



EcOz
Environmental
Services

WesternDesert
RESOURCES

Draft EIS - Appendix Q Commitments Table

Western Desert Resources Limited
Roper Bar Iron Ore Project



2012



Component	Aspect/Impact	Commitment/Safeguard	Section in EIS
Proponent	Operations	Western Desert Resources Limited commits to operate in an environmentally and socially responsible way in order to minimise our footprint and maximise benefits for our staff, shareholders and stakeholders well beyond the life of our mines.	Chapter 1 (Introduction)
Project Planning and Project Components	Construction of Haul Road	WDRL commit to undertaking construction of river crossings to minimise impact on fish passage, in accordance with best-practice engineering guidelines.	Chapter 2 (Waste Management)
Project Planning and Project Components	Low Grade Storage Facility	A sub grade storage facility will hold material that is below 56% iron so that it can be potentially beneficiated in the future. This facility is adjacent to the ROM pad and crushing circuit. This facility is likely to store ore for several years, so it will require an impervious pad, erosion and sediment control structures and monitoring devices for surface and groundwater.	Chapter 2 (Project Description)
Project Planning and Project Components	Haul Road	WDRL commits to locating construction camps outside of locations of environmental, social or cultural sensitivity. Camps will be located at least 100m away from any creek or water-body. Camps will be located away from stock pads and at least 500m away from wells, bores, dams and drinking troughs used by stock. Camps will not be set up in areas of cultural sensitivity.	Chapter 2 (Project Description)
Project Planning and Project Components	Haul Road	Should the haul road no longer be required, WDRL commit to rehabilitation of the haul road area according to general principles and prevailing conditions at the time of decommissioning.	Chapter 2 (Project Description)
Project Planning and Project Components	Land Repatriation (Limmen National Park)	WDRL commit to repatriating into Limmen National Park components of the mining lease if subsequently shown to be unlikely to provide for future mining potential and, in mined areas, when the resource is no longer economically viable for mining and the areas have been appropriately rehabilitated.	Chapter 3 (Land Management)
Soils and Geology	Geotechnical Survey	WDRL commit to undertaking soil surveys and testing along the Haul Road route and throughout the MLA Area to determine erosion risk and incorporate relevant parameters into the road design. These studies are underway.	Chapter 3 (Geology and Soils)
Acid Mine Drainage	PAF Management	WDRL commit to updating the PAF Management Plan (contained in Appendix K) (if required) to meet the requirements of regulatory bodies (e.g. DoR) and as more detailed	Appendix K

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		information becomes available (e.g. kinetic testing).	
Acid Mine Drainage	PAF Management	In regards to the management of PAF materials during mining, WDRL commit to improve the preliminary risk assessment framework to promote better environmental practice and continuous environmental improvement and awareness of AMD issues.	Appendix K
Acid Mine Drainage	PAF Management	In regards to waste rock structures containing PAF materials, WDRL commits to implement well designed drainage and seepage structures to prevent seepage leaving the WRD footprints. Proposed engineered and scientific steps will be improved as up to date technology and knowledge becomes available.	Appendix K
Groundwater	Groundwater Management	WDRL commits to implement Environmental Monitoring Bores (EMBs) around the vicinity of mine infrastructure such as WRD, ROM, and pits monitor for potential contamination and as necessary remediated before contaminants move into the surrounding environment.	Appendix E
Groundwater	Groundwater Management	WDRL commits to investigate the development of interaction between surface and ground waters as a result of the pit and other water structure implementation. Results will inform long term groundwater monitoring and feed into closure and rehabilitation strategies.	Appendix E
Surface Water	Regional and Local Scale Flooding	WDRL commit to undertaking additional field surveys/mapping of the project site to support appropriate hydrologic and hydraulic modelling for the mine site, air strip and accommodation camp to enable an optimum design with respect to flood protection measures. This work has been commissioned and is ongoing.	Chapter 6 (Surface Water)
Surface Water	Water Quality and Environmental Flows	WDRL commit to undertaking surface water quality monitoring on a regular basis at sites that are located both upstream and downstream of the mine site, in order to assess potential impacts of mining operations on downstream surface water quality. The monitoring program will be finalised prior to commencement of mining activities, in consultation with relevant regulatory agencies.	Chapter 6 (Surface Water)
Erosion and Sediment Control	Mine site and accommodation camp	WDRL commit to implementing the following best practice erosion and sediment control devices and stormwater management controls on the mine site and accommodation camp: <ul style="list-style-type: none"> • diversion drains; • catch drains; • level spreaders; 	Appendix L (Erosion and Sediment Control)

