

Appendix B

Pardoo DSO Project- EPBC Act Referral



Australian Government

Department of the Environment and Water Resources

Referral of proposed action

What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) protects matters of national environmental significance (NES), and the environment, in relation to Commonwealth actions, and actions on (or impacting upon) Commonwealth land. The purpose of a referral is to determine whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister for the Environment and Water Resources' decision as to whether approval is necessary and, if so, the type of assessment that will be taken. These decisions are made within 20 business days.

When do I need to make a referral?

A referral must be made for actions that are likely to have a significant impact on matters protected by Part 3 of the EPBC Act:

- World Heritage (sections 12 and 15A)
- National Heritage places (sections 15B and 15C)
- Wetlands of international importance (sections 16 and 17B)
- Listed threatened species and communities (sections 18 and 18A)
- Listed migratory species (sections 20 and 20A)
- Protection of the environment from nuclear actions (sections 21 and 22A)
- Marine environment (sections 23 and 24A)
- Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
- Protection of the environment from Commonwealth actions (section 28)

OR

- actions that may have a significant impact on the environment of Commonwealth land (even if taken outside Commonwealth land)
- actions taken on Commonwealth land that may have a significant impact on the environment generally
- actions by Commonwealth Authorities that are likely have a significant impact on the environment require approval.

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure.

To help you decide whether or not your proposed action requires approval (and, therefore, if you should make a referral), read the following documents, available from the Department web site:

- the Policy Statement titled *Principle Significance Guidelines 1.1 – Matters of National Environmental Significance*. Additional sectoral guidelines are also available.
- the Policy Statement titled *Principle Significance Guidelines 1.2 - Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies*.
- the interactive map on the web site—enter a location to obtain a report on what matters of NES may occur in that location.

A staged or component action

An action that is a component of a larger action may not be accepted separately and may require referral of the larger action for consideration under the EPBC Act. Refer to *Fact Sheet 6: Staged Developments/Split Referrals*.

If you want to make a referral for a staged or component referral, contact the EPBC Act Referrals Section (1800 803 772).

Permits

Some activities may also require a permit under other sections of the EPBC Act, whether or not approval is required. Information is available on the Department web site.

Completing the referral form

Completing this form will help ensure that you submit the information required by the EPBC Regulations.

All referrals MUST be published on the Department's web site for public comment (the Department will arrange this) and should generally be:

- readily understood by the public
- no longer than 25 A4-sized, single-sided pages
- typed (main text no smaller than 11 points)
- have clearly legible maps and diagrams
- supplied unbound or electronically.

Provide supporting documentation, such as environmental reports or surveys, as attachments. However, the referral form must contain the core information, so that it provides an adequate basis for public comment and decision-making.

Provide coloured maps, figures or photographs to help explain the project and its location. Aerial photographs, in particular, can provide a useful perspective and context. Figures should be good quality as they may be scanned and viewed electronically as black and white documents. Maps should be of a scale that clearly shows the location of the proposed action and any environmental aspects of interest.

Using the MS Word file to enter your information

You can complete your referral by entering your information into this Word file.

Instructions are provided in green text. If you do not see the instructions you need to reveal 'hidden' text. A toolbar with buttons to turn the instructions on and off should be visible when you open the file.

Normally the instruction text will not print. (If you wish to print a copy of the form with the instructions you will need to select the Options button in the Print dialog and select Hidden text.)

Submitting the referral form

By mail to

EPBC Act Referrals Section
Environment Assessment Branch
Department of the Environment and
Water Resources
GPO Box 787
CANBERRA ACT 2601

By fax to 02 6274 1789

- Referrals must be of sufficiently clear quality to be scanned into electronic format.
- Address the fax to the mailing address, and clearly mark it as a 'Referral under the EPBC Act'.
- Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

By email to epbc.referrals@environment.gov.au.

- Clearly mark the email as a 'Referral under the EPBC Act'.
- Attach the referral as a Microsoft Word file and, if possible, a PDF file.
- To ensure file sizes are not too large (below two megabytes), enclose maps and figures as separate files if necessary. If unsure, send a question to the email address.
- Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

What happens next?

The Department will write to you at the end of the 20 business day period to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is needed. There are three types of decisions about the referral.

The proposed action is NOT LIKELY to be significant and does NOT NEED approval

No further consideration is required under the environmental assessment provisions of the EPBC Act and the action can proceed (subject to any state or local government requirements).

The proposed action is NOT LIKELY to be significant IF undertaken in specified manner

The specified manner in which you must carry out the action will be identified as part of the final decision. You must report your compliance with the specified manner to the Department.

The proposed action is LIKELY to be significant and does NEED approval

The proposed action is subject to a public assessment process before it can be considered for approval. The level of assessment will be decided at the same time. (Further information about the levels of assessment and basis for deciding the approach are available on the web site.)

