Volume 2

Balranald Mineral Sands Project

NSW Environmental Impact Statement

Prepared for Iluka Resources Limited
May 2015

Appendix A - Secretary's Environmental Impact Assessment Requirements
Appendix B - Study Team
Appendix C - Agricultural Impact Statement
Appendix D - Noise Assessment
Appendix E - Air Quality and Greenhouse Gas Assessment

ILUKA

EMM
EMGA Mitchell McLennan

Volume 1

Volume 2

Volume 3

Volume 4

Volume 5

Volume 6

Volume 7

Volume 8

Appendix A

Secretary's Environmental Impact Assessment Requirements

Balranald Project SEARs and where addressed in the EIS

Requirements	Chapter(s) addressed
A full description of the development, including:	
• the resource to be extracted, demonstrating efficient resource recovery within environmental constraints;	Chapter 4
• the mine layout and scheduling;	Chapter 4
• minerals processing;	Chapter 4
• a waste (overburden, tailings, etc.) management strategy, dealing with the EPA's requirements;	Chapter 4
• a water management strategy, dealing with the EPA's and NSW Office of Water's requirements; and	Chapter 14
• a rehabilitation strategy, dealing with NSW Trade and Investment's requirements;	Chapter 17
• a list of any approvals that must be obtained before the development may commence;	Chapter 6
An assessment of the likely impacts of the development on the environment, focussing on the specific issues identified below, including:	
• a description of the existing environment likely to be affected by the development, using sufficient baseline data;	Chapter 3
• an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice; and	Part B (Chapters 9 to 25)
• a description of the measures that would be implemented to mitigate and/or offset the potential impacts of the development, and an assessment of: i) whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented; ii) the likely effectiveness of these measures; and iii) whether contingency plans would be necessary to manage any residual risks;	Part B (Chapters 9 to 25) and chapters 26 and 27
• a description of the measures that would be implemented to monitor and report on if it is approved; the environmental performance of the development	Chapter 26
• consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS;	Chapter 26
• consideration of the development against all relevant environmental planning instruments (including Part 3 of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007); and	Chapters 5 and 6
• the reasons why the development should be approved having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development	Part B (Chapters 9 to 25) and 27
In addition to the matters set out in Schedule 1 of the Environmental Planning and Assessment Regulation 2000, the development application must be accompanied by a signed report from a suitably qualified expert that includes an accurate estimate of the: • capital investment value (as defined in Clause 3 of the Environmental Planning and Assessment Regulation 2000) of the development, including details of all the assumptions and components from which the capital investment value calculation is derived; and • jobs that would be created during each stage of the development.	Chapter 20
The EIS must address the following specific issues: Land – including:	
• an assessment of the likely impacts of the development on the soils, land capability, and landforms (topography) of the site; and	Chapter 15
• an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements in Clause 12 of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007;	Chapters 3, 16 and 27

Requirements	Chapter(s) addressed
Water – including:	
• an assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, having regard to the EPA's and NSW Office of Water's requirements and the NSW Aquifer Interference Policy;	Chapter 14
• an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users	Chapter 14
• a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures;	Chapter 14
• demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP);	Chapter 14
• a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant WSP or water source embargo; and	Chapter 14
• a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts;	Chapter 14
Biodiversity – including:	
• an assessment of the likely biodiversity impacts of the development, having regard to the principles and strategies in the draft NSW Biodiversity Offsets Policy for Major Projects and the requirements of OEH;	Chapter 12
• measures taken to avoid, reduce or mitigate impacts on biodiversity;	Chapter 12
• accurate estimates of proposed vegetation clearing;	Chapter 12
• a comprehensive offset strategy to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term;	Chapter 12
Air Quality – including:	
• an assessment of the likely air quality impacts of the development in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW and the EPA's additional requirements; and	Chapter 10
• reasonable and feasible mitigation measures to minimise dust and processing emissions, including evidence that there are no such measures available other than those proposed;	Chapter 10
• monitoring and management measures, in particular air quality monitoring; and	Chapter 10
• an assessment of the likely greenhouse gas impacts of the development, dealing with the EPA's requirements;	Chapter 10
Heritage – including:	
• an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: iv) demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting mitigation options and measures; and v) outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and	Chapter 13
• a Historic heritage assessment (including archaeology) which must: vi) include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and vii) outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures);	Chapter 24
Noise – including:	
• an assessment of the likely operational noise impacts of the development (including construction noise) under the NSW Industrial Noise Policy, including the obligations in chapters 8 and 9 of the policy;	Chapter 9
• if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the Interim Construction Noise Guideline;	Chapter 9

