aurora Ranges Conservation Park. • Provide figure(s) showing the extent of clearing or predicted extent of loss of vegetation and conservation significant flora species from both direct and indirect impacts (including, but not limited to, changed hydrology and dust). • Assess potential radiation impacts on flora and vegetation using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. • Provide a discussion of the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts (direct and indirect) on flora and vegetation and consideration of alternatives. • Outline the outcomes/objectives, management, monitoring, trigger and contingency actions, to ensure impacts (direct and indirect) are not greater than predicted. • Complete EPA’s checklist for documents submitted for Environmental Impact Assessment (EIA) on terrestrial biodiversity. • To the extent that significant residual impacts cannot be avoided, reduced, mitigated, or subsequently restored – identify appropriate offsets. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Section 10.2.3. • Section 9.1. • Section 10.2.3 and Table 10-4. • Figure 9-1; Figure 9-2a and Figure 9-2b. • Section 10.2.3. • Section 10.2.4. • Section 10.2.4 and 10.2.5. • Appendix A.6. • Section 10.8. • Section 10.2.5.



ESD category	Work required for the PER	PER reference
<p>Terrestrial environmental quality</p>	<ul style="list-style-type: none"> • Conduct a baseline soils assessment of the development envelope which includes recommendations for soil handling to minimised degradation of stockpiled soils. • Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events. • Assess potential impacts on the surrounding environment if leachate was generated from the waste cells. • Assess potential radiation impacts on surrounding soils/land using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. • Provide details of the engineering design of waste cells to minimise risk of environmental exposure to as low as reasonably achievable. The design of waste cells would ensure long term encapsulation of wastes that reduces any risks to the environment and environmental values to an acceptable level. • Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped. • Provide evidence of the stability of the site from a geotechnical and geochemical perspective. Include a subsidence monitoring program upon closure of a cell. • Show how the proposal would meet the requirements of the National Waste Policy, and State Waste Strategy, including but not limited to: <ul style="list-style-type: none"> - The need for a large class V Facility in Western Australia; - The benefit and risks of the Facility receiving waste from all of Australia; - How the Facility would not result in an increased production of hazardous waste; - The volumes and types of waste it would receive and if other treatment options are available for these wastes; - The potential for recycling of wastes at the facility; and 	<ul style="list-style-type: none"> • Section 9.2.15; Figure 9-9 and Section 10.3.5. • Appendix A.7, Section 10.9.3; Figure 10-8 and Figure 10-9. • Section 10.3.3. • Section 10.3.3. • Section 5.10.2; Section 5.12; Table 5-7; Appendix A.24. • Figure 10-8 and 10-9 and Appendix A.19. • Section 2.3, Appendix A.4 and A.19. • Section 2.4, Chapter 4 and Chapter 5.



ESD category	Work required for the PER	PER reference
	<ul style="list-style-type: none"> - Reducing the viability of the site for future disposal of Class V wastes through the disposal of Class IV waste. • Describe the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts (direct and indirect) on soils/land. • Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA. • Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells. • Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste. • Outline the outcomes/objectives, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Section 5.5.4 and Section 10.3.4. • Appendix A.19. • Appendix A.18. • Appendix A.14.A.17 • Section 10.4.5. • Section 10.4.5.
Terrestrial Fauna	<ul style="list-style-type: none"> • Conduct a Level 1 Fauna Survey in accordance with the requirements of Guidance Statement 56 to provide a comprehensive listing of fauna known or likely to occur in the habitat present, and identification of conservation significant fauna species likely to occur in the development envelope. • A Level 2 Fauna Survey would be conducted in accordance with Guidance Statement 56 (EPA, 2004) if the Level 1 Survey indicates that a survey at this level is justified. • Conduct a Targeted Malleefowl Survey. • Describe the terrestrial fauna within the development envelope including its relevance within a wider regional context. • Provide a description of all direct and indirect impacts including fire. 	<ul style="list-style-type: none"> • Section 9.3.1 and 10.4.2 and Appendix A.8. • Section 9.3.1 and 10.4.2 and Appendix A.8. • Section 9.3.3 and Appendix A.8. • Section 9.3.1 and Appendix A.8. • Section 10.4.3. • Section 10.4.3 and Appendix A.14.



ESD category	Work required for the PER	PER reference
	<ul style="list-style-type: none"> • Assess potential radiation impacts on terrestrial fauna using the Environmental Risk from Ionising Contaminants: Assessment and Management (ERICA) tool. Australian specific data should be used where available. • Discussion of the proposed management, monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has minimised impacts on terrestrial fauna and habitat. • Outline the outcomes/objectives, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted. • Complete EPA’s checklist for documents submitted for Environmental Impact Assessment (EIA) on terrestrial biodiversity. • To the extent that significant residual impacts cannot be avoided, reduced, mitigated, or subsequently restored – identify appropriate offsets. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Section 10.4.4. • Section 10.4.5. • Appendix A.9. • Section 10.8. • Section 10.4.5.
<p>Inland Waters Environmental Quality</p>	<ul style="list-style-type: none"> • Conduct a hydrogeological assessment to determine the presence of an aquifer. • Conduct a hydrology assessment to assess impacts to surface water runoff and surface water bodies. • Conduct modelling to assess the potential for a leachate plume to develop. • Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events. • Describe the existing hydrogeological and hydrological setting of the development envelope. • Describe how waste would be contained within the cells. • Describe the impacts from this proposal on the associated inland water quality including direct and indirect impacts. 	<ul style="list-style-type: none"> • Section 9.4. • Section 9.4. • Appendix A.11 and Section 10.3.3. • Appendix A.7 and Section 10.3.3. • Section 9.4 and Figure 5-15 to 5- 17. • Section 5.5.4 and Appendix A.23. • Section 10.5.3. • Section 5.9.2 and Section 10.5.3. • Figures 10-8 and 10-9.