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		<ul style="list-style-type: none"> • sediment basins; and • maintenance and monitoring program. 	
Erosion and Sediment Control	Stockyard	<p>WDRL commit to implementing the following best practice erosion and sediment control devices and stormwater management controls at the Stockyard:</p> <ul style="list-style-type: none"> • diversion/catchment bunds; • sediment basins; • mulch bunds; and • maintenance and monitoring program. 	Appendix L (Erosion and Sediment Control)
Erosion and Sediment Control	Haul road	<p>WDRL commit to implementing the following best practice erosion and sediment control devices and stormwater management controls site haul road:</p> <ul style="list-style-type: none"> • diversion channel; • catch drains; • silt fences; • check dams; • level spreaders; • sediment basins; and • floating booms. 	Appendix L (Erosion and Sediment Control)
Erosion and Sediment Control	Barge loading facility	WDRL commit to developing an Erosion and Sediment Control Plan for construction of the barge loading facility once detailed designs have been prepared.	Appendix L (Erosion and Sediment Control).
Groundwater	Extent and Nature of Aquifer System in Project Area	<p>WDRL commit to further drilling to a depth of 120m below surface, sampling and testing to ascertain whether there is continuity of the aquifer system hosted by the Sherwin Iron Ore Body or whether there is an independent deeper aquifer system that will require consideration, with appropriate management as required.</p> <p>Shallow monitoring bores (~ 60 m) will also be constructed around ancillary infrastructure.</p>	Chapter 6 (Groundwater)
Groundwater	Water Balance	WDRL commit to ongoing refinement of the site wide water balance.	Chapter 6 (Groundwater)

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Groundwater	Groundwater Monitoring	WDRL commit to quarterly groundwater sampling and monitoring programs including Groundwater Dependent Ecosystems.	Chapter 6 (Groundwater)
Groundwater	Groundwater Monitoring	WDRL commit to expansion of the environmental monitoring bore (EMB) network around and within the vicinity of planned mine infrastructure to facilitate monitoring of potential impacts during mining operations. Groundwater levels and field water quality will be surveyed monthly whilst samples for laboratory analysis of water quality will be obtained quarterly, from all monitoring bores. The data and information gathered from these monitoring programs will be used to assess potential impacts of mining operations on downstream water qualities.	Chapter 6 (Groundwater)
Groundwater	Adaptive Management of Groundwater	WDRL commit to updating the groundwater flow model periodically using the results of ongoing monitoring including further modelling on predicting post-mining water levels, pit water quality and possible migration of contaminated groundwater/seepage plumes off site.	Chapter 6 (Groundwater)
Marine Environment	Construction of Coastal and Marine Infrastructure - Timing	WDRL commits to timing of construction works to take into account seasonal variation and optimal tidal conditions to minimise impacts upon the marine environment.	Chapter 5 (Marine)
Marine Environment	Seabed Disturbance and Coastal Construction	WDRL commits to the use of physical mitigation measures including but not limited to erosion and sediment control barriers onshore and floating booms and silt curtains in the marine environment for the construction of the Barge Landing Structure and combi-pile wall.	Chapter5 (Marine)
Marine Environment	Port traffic management	WDRL commits to a set of Port Operating Rules, which will be developed by WDRL in conjunction with Xstrata and agreed upon by Xstrata to establish operating rules for the safety of all port users.	Chapter 5 (Marine)
Marine Environment	Acoustic Disturbance	WDRL commits to the implementation of acoustic controls to minimise underwater noise impacts including marine megafauna observers prior to and during construction, engineering alternatives for pile installation or soft start procedures, and speed restrictions in the Port.	Chapter 5 (Marine)