If the action is likely to be significant it is called a *controlled action* and the particular matters upon which the action may have a significant impact (such as World Heritage or threatened species) are known as the *controlling provisions*.

Compliance audits

The Department may audit your project at any time to ensure that it was completed in accordance with the information provided in the referral or the stated particular manner. If the project changes, such that the degree of significance could vary, you should write to the Department to advise of the changes, and likely significance, or discuss with the EPBC Act Referrals Section (1800 803 772).

For more information

- call the Department of the Environment and Water Resources Community Information Unit on 1800 803 772 or
- visit the web site www.environment.gov.au/epbc

All the information you need to make a referral, including documents referenced in this form, can be accessed from this web page.

Environmental Protection and Biodiversity Conservation Act 1999

Referral Form

Project title: Pardoo Direct Shipping Ore (DSO) Project

1. Contacts

1.1 Referring party

Mr Nick Phillips
Project Manager
Enesar Consulting Pty Ltd
PO Box 4223, Victoria Park, WA 6979
(08) 9470 8670
nick.phillips@enesar.com.au

1.2 Responsible party

Mr Garry Plowright
Land Tenure and Approvals Manager
Atlas Iron Limited
PO Box 223, West Perth, WA 6872
(08) 9476 7911
garryp@atlasiron.com.au

1.3 Proponent

As per 1.2

2. Summary of proposed action

2.1 Short description

Atlas Iron Limited (Atlas) is a public company listed on the Australian Stock Exchange (ASX) under the ASX code AGO. This Western Australian-based 'junior' iron ore company has a wealth of local resource industry experience.

The Pardoo Direct Shipping Ore (DSO) Project is the initial part of the larger Pardoo Iron Ore Project currently being explored by Atlas. It is located in the Pilbara region of Western Australia, and the minesite is located approximately 70-km east of Port Hedland (see Figure 1).

The Pardoo DSO Project is based on an identified iron ore (hematite) resource of approximately 7.4-Mt. The project proposes an ore production rate of 1.5-Mtpa, resulting in a mining life of 5 to 6 years. The project involves the open cut mining of eight small pits in five deposits to obtain direct-shipping quality iron ore. The ore will be crushed, screened and stockpiled on site prior to being loaded into road trains for road haulage to the appropriate berth at Port Hedland. Ore will be stockpiled at the port until it is loaded onto Panamax-size (65,000-t) ships for export to overseas customers.

Atlas do not consider the Pardoo DSO Project to be a controlled action as defined by the EPBC Act, as it is not likely to have a significant impact upon matters of national environmental significance.

The Pardoo DSO Project Environmental and Social Impact Assessment (ESIA) is enclosed as supporting material to this referral of proposed action.

2.2 Latitude and longitude

The geographical coordinates of the Pardoo DSO Project minesite are provided in Table 1.

Table 1 Geographical coordinates of the proposed Pardoo DSO Project minesite.

location point	Latitude			Longitude		
	degrees	minutes	seconds	degrees	minutes	seconds
NW Boundary	-20	14	09.9	119	05	10.8
NE Boundary	-20	14	09.9	119	09	04.7
SE Boundary	-20	20	40.4	119	09	04.7
SW Boundary	-20	20	40.4	119	05	10.8

2.3 Locality

The minesite is located within the Pilbara region of Western Australia, approximately 70-km east of Port Hedland along the Great Northern Highway (see Figure 1). The minesite is situated within the De Grey pastoral station (pastoral lease 3114/1142/200).

2.4 Size of the development footprint or work area (hectares)

The estimated total disturbance footprint of the minesite is 278-ha. As contextual information, the Pilbara region covers a total area of 50,789,600-ha, the De Grey pastoral station 1,000,000-ha and the Ord Range ~18,800-ha.

2.5 Street address of the site

Great Northern Highway, Pardoo.

2.6 Lot description

Not applicable.

2.7 Local Government Area and Council contact (if known)

Town of Port Hedland
 Mr Richard Bairstow
 Manager Planning
 PO Box 41, Port Hedland, WA 6721
 (08) 9158 9342
 managerplanning@porthedland.wa.gov.au

2.8 Project life

Atlas intends to begin construction in the first quarter of 2008 (subject to approvals). Adding construction and closure time, the project life is likely to be in the order of 7 years. Decommissioning and site closure should be completed by the third quarter in 2014.

2.9 Alternatives		No
	X	Yes, complete section 3.2
2.10 State assessment		No
	X	Yes, complete Section 3.5
2.11 Component of larger action		No
	X	Yes, complete Section 3.6

3. Detailed project description

3.1 Description of proposal

Atlas has identified approximately 7.4-Mt of iron ore in five mineralised deposits within the proposed Pardoo DSO Project minesite. The proposal is to develop a mining and transport operation with a project mining life of approximately 5 to 6 years at a ore production rate of 1.5-Mtpa.