ESD category	Work required for the PER	PER reference
	<ul style="list-style-type: none"> • Assess the impacts to water quality from sourcing water from the Carina Iron Ore Mine over 25 years. • Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped. • Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA. • Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells. • Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste. • Outline the outcomes/objectives, management, monitoring, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Appendix A.19. • Appendix A.18. • Appendix A.14. • Section 10.5.3 and 10.5.4. • Section 10.5.4.
Human Health	<ul style="list-style-type: none"> • Define and model the radiation exposure pathways (internal exposure pathways and external exposure pathways); provide exposure estimates of the workforce and any other identified critical groups, during operation and post closure. • Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events. • Conduct a desktop assessment of the radionuclides and metals likely to be present in the geology of the development envelope, based on an interpretation of the site geology, exploration drilling data previously collected, and publicly available geophysical mapping. The assessment should explain if naturally occurring radionuclides and metals are likely to be of environmental significance or detrimental to human health during the development of the Proposal9 and throughout operations. 	<ul style="list-style-type: none"> • Appendix A.14. • Appendix A.7 and Section 10.9.3. • Appendix A.6.



ESD category	Work required for the PER	PER reference
	<ul style="list-style-type: none"> • Conduct an assessment of potential impacts to human health. • Conduct an assessment of risks to human health from bush tucker consumption in the region from radiological sources and other contaminants. This should be based upon local diet, determined through consultation with the local community. • Discuss the proposed management (including fire management measures), monitoring and mitigation methods to be implemented demonstrating that the design of the proposal has addressed the mitigation hierarchy in relation to impacts on human health. • Outline the outcomes/objectives, management, monitoring, trigger and contingency actions to ensure impacts (direct and indirect) are not greater than predicted. • Provide information on how the proposal would be compliant with the <i>Food Act 2008</i> and Australian Drinking Water Quality Guidelines and prepare a Drinking Water Quality monitoring and compliance plan. • Provide information on management of asbestiform materials should they be found during construction of the proposal, or if they are received at the site. • Provide details of the engineering design of waste cells to minimise risk of human exposure to as low as reasonably achievable. The design of waste cells would ensure long term encapsulation of wastes that reduces any risks to human health, the environment and environmental values to an acceptable level. • Provide details of the engineering design of waste cells to show best practice design for containment of wastes. This would draw on international best practice and expertise in encapsulating similar wastes around the world. • Undertake an independent peer review of the engineering design of waste cells to confirm best practice design has been met. • Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped. • Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should 	<ul style="list-style-type: none"> • Section 10.6.3. • Section 10.6.3. • Section 10.6.4. • Section 10.6.4. • Section 10.6.4 and Appendix A.20. • Section 10.6.4. • Sections 5.5 and Appendix A.16. • Section 5.5. • Appendix A.21. • Figures 10-8 and 10-9 and Appendix A.7 • Appendix A.19.



ESD category	Work required for the PER	PER reference
	<p>be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA.</p> <ul style="list-style-type: none"> • Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells. • Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste. This would include details of how radioactive waste is handled, stored, monitored in accordance with relevant legislation and policies. • Prepare and provide an Operating Strategy for the proposal. The Operating Strategy would be prepared to an appropriate level and include a high level description of components and where necessary detail elements such as waste acceptance criteria to facilitate environmental assessment. The Operating Strategy would provide details of how waste is handled, stored, monitored accordance with <i>Environmental Protection (Controlled waste) Regulations 2004</i>. • Provide information on wastewater management on site. • Provide an Emergency Response and Management Plan as an Appendix to the PER to describe the management actions to be implemented to respond to an emergency. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Appendix A.18. • Appendix A.14. • Appendix A.16 and Appendix A.3. • Section 10.6.4. • Appendix A.22. • Section 10.6.4 and 10.6.5.
<p>Heritage</p>	<ul style="list-style-type: none"> • Identify sites of cultural significance. • Assess potential impacts on any heritage sites and / or cultural associations in accordance with EPA (2004) <i>Assessment of Aboriginal Heritage guidelines</i>. • If heritage sites and/or cultural associations are identified, and are likely to be impacted, propose management measures to avoid or minimise impacts. If this is not possible, propose restoration measures or offset any impacts. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Section 9.5. • Section 10.7.3. • Section 10.7.4. • Section 10.7.5.