Requirements	Chapter(s) addressed
• an assessment of the likely road noise impacts of the development under the NSW Road Noise Policy;	Chapter 9
Traffic & Transport – including:	
• accurate predictions of the road traffic generated by the project;	Chapter 18
• an assessment of the capacity of the rail network to accommodate the transport of ore;	Chapter 18
• an assessment of potential traffic impacts on the safety and efficiency of the road network; and	Chapter 18
• a detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road networks in the surrounding area over the life of the project;	Chapter 18
Visual – including an assessment of the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain, the temporary and permanent modification of the landscape during the various stages of the project (overburden dumps, bunds, etc.), and minimising the lighting impacts of the development;	Chapter 25
Social & Economic – including:	
• an assessment of the likely social impacts of the development (including perceived impacts), paying particular attention to any impacts on Balranald; and • an assessment of the likely economic impacts of the development, paying particular attention to: viii) the significance of the resource ix) economic benefits of the project for the State and region; and x) the demand for the provision of local infrastructure and services.	Chapters 19 and 20
Hazards and Risks – including: a detailed description of the management of concentrate and backloaded waste material during transport, storage and handling; and bushfires.	Chapters 22 and 23
The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	Chapter 7

NSW GOVERNMENT | Planning & Environment

Resource Assessments
Contact: Kane Winwood
Phone: 9228 6298
Email: kane.winwood@planning.nsw.gov.au

Our Ref: 11/22089-1

Ms Julieanne Goode
Senior Environment & Community Specialist
Iluka Resources Limited
9-11 Dequetteville Terrace
ADELAIDE SA 5067

Dear Ms Goode

State Significant Development - Secretary's Requirements
Balranald Mineral Sands Project (SSD-5285)

I have attached a copy of the Secretary's environmental assessment requirements (EARs) for the preparation of an Environmental Impact Statement (EIS) for the Balranald Mineral Sands Project.

These requirements are based on the information you have provided to date and the previous Director-General's Requirements, which were prepared in consultation with relevant government agencies and Balranald Shire Council. While the Department has decided that it does not require further information from the agencies for the revised assessment requirements, you should continue to consult with these parties and address their comments appropriately in preparing the EIS.

Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the project within two years of the date of issue of these EARs.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your project. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

The Department will review the EIS for the project carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the EARs.

If you have any enquiries about these requirements, please contact Kane Winwood.

Yours sincerely

Michael D 2.12.14

Mike Young
Manager
Mining Projects
as delegate of the Secretary

Secretary's Environmental Assessment Requirements

State Significant Development

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

Application Number	SSD 5285
Development	The Balranald Mineral Sands Project, which includes: • developing an open cut mineral sands mine and associated infrastructure; • extracting and processing approximately 14.4 million tonnes of ore over a period of up to 10 years; • transporting the processed ore from the mine via road to a mineral separation plant in Victoria; and • rehabilitating the site.
Location	12 km north of Balranald, in the Balranald LGA
Applicant	Iluka Resources Limited
Date of Issue	2 December 2014
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* In addition, the EIS must include: • a full description of the development, including: – the resource to be extracted, demonstrating efficient resource recovery within environmental constraints; – the mine layout and scheduling; – minerals processing; – a waste (overburden, tailings, etc.) management strategy, dealing with the EPA's requirements; – a water management strategy, dealing with the EPA's and NSW Office of Water's requirements; and – a rehabilitation strategy, dealing with NSW Trade and Investment's requirements; • a list of any approvals that must be obtained before the development may commence; • an assessment of the likely impacts of the development on the environment, focussing on the specific issues identified below, including: – a description of the existing environment likely to be affected by the development, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice; and – a description of the measures that would be implemented to mitigate and/or offset the potential impacts of the development, and an assessment of: o whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented; o the likely effectiveness of these measures; and o whether contingency plans would be necessary to manage any residual risks; – a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved; • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS; • consideration of the development against all relevant environmental planning instruments (including Part 3 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007); and*