The major components of the Pardoo DSO Project are:

- Minesite establishment;
- Mining operations;
- Product transport and export; and
- Decommissioning and closure.

Minesite Establishment

The minesite access road and a temporary construction yard and administration area will be the first infrastructure constructed (see Figure 2). To minimise the area of disturbance the initial infrastructure will be established within previously disturbed areas or within the proposed mining operations centre (MOC) disturbance footprint as far as practicable.

The MOC will be located in the northern portion of the minesite and contains the following infrastructure.

- Administration area, including:
 - Atlas facilities.
 - Mining contractor's facilities.
 - Crushing and screening contractor's facilities.
 - Haulage contractor's facilities.
 - Sewage treatment and waste water storage.
 - Potable water storage.
 - Common parking area.
- Fuel storage and refuelling area.
- Power station (diesel).
- Crushing and screening plant.
- Run-of-mine (ROM) ore pad and product stockpiling area.
- Parking areas and portions of the access road and haul road.
- Combined contractors' laydown area.

Haul roads will be constructed between the pits, waste rock dumps, stockpiles and ROM pad stockpile. Minor access roads will provide access to waste rock dump inspection points, dewatering equipment, water management structures, environmental discharge locations and other minesite management areas.

Establishment of infrastructure and roads will initially involve clearing and levelling the ground. Factors considered during siting of the infrastructure and roads to minimise impact on the surrounding environment included the distance from adjacent drainage lines and the likely flood levels. Clearing and soil stripping will be undertaken in accordance with environmental management plans and protocols to minimise disturbance and provide for future rehabilitation.

Mining Operations

The proposed mining operation will be a multiple, open pit mining operation, using conventional drill and blast and load and haul methods.

Campaign mining will occur within the eight open pits, consisting of two primary pits, namely Bobby and South Limb, and six satellite pits, namely Glenda, Olivia, Alice East, Alice West, Connie and South Limb West. Given the ore blending requirements, for some years of project life, all eight pits may be open and the adjacent waste rock dumps active.

Blasting will occur on a daily basis in the active open pit. Ore and waste material will be separately loaded into haul trucks. Ore will be transported either to the ROM pad or to the adjacent pit ore stockpile. The waste rock will be used to construct bunds, transported to a waste rock dump, or used as pit backfill. Three pits will be backfilled to at least 2-m above the pre-mining watertable level (Alice East and Bobby or Glenda, which intersect the watertable) or to the depth practicable (South Limb West, which does not intersect the watertable).

The optimised pit shells of Bobby, Glenda, Alice East and South Limb extend below the watertable. These pits will require dewatering ahead of pit floor advancement. Water from the in-pit bores and sumps will be pumped to a retention pond for storage until it is used in dust suppression, evaporates or is discharged to the environment. The peak dewatering volume from Bobby, Glenda and Alice East will be approximately 3,100-kL per day. The peak dewatering volume from South Limb will be in the order of 2,000-kL per day.

Two environmental discharge pipelines will be constructed to carry the excess water from mine dewatering, which will be piped from the retention ponds and discharged at the environmental discharge locations. Based on the dewatering volumes and the project water use estimates, it is likely that, on average, approximately 1,200-kL per day from the northern retention pond and approximately 1,000-kL per day from the southern retention pond will require environmental discharge.

Ore from the pits will be hauled directly to the ROM pad or temporarily stockpiled adjacent to the pits. The crushing and screening plant will provide primary and secondary crushing and screening. Ore will be selected from the ore stockpiles on the ROM pad to create an appropriately blended product. After passing through the crusher, ore will be directed to either the lump product stockpile or the fines product stockpile. Over the life of the project, approximately 60% of the product will be fines and 40% will be lump.

Based on the pit optimisations and strip ratios, approximately 10.9-Mt of waste rock will be mined over the life of the project. Apart from the waste rock used in the construction of the pit safety bunds and other minesite works, the remaining waste rock will be brought to the surface for storage in out-of-pit waste rock dumps or placed directly in-pit as part of the backfilling. Waste rock physical characteristics will guide the placement of waste rock to achieve stability of the final waste rock dump landform. Solutes reporting to leachate or runoff during weathering of the waste rock dumps should behave no differently than runoff from natural exposures, such as outcrops of bedrock, or from built exposures, such as faces cut into a slope for road construction.

Table 2 presents a consolidated view of the approximate proposed area of disturbance for the Pardoo DSO Project, i.e. maximum of 278-ha.

Table 2 Approximate proposed area of disturbance for the Pardoo DSO Project.