ESD category	Work required for the PER	PER reference
Offsets (Integrating Factor)	<ul style="list-style-type: none"> • All residual (following management) risks and impacts from the proposal to be considered in terms of their significance, and whether the proposal would result in significant residual impacts that require offsetting in accordance with the Western Australian Government’s offset policy and guidelines. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Section 10.8.2. • Section 10.8.3.
Rehabilitation and Decommissioning (Integrating Factor)	<ul style="list-style-type: none"> • Conduct long term (10,000 years) Landform Evolution Modelling of behaviour and performance of landforms and associated containment systems, including waste cell capping systems, modelled under a range of climatic events. • Provide a graphical conceptual representation of the final landform within the pit/cells area once all cells have been filled and capped. • Provide a Mine Closure Plan. Rehabilitation and closure management and mitigation measures should be described in a Mine Closure Plan. A final mine closure plan should be provided as an appendix to the PER and prepared in accordance with the Guidelines for Preparing Mine Closure Plans jointly prepared by the DMP and the EPA. • Provide a Waste Facility Decommissioning and Closure Management Plan as an appendix to the PER to describe the closure of the waste cells. • Provide a Radioactive Waste Management Plan as an appendix to the PER to describe the high-level management to be implemented to mitigate the risks associated with radioactive waste. • Provide a statement of how the proponent considers the EPA’s objective for this factor has been addressed. 	<ul style="list-style-type: none"> • Appendix A.7. • Appendix A.7 and Figures 10-8 and 10-9. • Appendix A.19. • Appendix A.18. • Appendix A.14. • Section 10.9.5.



Schedule 4 of the Environment Protection and Biodiversity Conservation Regulations 2000 (Cwlth) Checklist

Regulation	Description	PER reference
1 General information	1.01 The background of the action including: (a) the title of the action;	Section 1.1 and Table 1-2.
	(b) the full name and postal address of the designated proponent;	Section 1.4.
	(c) a clear outline of the objective of the action;	Section 1.6.1.
	(d) the location of the action;	Section 1.3.
	(e) the background to the development of the action;	Section 2.4.1 and Section 2.4.2.
	(f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action.	Section 10.2.3.
	(g) the current status of the action.	Public Review of the PER.
	(h) the consequences of not proceeding with the action.	Section 2.2.
2 Description	2.01 A description of the action, including: (a) all the components of the action;	Chapter 5.
	(b) the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;	Chapter 5.
2 Description	(c) how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts	Section 5.5.
	(d) relevant impacts of the action	Chapter 10.
	(e) proposed safeguards and mitigation measures to deal with relevant impacts of the action;	Chapter 10 and Chapter 12.
	(f) any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action;	Chapter 4.
	(g) to the extent reasonably practicable, any feasible alternatives to the action, including: (i) if relevant, the alternative of taking no action. (ii) a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action. (iii) sufficient detail to make clear why any alternative is preferred to another.	Chapter 2.
	(h) any consultation about the action, including: (i) any consultation that has already taken place. (ii) proposed consultation about relevant impacts of the action.	Chapter 6.



	(iii) if there has been consultation about the proposed action—any documented response to, or result of, the consultation.	
	(i) identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.	Chapter 6.
3 Relevant impacts	3.01 Information given under paragraph 2.01(d) must include: (a) a description of the relevant impacts of the action. (b) a detailed assessment of the nature and extent of the likely short term and long term relevant impacts. (c) a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible. (d) analysis of the significance of the relevant impacts. (e) any technical data and other information used or needed to make a detailed assessment of the relevant impacts.	Chapter 10.
4 Proposed safeguards and mitigation measures	4.01 Information given under paragraph 2.01(e) must include: (a) a description, and an assessment of the expected or predicted effectiveness of, the mitigation measures.	Chapter 10.
	(b) any statutory or policy basis for the mitigation measures;	Chapter 4.
	(c) the cost of the mitigation measures;	Costs for mitigation would be developed during detailed design.
	(d) an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing.	Chapter 11. Appendix A.18. Appendix A.19.
	(e) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.	Overall management plans are endorsed by the WA OEAP, DMP and DER.
	(f) a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.	Table 12-1.
5 Other approvals and conditions	5.01 Information given under paragraph 2.01(f) must include: (a) details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including: (i) what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy.	Section 4.6.1 and 4.7.



	(ii) how the scheme provides for the prevention, minimisation and management of any relevant impacts.	
	(b) a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions that apply to the action.	Section 4.4.
	(c) a statement identifying any additional approval that is required.	Section 4.4.
	(d) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.	Table 12-1.
6 Environmental record of person proposing to take the action	6.01 Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against: (a) the person proposing to take the action; and (b) for an action for which a person has applied for a permit, the person making the application.	Section 1.5.
	6.02 If the person proposing to take the action is a corporation, details of the corporation’s environmental policy and planning framework.	Section 1.5 and Chapter 11.
7 Information sources	7.01 For information given in a draft public environment report or environmental impact statement, the draft must state: (a) the source of the information. (b) how recent the information is. (c) how the reliability of the information was tested. (d) what uncertainties (if any) are in the information.	Chapter 15.