	• the reasons why the development should be approved having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development. In addition to the matters set out in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*, the development application must be accompanied by a signed report from a suitably qualified expert that includes an accurate estimate of the: • capital investment value (as defined in Clause 3 of the *Environmental Planning and Assessment Regulation 2000*) of the development, including details of all the assumptions and components from which the capital investment value calculation is derived; and • jobs that would be created during each stage of the development.
Key issues	The EIS must address the following specific issues: • **Land** - including: - an assessment of the likely impacts of the development on the soils, land capability, and landforms (topography) of the site; and - an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements in Clause 12 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*; • **Water** – including: - an assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, having regard to the EPA's and NSW Office of Water's requirements and the *NSW Aquifer Interference Policy*; - an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; - demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP); - a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant WSP or water source embargo; and - a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; • **Biodiversity** – including: - an assessment of the likely biodiversity impacts of the development, having regard to the principles and strategies in the draft *NSW Biodiversity Offsets Policy for Major Projects* and the requirements of OEH; - measures taken to avoid, reduce or mitigate impacts on biodiversity; - accurate estimates of proposed vegetation clearing; - a comprehensive offset strategy to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term; • **Air Quality** – including: - an assessment of the likely air quality impacts of the development in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* and the EPA's additional requirements; and - reasonable and feasible mitigation measures to minimise dust and processing emissions, including evidence that there are no such measures available other than those proposed;

	- monitoring and management measures, in particular air quality monitoring; and - an assessment of the likely greenhouse gas impacts of the development, dealing with the EPA's requirements; • **Heritage** – including: - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: o demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting mitigation options and measures; and o outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and - a Historic heritage assessment (including archaeology) which must: o include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and o outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); • **Noise** – including: - an assessment of the likely operational noise impacts of the development (including construction noise) under the *NSW Industrial Noise Policy*, including the obligations in chapters 8 and 9 of the policy; - if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the *Interim Construction Noise Guideline*; - an assessment of the likely road noise impacts of the development under the *NSW Road Noise Policy*; • **Traffic & Transport** – including: - accurate predictions of the road traffic generated by the project; - an assessment of the capacity of the rail network to accommodate the transport of ore; - an assessment of potential traffic impacts on the safety and efficiency of the road network; and - a detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road networks in the surrounding area over the life of the project; • **Visual** – including an assessment of the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain, the temporary and permanent modification of the landscape during the various stages of the project (overburden dumps, bunds, etc.), and minimising the lighting impacts of the development; • **Social & Economic** – including: - an assessment of the likely social impacts of the development (including perceived impacts), paying particular attention to any impacts on Balranald; and - an assessment of the likely economic impacts of the development, paying particular attention to: o the significance of the resource o economic benefits of the project for the State and region; and o the demand for the provision of local infrastructure and services; and • **Hazards and Risks** – including: - a detailed description of the management of concentrate and back-loaded waste material during transport, storage and handling; and - bushfires.
Consultation	During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Land Resources	
	Agricultural Impact Assessment Guidelines 2012 (DP&I)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
Biodiversity	
	Draft NSW Biodiversity Offset Policy for Major Projects (OEH)
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW 2009)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DECC 2004)
	Threatened Species Assessment Guidelines: the Assessment of Significance (DECC 2007)
	Guidelines for Threatened Species Assessment (DoP 2005)
	BioBanking Assessment Methodology (OEH)
	Environmental Offsets Policy (Commonwealth DoE)
	NSW State Groundwater Dependent Ecosystem Policy (NOW)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Water Sharing Plan for the Lower Murray Darling Unregulated and Alluvial Water Sources (2011)
	NSW Government Water Quality and River Flow Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries.
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)

	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	NSW Aquifer Interference Policy 2012 (NOW)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Water Sharing Plan for NSW Murray Darling Basin Porous Rock Groundwater Sources (2011)
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
Aboriginal	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis

Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)
Environmental Planning Instruments - General	
	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
	State Environmental Planning Policy (State and Regional Development) 2011
	State Environmental Planning Policy (Infrastructure) 2007
	Balranald Local Environmental Plan 2010

13 June 2011

David Kitto
Director
Mining and Industry Projects
Major Projects Assessment
Department of Planning & Infrastructure
22-33 Bridge Street
Sydney NSW 2000

Attention: Kane Winwood

Re: Clarification of Director-General's Requirements
Balranald Mineral Sands Project (SSD-5285)

Dear Mr Kitto,

I refer to the Director-General's Requirements (DGRs) issued for the Balranald Mineral Sands Project issued on 25 May 2012 (your reference 11/22089-1).

We would like to request clarification or an amendment on three matters contained within the DGRs, including the development description and requirements relating to water resources and traffic and transport. These matters are discussed below.