Area of Disturbance	Indicative Footprint (ha)
Open pit total	26
Waste rock dump total	35
Pit ore stockpile	3
Access road	81
Mining operations centre (MOC)	50
Other ¹	83
Total proposed disturbance	278

¹ Includes haul roads, minor roads, explosive magazine, environmental discharge pipelines, retention ponds, topsoil stockpiles, safety and closure bunds and other minor disturbance.

Product Transport and Export

A contractor will transport product from the minesite to the relevant berth at Port Hedland using side-tipper, quad-configuration road trains with a load capacity of approximately 105-t and a length of approximately 53-m. The product transport road trains will be loaded at the minesite product stockpile area and will transport the product along Great Northern Highway to the designated export berth in Port Hedland.

Initially, two- or three-week transport campaigns will be used to create a 65,000-t stockpile at the existing Port Hedland public access berth. These traffic campaigns will occur no more than six times a year for a 390,000-tpa scenario and eight times a year for a 500,000-tpa scenario. Atlas has made the commitment not to truck product on the town roads during the afternoon peak hour to minimise the impact of product transport on the existing road users.

Transport of product to the proposed Utah Point bulk commodities berth is projected to commence in 2009 and would occur on a continuous basis (i.e., up to 24 hours per day, 7 days per week) to achieve the desired annual output of 1.5-Mt, with the proviso that product will not be trucked on the existing town roads during the afternoon peak hour.

Until the proposed Utah Point bulk commodities berth becomes available in 2009, the existing Port Hedland public access berth is the only export berth available to Atlas unless an agreement can be reached with a third party for the use of a private berth. Atlas has undertaken extensive negotiations with third parties in an attempt to gain access to a third-party berth. A key objective of these negotiations has been to minimise the impact of dust and road train traffic through the town of Port Hedland. In June 2007, Atlas entered into a memorandum of understanding with Fortescue Metals Group regarding interim and long-term port handling and ship loading services at Fortescue's port facilities at Anderson Point for the Pardoo DSO Project. Negotiations continue to advance in good faith.

The three berth options at the port do not differ significantly in terms of any potential impacts to matters of national environmental significance.

The stockpiling and ship loading activities at all berths are assumed to be covered by the facility approvals held (or to be held) by the Port Hedland Port Authority or a third party (i.e., Fortescue Metals Group) and as such, do not form part of the Pardoo DSO Project for the purposes of this referral of proposed action.

Decommissioning and Closure

A Mine Completion Plan will be developed and implemented in consultation with stakeholders and government regulators. Conceptually it is anticipated that post mining, the land use will revert to the existing pastoral activities. Unless otherwise agreed with the pastoralist, all above ground infrastructure will be removed. The minesite will be rehabilitated in a manner that is generally congruent with the surrounding topography, landform and vegetation where practicable. As a

minimum, the post-mining landform will be stable and constructed to comply with relevant safety standards.

3.2 Alternative locations, time frames or activities that form part of the referred action

No alternative locations, time frames or activities form part of this referral of proposed action for the minesite. Final project time frames are subject to the government approvals process. The three berth alternatives at Port Hedland do not differ significantly in terms of any potential impacts to matters of national environmental significance. As mentioned above, the stockpiling and ship loading activities at the port do not form part of the Pardoo DSO Project for the purposes of this referral.

3.3 Previously considered alternatives and the 'do nothing' case

Minesite Alternatives

The following alternatives were investigated with respect to the activities to be undertaken at the minesite and the location of surface infrastructure within the minesite:

- Replacement of the crushing and screening plant with a mobile crushing and screening plant.
- Relocation of the MOC off the Priority 1 De Grey River water reserve.
- Alternative disposal options for excess dewatered ground water.
- Alternative power sources for the minesite.

Such alternatives were considered infeasible, too costly or unwarranted given the size of the project and the proposed management measures to mitigate impacts.

Product Transport Alternatives

The only product transport alternative to the proposed truck haulage is by rail.

The BHP Billiton rail line from the Goldsworthy mine to Port Hedland runs adjacent to the minesite access intersection. BHP Billiton does not currently allow third-party access to this rail line, and indications are that it would take up to four years for an agreement on access to be reached. There are no other railways in the vicinity of the project, and the relatively small production rate and short mine life of the project do not support construction of a project-specific rail line.

Export Alternatives

Until the proposed Utah Point bulk commodities berth becomes available in 2009, the existing Port Hedland public access berth is the only export berth available to Atlas unless an agreement can be reached with a third party for the use of a private berth (see Section 3.1).

The Do Nothing Alternative

The 'do nothing' alternative refers to the potential impacts if the project was not approved or developed. Should this be the case, the risk of potential environmental and social impacts from the project would not arise. Conversely, the potential socio-economic contribution to the nation, state and local community would not be realized.