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Marine Environment	Marine Megafauna Interactions (Vessel Strike and Disturbance)	WDRL commits to the implementation of marine megafauna approach/interaction procedures and mandatory speed restrictions within the access channel- (assuming that these do not presently exist for current operations) – suggested maximum speed within the channel of 4 knots. Barges will have operational maximum of approximately 6 knots empty and 4 knots loaded. Vessels are to avoid interactions with marine mammals where possible – noting the limitations imposed by the lack of manoeuvrability of barges.	Chapter 5 (Marine)
Marine Environment	Hydrocarbon or Ore Spill	WDRL commits to design controls to prevent spills including covered conveyors and loading chutes, automatic cut-off valves on fuel hoses, standard operating procedures and clean up procedures as specified in Chapter 5, and in WDRL documentation.	Chapter 5 (Marine)
Marine Environment	Fugitive Dust Emissions	WDRL commits to dust suppression measures specific to coastal and maritime operations as specified in the Chapter 5. WDRL also commit to contributions toward Xstrata's existing dust monitoring program at Bing Bong Port, including monetary contributions and personnel as required.	Chapter 5 (Marine)
Marine Environment	Marine Debris (Pollution)	WDRL commits to management of rubbish and waste including regular rubbish inspections around the Port.	Chapter 5 (Marine)
Marine Environment	Marine Ecological Monitoring	WDRL commits to monitoring of water and sediment quality, presence of invasive marine pest species and other marine biota as determined by the Strategic Review as outlined in Chapter 5.	Chapter 5 (Marine)
Marine Environment	Recreational Fishing Access	The existing viewing platform, access track and informal car parking area will be relocated, with appropriate signage installed as required as determined appropriate by Xstrata.	Chapter 5 (Marine)
Marine Environment	Extreme Weather Events (Severe Storms and Cyclones)	Coastal process modelling (if required) will be undertaken at the detailed design stage to ensure that the proposed Barge Loading Facility does not impact upon coastal processes. Extreme event design criteria (i.e. wave height, storm surge) will be taken into account at the detailed design stage so that existing infrastructure is designed to withstand any future event.	Chapter 5(Marine)
Terrestrial Biodiversity	Vegetation Clearing	WDRL commit to using NT Land Clearing Guidelines to guide vegetation clearing activities. Clearing will be staged to coincide with mine development.	Appendix C Environmental Management Plans

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Terrestrial Biodiversity	Weeds	<p>WDRL commits to perform a targeted weed survey within the following areas proposed for development prior to construction activities:</p> <ul style="list-style-type: none"> ○ Bing Bong Port Facility (as this is a potential weed source – spread potential – during haul road construction and operation/road maintenance); ○ A weed survey of the camp site will be performed prior to clearing and appropriate management measures installed; and ○ Complete weed survey of final haul road alignment (up and downstream environments) to gain a baseline of weed infestations in the project area. 	Chapter 4 (Terrestrial Biodiversity)
Terrestrial Biodiversity	Vegetation	WDRL commits to monitoring the health of vegetation for stream-side Melaleuca communities.	Chapter 9
Aquatic Biodiversity/Water	Macroinvertebrate assemblages	WDRL commit to ongoing surveys of macroinvertebrate assemblages. Macroinvertebrate monitoring will continue to be undertaken as part of the surface water monitoring program.	Chapter 4(Aquatic Biodiversity)
Aquatic Biodiversity	Freshwater Fish	WDRL will commit to further study of fish assemblages along the creeks and rivers of the mine site, haul road and port area to improve knowledge of fish assemblages in this understudied region.	Chapter 4 (Terrestrial and Aquatic Biodiversity)
Pest and Disease Vectors	Biting Insects (Mosquitoes)	WDRL commit to undertaking a 12 month baseline biting insect study to be completed January 2013.	Appendix O Biting Insect Management Plan
Pest and Disease Vectors	Weeds	WDRL will control Parkinsonia appropriately during the construction phase to ensure that the weed is not spread elsewhere within the project area, including at Bing Bong and anywhere else this is identified within the project area. WDRL further commit to the implementation of a strict weed quarantine program to ensure that weeds are not spread by the mining operation.	Chapter 4 (Terrestrial and Aquatic Biodiversity) and Appendix F
Traffic	Traffic Management	WDRL commit to developing a Traffic Safety Management System which all inductees will be made aware of. This will include routine maintenance of vehicles, ensuring all operators are appropriately licenced, ensuring all loads are safely secured, and the management of driver fatigue.	Chapter 2 (Traffic)