Development description

The development description in the DGRs states:

The Balranald Mineral Sands Project, which includes:

- *developing an open cut mineral sands mine and associated infrastructure;*
- *extracting and processing approximately 14.4 million tonnes of ore over a period of up to 10 years;*
- *transporting the processed ore from the mine via road to a mineral separation plant in Victoria; and*
- *rehabilitating the site.*

The description of the transportation of the ore doesn't cover the transport of ilmenite directly to port nor the potential return of waste (or by-product) back to the mine from Hamilton as described in the Project Scoping Report dated April 2012. Page 7 of the Project Scoping Report stated that the project included the following:

- *transport of the [heavy mineral concentrate]HMC from the mine by a combination of road and rail to Iluka's mineral processing facilities in Hamilton, Victoria;*
- *transport of Ilmenite from the mine by either road or a combination of road and rail to port facilities in Victoria; and*

- *potential for transportation of by product from Hamilton [mineral separation plant] MSP back to the mine site by either road or a combination of rail and road.*

Iluka requests that the above be noted on the Department's file, or the DGRs amended to reflect these transport arrangements.

Water resources

The DGRs require that the EIS demonstrate:

... that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP);

Iluka is unsure as to the meaning of 'can be obtained'. Does it mean that Iluka has to document that there is a process in place to obtain the water for construction and operation (ie via the purchase/lease of licence allocations on the market or via a controlled allocation order from the Minister) or does it mean that Iluka needs to demonstrate in the document that we have obtained the allocations to the water? Accordingly, Iluka requests clarification around the meaning or intention of this requirement.

Traffic and transport

The DGRs require:

an assessment of the capacity of the rail network to accommodate the transport of ore;

They also require:

a detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road and rail networks in the surrounding area over the life of the project;

As stated on pages 23 and 14 of the Project Scoping Report, no rail transport is proposed in NSW. Rail transport will only be undertaken in Victoria:

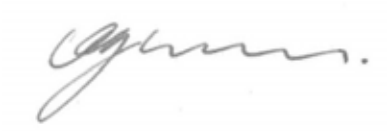
In relation to the transportation of HMC, this will be transported by road from the mine site to either Robinvale (Option A) or Hopetoun via Robinvale (Option B), both towns located in Victoria, before it is loaded for rail transport. In relation to the transportation of ilmenite, there are four options being considered, but all options include the transportation by road to different rail loading facilities in Victoria. In relation to the potential transportation of by-products produced at the Hamilton MSP back to the mine site, this will be undertaken by road or a combination of road and rail. However if the by-products are transported by rail, this would only be undertaken by rail in Victoria, with road transportation being undertaken in NSW. Accordingly, only road transportation is proposed in NSW.

Discussions have commenced with the Victorian Government regarding upgrades required for the rail network, including the need for regulatory approvals.

Accordingly, it is requested that any requirements relating to assessments of rail transport be deleted from the DGRs.

Should you have any queries regarding this matter, please do not hesitate to contact me on 08 8300 2066 or 0408 940 391.

Yours sincerely



Andrew Minns
Manager HSEC
Iluka Resources Limited

Brett McLennan

From: Kane Winwood [Kane.Winwood@planning.nsw.gov.au]
Sent: Monday, 23 July 2012 12:39 PM
To: Kate Cox
Cc: andrew.minns@; Brett McLennan; Jarred Kramer; Julieanne Goode; Tim Baker
Subject: RE: DGRs for Balranald Project
Attachments: Balranald Project_Request for Clarification of DGRs_130612.pdf

Hi Kate,

On the points raised in Iluka's letter of 13 June 2012 (attached) regarding the clarification of the DGRs:

1. Description of the Proposal
Noted that transport of ilmenite and return waste is not specifically mentioned in the description in the DGRs and I will consider whether or not to make any changes to our website, but the key document for people's reference is the project scoping report which includes the full scope of proposed transport operations.

2. Water Supply
The preferred outcome would be for Iluka to demonstrate that the water entitlements have been obtained.

What we are trying to avoid is uncertainty about whether or not water can legally be obtained for the development in sufficient quantities to enable it to operate. If it can at least be demonstrated that Iluka has commenced the process to obtain water entitlements (with a description of the mechanism by which these would be obtained) and that these entitlements are available, I believe this would satisfy this component of the DGRs.

I've copied Tim Baker onto this for information and to clarify this position if I'm slightly off the mark.

3. Rail Transport
If, by the time the EIS is submitted, rail transport (in NSW) is not proposed, just make this clear in the EIS. An assessment of rail impacts would not therefore be required if no rail transport is proposed.

I trust this clarifies Iluka's queries.