3.4 Context, planning framework and state/local government requirements

Iron ore mining in the Pilbara commenced in the 1960's, and the region is now the third largest production area after China and Brazil. The discovery of iron ore was the major factor responsible for growth in the region, the economy of which is now dominated by mining and petroleum industries. The Pardoo DSO Project will provide additional socio-economic benefits to the Pilbara, and Western Australia.

In planning and developing a resource related project in Western Australia, approvals are required under, but not limited to, the following state statutes.

- *Environmental Protection Act 1986;*
- *Mining Act 1978;*
- *Rights in Water and Irrigation Act 1914;*
- *Aboriginal Heritage Act 1972;*
- *Town Planning and Development Act 1928;*
- *Local Government Act 1995;*
- *Road Traffic Act 1974;*
- *Dangerous Goods (Transport) Act 1998;*
- *Explosives and Dangerous Goods Act 1961;*
- *Mines Safety and Inspection Act 1994;* and the
- *Health Act 1911*

Atlas will ensure that all state and local government requirements are fulfilled as required.

3.5 Environmental impact assessments under Commonwealth, state or territory legislation

The Environmental and Social Impact Assessment (ESIA) document for the Pardoo DSO Project was referred to the Western Australian Environmental Protection Authority (EPA) on the 22 July 2007 in accordance with Section 38A of the *Environmental Protection Act 1986*. It is anticipated that the EPA will take approximately 20-days to determine whether the project requires an environmental impact assessment, and if so, as to what level of assessment should be undertaken.

The Pardoo DSO Project will also be referred to the Western Australian Department of Industry and Resources (DoIR) in accordance with the requirements of the *Mining Act 1978*.

Atlas has been proactive in their consultation with government and the community since the initiation of the Pardoo DSO Project impact assessment and approvals process. Consultation will continue throughout the life of the project.

Appropriate state government stakeholders were initially identified through the review of approval requirements for the project. Identification of other stakeholders was initially through discussions with the Town of Port Hedland Council (the Council) as to the active community, special interest and business groups and associations in the area, as well as groups that Atlas had already come into contact with through their exploration works. As additional stakeholders were identified during the ESIA preparation process, they were added to the consultation register.

Two government stakeholder issue identification meetings were held early in the impact assessment process. The purpose of these meetings was to identify issues that the government agencies wanted covered in the impact assessment and to identify potential issues of priority. Following these meetings, as specific issues were identified through consultation and the specialist consultant studies, technical specialists within relevant government departments were identified and consulted with respect to the specific issues.

Stakeholder consultation has been concentrated on the De Grey Station owners/occupiers, Ngarla people (primarily through their representatives, Pilbara Native Title Services), Care for the Environment Port Hedland, Port Hedland Progress Association, Pilbara Development Commission, Port Hedland Chamber of Commerce, Wedgefield Association, Conservation Council (WA) and the Wildflower Society (WA).

With respect to the minesite, letters were also sent to all overlapping and adjoining leaseholders, advising them of the project and providing them with contact details for further discussions if required. Similar letters were also sent to all other mining related port users in the Port Hedland area, including BHP Billiton, Fortescue Metals Group, Dampier Salt, Consolidated Minerals, Process Minerals International (PMI) and Aditya Birla Copper. No significant issues have been raised so far.

A community information session was held in Port Hedland on 6 June 2007. The information was presented in the form of a number of informative posters relating to the project and the potential impacts. The session provided the opportunity for the community members to study the poster information in their own time and ask specific questions of the Atlas and Enesar representatives who were present at the session. The forum was advertised in the *Northwest Telegraph* on the day of the information session, as well as the week prior. Twenty community members attended the community information session, and the general expression regarding the project was positive.

3.6 A staged development or component of a larger project

The Pardoo DSO Project is the initial part of the larger Pardoo Iron Ore Project currently being explored by Atlas. Should the decision be made to expand the Pardoo DSO Project or proceed with additional projects in the region, extensive environmental, social and economic feasibility investigations will be required. Such investigations will form the basis for future government and social approvals.

4. Affected environment

4.1 Matters of national environmental significance

(a) World Heritage Properties

No World Heritage Properties occur in the vicinity of the Pardoo DSO Project or nearby surrounds. The nearest World Heritage Property is in Shark Bay, which is located approximately 800-km to the southwest of the project.

(b) National Heritage Places

No sites of National Heritage occur in the vicinity of the Pardoo DSO Project or nearby surrounds. The De Grey Station Group has recently been nominated (14467) on the Register of National Estate and is approximately 10-km north-northeast of the project.