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Waste Management	Landfill	WDRL commit to constructing and operating the on-site landfill to service the main camp and mine plant will be in accordance with the 'Waste Management Guidelines for Small Communities in the Northern Territory	Chapter 2 (Waste Management)
Waste Management	Clinical Waste	WDRL commit to managing clinical wastes in accordance with Section 27 Infection Control of the Remote Health Atlas (Department of Health and Families, 2006).	Chapter 2 (Waste Management)
Noise	Operational Noise Emissions	WDRL commit to implementing noise control measures at noise-sensitive places including the accommodation area and administration building at the processing plant including but not limited to acoustic design of buildings in accordance with relevant Australian standards, acoustically-attenuated power generators, and setbacks.	Chapter 7 (Air Noise and Vibration)
Noise	Operational Noise Emissions	WDRL commit to studying noise levels at potentially sensitive receptor sites along the haul road route, especially near campsites, so as to determine if noise management measures are required.	Chapter 7 (Air Noise and Vibration)
Noise	Operational Noise Emissions	To ensure long-term compliance with the requirements for environmental and occupational noise control, WDRL is committed to undertaking periodic noise surveys to evaluate and ensure compliance with the environmental and occupational health and safety legislation.	Chapter 7 (Air Noise and Vibration)
Air Quality	Dust	WDRL commit to employing stringent dust control measures to minimise the impact of its operations on the surrounding environment. This will include but is not limited to appropriate training for all personnel during site inductions.	Chapter 7 (Air Noise and Vibration)
Air Quality	Dust	WDRL commit to undertake baseline surveys of air quality at the mine site and mine camp using dust deposition gauges during the dry season, 2012 in order to provide a baseline against which expected and actual dust nuisance can be measured against. WDRL also commit to undertaking ongoing dust monitoring to monitor dust generation for the life of the mine.	Chapter 7 (Air Noise and Vibration)
Social	Community Engagement and Adaptive Impact Assessment and	WDRL commit to ongoing community engagement with community and key stakeholders as described in the Stakeholder Engagement Plan and a 'life of project' approach to social impact assessment. Ongoing engagement will enable identification of any impacts upon affected communities, and appropriate mitigation measures to be put in place.	Chapter 8 (Social)

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	Management.		
Social	Indigenous Employment	WDRL commit to maximising Indigenous employment outcomes through implementation of the WDRL Indigenous Employment Strategy.	Chapter8 (Social)
Social	Social Enterprise Scheme	WDRL commit to implementing a social enterprise scheme to maximise benefits to all members of affected communities, which is to be further refined in consultation with the Northern Land Council and Traditional Owners.	Chapter 8 (Social)
Social	Social Impact Assessment	WDRL commit to continue to undertake Social Impact Assessment studies throughout the life of the project.	Chapter 8 (Social Aspects)
Environmental Management	Complaints	WDRL commit to establishing a Complaints Register in accordance with a Complaints Management Procedure (to be developed).	Appendix C EMP
Environmental Management	Environmental Monitoring	WDRL commit to undertaking environmental monitoring as prescribed in the Environmental Management Plan to verify compliance with environmental conditions and commitments, to satisfy regulatory and reporting requirements, track environmental performance and measure the effectiveness of environmental management measures. WDRL will also participate in the environmental monitoring programs currently run by Xstrata and expand these programs if necessary for the WDRL operations. Compliance with environmental performance obligations will be further demonstrated throughout the Project by an appointed independent auditor, and externally via relevant authorities	Appendix C EMP
Rehabilitation and Closure	Rehabilitation	WDRL commit to the preparation of a rehabilitation and closure strategy, to be informed by the principles contained within the Draft Rehabilitation and Closure Plan. This will include a revegetation monitoring plan to ensure that rehabilitation success can be monitored and reported to relevant regulatory bodies and stakeholders.	Chapter 2 (Decommissioning and Closure) and Appendix P Draft Rehabilitation and Closure Strategy.

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Decommissioning	Rehabilitation and Closure	WDRL commit to annual reviews and updates of the Rehabilitation and Closure Plan.	Appendix P Rehabilitation and Closure Plan
Environmental Offsets	Offset Package Structure	WDRL commit to the creation of an offsets package which is a legally binding and auditable Offsets Agreement. The parties to the agreement would include Western Desert Resources, representative Traditional Owners, and representatives of affected Aboriginal people and their communities.	Chapter 11 (Environmental Offsets)
Environmental Offsets	Aboriginal Land and Sea Management	WDRL commits to supporting careers in land and sea management for Traditional Owners for benefits beyond the life of the mine. The Company will also commits to supporting school based junior Ranger programs.	Chapter 11 (Environmental Offsets)
Environmental Offsets	Community Facilities	The Company commits to provide seed money to assist in the provision of dedicated facilities within the communities and to operate worthy programs aimed at ameliorating the problems outlined by community members in consultations, including the provision of health services.	Chapter 11 (Environmental Offsets)