Regards,
Kane

Kane Winwood
Senior Planner
Mining & Industry Projects
NSW Department of Planning & Infrastructure | GPO Box 39 | Sydney NSW 2001
T 02 9228 6298 E kane.winwood@planning.nsw.gov.au

>>> Kate Cox <kcox@emgamm.com> 13/06/2012 11:25 am >>>
Hi Kane,

As per Brett's email below, please find attached a request for clarification of a number of aspects within the DGRs issued for the Balranald Mineral Sands Project.

Brett will be in touch in the next couple of days to discuss a way forward in seeking these clarifications.

Thanks,
Kate

Kate Cox
Senior Environmental Scientist

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From: Brett McLennan
Sent: Tuesday, 12 June 2012 5:22 PM
To: Kane.Winwood@planning.nsw.gov.au
Cc: Kate Cox; Goode, Julieanne
Subject: DGRs for Balranald Project

Hi Kane,

Just called but Felicity said that you were away from your desk.

This email is just a heads up that we/Iluka will be sending through a letter soon requesting clarification on a couple of aspects of the DGRs issued for the Balranald Project. They relate to the project description summary (request that it includes all transport options in the summary), water supply (that we demonstrate that water can be obtained appropriately in accordance with a WSP) and need to undertake a rail assessment (when no rail is proposed in New South Wales – all product will be transported across the border to Victoria).

We will send through letter in due course. Then I'll be in contact to determine how we move forward with seeking a clarification.

Regards,

Brett

Now in Sydney, Newcastle and Brisbane. EMM's Brisbane office opened on 20 February. The office is led by leading Queensland environmental professional - Rob Janssen. Rob can be contacted on 07 3839 1800 or rjanssen@emgamm.com

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EMGA Mitchell McLennan

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Major Projects Assessment
Mining & Industry Projects
Contact: Kane Winwood
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Email: kane.winwood@planning.nsw.gov.au

Our Ref: 11/22089-1

Mr Andrew Minns
Manager HSEC
Iluka Resources Limited
9-11 Dequetteville Terrace
ADELAIDE SA 5067

Dear Mr Minns

State Significant Development - Director-General's Requirements
Balranald Mineral Sands Project (SSD-5285)

I have attached a copy of the Director General's environmental assessment requirements (DGRs) for the preparation of an Environmental Impact Statement (EIS) for the Balranald Mineral Sands Project.

These requirements are based on the information you have provided to date and have been prepared in consultation with relevant government agencies and the affected council. Their comments, which you should address appropriately in preparing the EIS, are also attached (see Attachment 2). Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the project within two years of the date of issue of these DGRs. The Department will review the EIS for the project carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

I wish to emphasise the importance of effective and genuine community consultation and the need for proposals to proactively respond to the community's concerns. Accordingly a comprehensive, detailed and genuine community consultation and engagement process must be undertaken during preparation of the EIS. This process must ensure that the community, including key special interest, is both informed of the proposal and is actively engaged in issues of concern to them. Sufficient information must be provided to the community so that it has a good understanding of what is being proposed and of the potential impacts.

Your project may require separate approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Department encourages you to confirm whether such an approval will be required as soon as possible. If an EPBC Act approval is required, I would appreciate it if you would advise the Department accordingly, as the Commonwealth approval process may be integrated into the NSW approval process, and supplementary DGRs may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your project. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

If you have any enquiries about these requirements, please contact Kane Winwood.

Yours sincerely

DKitto 25/5/12

David Kitto
Director
Mining and Industry Projects
Delegate of the Director-General

Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

State Significant Development

Application Number	SSD 5285
Development	The Balranald Mineral Sands Project, which includes: • developing an open cut mineral sands mine and associated infrastructure; • extracting and processing approximately 14.4 million tonnes of ore over a period of up to 10 years; • transporting the processed ore from the mine via road to a mineral separation plant in Victoria; and • rehabilitating the site.
Location	12 km north of Balranald, in the Balranald LGA
Applicant	Iluka Resources Limited
Date of Issue	25 May 2012
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* In addition, the EIS must include a: • detailed description of the development, including: – need for the proposed development; – information on the amount of ore to be mined and its mineralogy; – justification for the proposed mine plan, including efficiency of resource recovery, mine safety, and environmental protection; – likely staging of the development - including construction, operational stage/s and rehabilitation; – likely interactions between the development and existing, approved and proposed mining operations in the vicinity of the site; – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.
Key issues	The EIS must address the following specific issues: • **Land Resources** - including a detailed assessment of the potential impacts on: - soils and land capability (including salinisation and contamination); - landforms and topography; and - land use, including agricultural use; • **Water Resources** – including: - detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: o detailed modelling of potential groundwater impacts; o impacts on affected licensed water users and basic landholder