(c) Wetlands of International Significance (Ramsar)

No wetlands of international significance occur in the vicinity of the Pardoo DSO Project or nearby surrounds. The nearest Ramsar site to the project is Eighty Mile Beach, which is located approximately 45-km to the north of the project.

(d) Listed threatened species and ecological communities

Comprehensive flora and fauna desktop reviews and field surveys have been completed by Woodman Environmental Consulting Pty Ltd (Woodman) and M.J. and A.R. Bamford Consulting Ecologists (Bamford) in 2007, respectively (see Section 10.1).

Flora

Woodman gathered desktop information primarily from government databases including the Western Australian Department of Environment and Conservation (DEC) Threatened Flora Database (DELFL) and the EPBC Act Protected Matters Search Tool. The desktop review spanned approximately 25-km in all directions from the centre of the minesite. This information was supplemented with species found in previous flora surveys around the Pilbara region. Field surveys of the minesite were undertaken in 2005 and April 2007.

No threatened flora species or ecological communities, as listed under the EPBC Act, were identified as occurring in the project survey area or likely to occur within a 25-km buffer zone surrounding the project survey area.

Fauna

Bamford gathered desktop information from government databases, such as the Western Australian Museum's Fauna-Base, the Birds Australia Atlas Database, the DEC Threatened Fauna

Database and the EPBC Act Protected Matters Search Tool. The search spanned approximately 25-km in all directions from the centre of the minesite. A literature review was also conducted to determine other fauna species potentially in the vicinity of the minesite based on known patterns of distribution. A field survey of the minesite was undertaken in April 2007.

Six threatened fauna species listed under the EPBC Act were identified with the potential to occur in the vicinity of the minesite (see Table 3). No threatened ecological communities, as listed under the EPBC Act, were identified.

Three of the listed threatened fauna species, namely the Pilbara olive python (*Liasis olivaceus barroni*), northern quoll (*Dasyurus hallucatus*) and the mulgara (*Dasycercus cristicauda*), were recorded or evidenced by Bamford during the field survey in 2007 (See Figure 3). Suitable habitat for the bilby (*Macrotis lagotis*) was also located at the southern end of the minesite.

Table 3 Results of the EPBC Act Protected Matters Search Tool for listed threatened fauna at the Pardoo DSO Project minesite (2007).

Scientific Name	Common Name	EPBC Act Listing
<i>Rhinonictoris aurantius</i> (Pilbara form)	Orange leaf-nosed bat	Vulnerable
<i>Liasis olivaceus barroni</i>	Pilbara olive python	Vulnerable
<i>Dasycercus cristicauda</i>	Mulgara	Vulnerable
<i>Macrotis lagotis</i>	Bilby	Vulnerable
<i>Dasyurus hallucatus</i>	Northern quoll	Endangered
<i>Pezoporus occidentalis</i>	Night parrot	Endangered

No suitable habitat was found for either the night parrot (*Pezoporus occidentalis*) or the orange leaf-nosed bat (*Rhinonictoris aurantius*), so it is unlikely that these species occur within the minesite.

(e) Listed migratory species

Minesite

Nine migratory species as listed under the EPBC Act were identified with the potential to occur in the vicinity of the minesite (see Table 4).

Table 4 Results of the EPBC Act Protected Matters Search Tool for listed migratory species at the Pardoo DSO Project minesite (2007).

Scientific Name	Common Name	EPBC Act Listing
<i>Ardea alba</i>	Great egret	Migratory
<i>Plegadis falcinellus</i>	Glossy ibis	Migratory
<i>Tringa stagnatalis</i>	Marsh sandpiper	Migratory
<i>Tringa nebularia</i>	Common greenshank	Migratory
<i>Tringa glareola</i>	Wood sandpiper	Migratory
<i>Tringa hypoleucos</i>	Common sandpiper	Migratory
<i>Glareola maldivarum</i>	Oriental pratincole	Migratory
<i>Aspus pacificus</i>	Fork-tailed swift	Migratory
<i>Merops ornatus</i>	Rainbow bee-eater	Migratory

Only one of the nine listed migratory species, being the rainbow bee-eater (*Merops ornatus*), was observed during the field survey at the minesite in April 2007. This species was common over the low-relief areas of the minesite, inhabiting areas that supported trees or large shrubs (i.e., along drainage lines).

The wood and marsh sandpiper are unlikely to make seasonal or intermittent use of the minesite given the lack of habitat types suited to these species. All other species are expected to make seasonal or intermittent use of riverine or open plain habitat in the vicinity of the minesite.

(f) Nuclear actions

The Pardoo DSO Project does not represent a nuclear action.

(g) Commonwealth marine areas

There are no Commonwealth marine areas located in the vicinity of the Pardoo DSO Project and the project is not situated on or near Commonwealth land.