rights; and
    - impacts on riparian, ecological, geomorphological and hydrological values of watercourses, including environmental flows;
  - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures;
  - an assessment of proposed water discharge quantities and quality/ies against receiving water quality and flow objectives;
  - an assessment of proposed modifications to surface water management, including modelling the redistribution of waters and an assessment of the impact on neighbouring properties and the associated watercourse and floodplain;
  - identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*;
  - demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP);
  - a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant WSP or water source embargo; and
  - a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts;
- **Biodiversity** – including:
  - measures taken to avoid, reduce or mitigate impacts on biodiversity;
  - accurate estimates of proposed vegetation clearing;
  - a detailed assessment of potential impacts of the development on any:
    - terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and
    - regionally significant remnant vegetation, or vegetation corridors;
  - a comprehensive offset strategy to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term;
- **Air Quality** – including a quantitative assessment of potential:
  - construction and operational impacts, with a particular focus on dust emissions (including $PM_{2.5}$ and PM_{10} emissions) and processing emissions;
  - reasonable and feasible mitigation measures to minimise dust and processing emissions, including evidence that there are no such measures available other than those proposed; and
  - monitoring and management measures, in particular real-time air quality monitoring;
- **Greenhouse Gases** – including:
  - a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions;
  - a qualitative assessment of the potential impacts of these emissions on the environment; and
  - an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency;
- **Waste** – including:
  - accurate estimates of the quantity and nature of the potential waste streams of the development, including tailings, coarse reject and acid-generating potential;
  - a tailings and coarse reject disposal strategy; and
  - a description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed;
- **Hazards and Risks** – including:
  - a detailed description of the management of concentrate and back-loaded waste material during transport, storage and handling; and
  - bushfires;
- **Heritage** – including:
  - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must:

	○ demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting mitigation options and measures; and ○ outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and - a Historic heritage assessment (including archaeology) which must: ○ include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and ○ outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); • **Noise** – including a quantitative assessment of potential: - construction, operational and transport noise impacts; - reasonable and feasible mitigation measures, including evidence that there are no such measures available other than those proposed; and - monitoring and management measures, in particular real-time, attended noise monitoring and predictive meteorological forecasting; • **Traffic & Transport** – including: - accurate predictions of the road and rail traffic generated by the project; - an assessment of the capacity of the rail network to accommodate the transport of ore; - an assessment of potential traffic impacts on the safety and efficiency of the road network; and - a detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road and rail networks in the surrounding area over the life of the project; • **Visual** – including: - a detailed assessment of the: ○ changing landforms on the site during the various stages of the project; and ○ potential visual impacts of the project on private landowners in the surrounding area as well as key vantage points in the public domain, including lighting impacts; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the project; • **Social & Economic** – including an assessment of the: - potential direct and indirect economic benefits of the project for local and regional communities and the State; - potential impacts on local and regional communities, including: ○ increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and ○ impacts on social amenity; - a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the project, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism; and - a detailed assessment of the costs and benefits of the development as a whole, and whether it would result in a net benefit for the NSW community; and • **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in the Strategic Framework for Mine Closure, including: - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; and - the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with relevant local, State

	and Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the: • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Heritage Branch); • Environment Protection Authority; • Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services; • Department of Primary Industries (including the NSW Office of Water, NSW Forestry, Agriculture and Fisheries sections, Catchments and Lands (Crown Lands Division)); • Transport for NSW (including the Centre for Transport Planning, and Roads and Maritime Services); • Essential Energy; • Lower Murray Darling Catchment Management Authority; and • Balranald Shire Council. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.
Further consultation after 2 years	If you do not lodge a DA and an EIS for the development within 2 years of the issue date of these DGRs, you must consult further with the Director-General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Land Resources	
	Agricultural Impact Assessment Guidelines 2012 (DP&I)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
Biodiversity	
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (DECCW 2009)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DECC 2004)
	Threatened Species Assessment Guidelines: the Assessment of Significance (DECC 2007)
	Guidelines for Threatened Species Assessment (DoP 2005)
	BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW 2008)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009
	NSW Government Water Quality and River Flow Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries.
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)

	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Any relevant Water Sharing Plan for groundwater and surface water resources
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Interim Guidelines for the Assessment of Noise From Rail Infrastructure Projects (DECC)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
Aboriginal	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis

Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)