4.2 Important or unique aspects of the environment, if relevant

(a) Soil and vegetation characteristics

Soils within the minesite are scarce and shallow, with the surface cover of much of the landscape rocky. Consequently, vegetation is either sparse or absent on steeper slopes. The soils are mostly loam to light clay in texture, with possibly some slight increase in clay content with depth, and have a neutral pH and low electrical conductivity. Soil fertility is low, due to low levels of organic carbon, available phosphorous and sulphur. Given that organic carbon is low, it is likely that soil nitrogen will be low. Potassium and trace elements are not deficient in these locations.

The minesite falls within the Pilbara biogeographic zone, Pilbara 4 subregion, according to the Interim Biogeographic Regionalisation for Australia (IBRA). The minesite also falls within the Fortescue Botanical District of the Eremaean Province.

Woodman conducted flora and vegetation surveys over the minesite during 2005 and April 2007. A total of 238 discreet vascular flora taxa have been identified from within the survey area, and statistical analysis of the flora dataset resulted in the identification of six distinct floristic community types. The majority of vegetation consisted of hummock grasslands dominated by *Triodia* species, with occasional shrublands and open woodlands.

No Declared Rare Flora (DRF) as listed under the Western Australian *Wildlife Conservation Act 1950* was identified within the minesite. Three species considered 'Priority Flora' by the DEC and two species of conservation interest were found within the minesite (see Table 5).

Table 5 Conservation significant flora species identified within the minesite.

Species	Conservation Status	Number of locations identified within the minesite
<i>Eragrostis crateriformis</i>	Priority Flora	3
<i>Gomphrena pusilla</i>	Priority Flora	1
<i>Tephrosia</i> sp. Cathedral Gorge (F.H. Mollemans 2420)	Priority Flora	12
<i>Lotus</i> affn. <i>cruentus</i>	Species of interest	3
<i>Sauropus</i> sp.	Species of interest	1

The known location of the un-described *Sauropus* sp. will not be impacted. One of the three known locations of the un-described species *Lotus* affn. *cruentus* will be directly impacted by the minesite disturbance. It is highly likely that both taxa have a wider local and regional distribution both inside and outside the minesite disturbance footprint than is currently recognised.

(b) Water flows, including rivers, creeks and impoundments

The minesite is situated on the western margin of the Ord Range within the De Grey River Basin, which drains some 56,890-km² south of the Ord Range. The basin has the potential to develop

significant drainage. All the rivers within this basin are ephemeral and are dry for most the year, except for chains of large pools that may last for considerable periods.

The Pardoo DSO Project minesite is bounded by four watercourses; namely the Strelley and De Grey Rivers 6-km to the east, Ridley River 700-m to the north and Redrock Creek 2-km to the west.

The De Grey River is listed in the Directory of Important Wetlands in Australia (WA065). A key ecological feature of the wetland is the system of more than 30 named river pools, which constitute a significant drought refuge for freshwater fishes and waterbirds in the bioregion. The De Grey River will not be impacted by the mining operations.

The Ord Range is characterised by small catchments and ephemeral drainage lines approximately 20- to 30-m deep. Surface runoff, following major rainfall events, is diverted through these drainages to the surrounding river and creek systems.

(c) Outstanding natural features, including caves

The primary natural feature in the vicinity of the minesite is the Ord Range, which is formed by a series of eastward plunging synclines and anticlines forming a S-shaped range of hills. The Ord Range covers an area of approximately 18,768-ha. Elevations within the range rise approximately 100-m above the coastal plain of the De Grey River Basin. A recent fauna habitat search conducted by Bamford did not locate any caves.

(d) Gradient

Local elevations range from 6-m AHD (Australian Height Datum) on the De Grey River Basin to approximately 106-m AHD within the Ord Range.

(e) Buildings or other infrastructure

The nearest town to the Pardoo DSO Project minesite is Port Hedland, which is located approximately 70-km to the west. The nearest inhabited (non-project-related) building to the minesite is the De Grey Station homestead, located approximately 10-km north-northeast. There are also three uninhabited residences adjacent to the Great Northern Highway at the Strelley Pump Station, 7-km east of the minesite access intersection.

(f) Marine areas

The proposed minesite is not within, or is unlikely to affect marine areas. However, the export component of the Pardoo DSO Project will involve shipping through existing infrastructure at Port Hedland.

(g) Kinds of fauna

On the basis of known fauna species distributions and the habitats present within the minesite, up to ten fish, eight frog, 87 reptile, at least 145 bird, and 40 native and four introduced mammal species may potentially occur in the vicinity of the minesite.

One fish, four frog, 22 reptile, 51 bird and twelve mammal species have been recorded or evidenced by Bamford in the vicinity of the minesite during the field survey completed in April 2007.

The desktop review for vertebrate fauna identified 33 vertebrate species of conservation significance with potential to occur in the vicinity of the minesite. Of the species of conservation significance identified in the desktop review, only eight species were identified or evidenced during the field survey. However, habitat was identified within the minesite that has potential to support the species of conservation significance (see ESIA).

(h) Current state of the environment

The minesite has been exclusively used for cattle grazing in the past, and remains an active cattle station. Vegetation within the minesite is generally in good condition, with disturbance primarily related to cattle grazing, particularly around watercourses, etc. There has also been disturbance relating to mineral exploration lines, and existing access tracks and associated workings.

Evidence of the European red fox (*Vulpes vulpes*) and feral cat (*Felis catus*) were observed on the minesite during the 2007 field survey. The house mouse (*Mus musculus*), feral goat (*Capra hircus*) and the Asian house gecko (*Hemidactylus frenatus*) may also occur at the minesite.

No declared plants, as listed under the Western Australian *Agriculture and Related Resources Act 1976*, were recorded in the project survey area in the 2007 flora survey. However, the declared weed species *Parkinsonia aculeata* (parkinsonia) was recorded in two locations on the Ridley River during the initial flora survey in 2005. No locations of this declared weed species will be impacted by this proposal.

Cenchrus ciliaris (buffel grass) was the dominant introduced weed species recorded on the minesite and was especially prevalent on flat areas near creeklines. This species is used as a fodder crop by pastoralists and has become a naturalised species.

(i) Commonwealth Heritage Places and places on the Register of the National Estate

A search of the Heritage Council of Western Australia (HCWA) database and the Register of National Estate was conducted in February 2007 to identify any listed non-indigenous sites on the minesite or in the vicinity of the product transport route (see Table 6).

Table 6 Listed non-indigenous heritage sites in the vicinity of the Pardoo DSO Project.

Site name	Location	Listings (number)
Aboriginal/Afghan Water Source	Wilson Street, Port Hedland	Municipal Inventory (5940)
De Grey Station Group	De Grey Station, Great Northern Highway (10 km north northeast of minesite)	Register of National Estate (nominated - 14467) National Trust – classified Municipal Inventory (4001) HCWA Asset Program
Don Rhodes Mining Museum Park	Wilson Street, Port Hedland	Municipal Inventory (5944)
Original Causeway	Wilson Street, Port Hedland	Municipal Inventory (5952)
Rail Siding Foundations	Wilson Street, Port Hedland	Municipal Inventory (5955)

No non-indigenous heritage sites have been identified on the minesite. The nearest nominated non-indigenous heritage site is the De Grey Station Group, which is 10-km away from the closest area of mining activity.

(j) Known Indigenous heritage values

The minesite is located within the area inherited by the Ngarla people under the *Native Title Act 1993* (WAG6185/98 WC99/026). Ethno-historical sources indicate that the Ngarla people’s traditional land extends from the mouth of the De Grey River, inland to Yarrie (Eureka, 2005).

A search conducted by Pilbara Native Title Services (2007) of the Department of Indigenous Affairs (DIA) Aboriginal Heritage Inquiry System identified 12 registered sites on or in close proximity to the minesite, as defined by exploration tenement E45/2330 and the northern portion of E45/2380. The sites closest to Atlas tenements are listed in Table 7. It is unlikely that disturbance to known or unknown indigenous sites will occur as a consequence of the project.

Table 7 DIA indigenous heritage sites.

Lease No.	Site ID ¹	Site Name	Type	Coordinates ²
EL45/2330	7402	Poisoned Python Pool	Ceremonial Artefacts Scatter	728460E 7752056N (Unreliable)
	7403	Gully Pool	Artefacts, Camp	728640E 7755056N (Unreliable)
	7404	Fisherman's Cave	N/A	CLOSED SITE
	7405	Ridley River Pool	N/A	CLOSED SITE
	7406	Ord Range Ochre Quarry	N/A	CLOSED SITE
EL45/2380	6972	Bulganya Lake	Ceremonial	CLOSED SITE
	20122	Nyartinjikapunya Pool	Mythological	735640E 7752156N (Reliable)
	20085	Telfer Infrastructure Corridor 01	Artefacts/Scatter	721000E 7748964N (Reliable)
	20791	Telfer Infrastructure Corridor	Artefacts/Scatter	721340E 7748814N (Reliable)
	22152	Refuge Cave	Historical	723659E 7750061N (Reliable)
	21049	Telfer Infrastructure Corridor 07	Artefacts/Scatter	721340E 7752781N (Reliable)
	21050	Telfer Infrastructure Corridor 08	Artefacts/Scatter	741382E 7752854N

¹ Bold numbers indicate sites that are within or in close proximity to the minesite.

² DIA gives a 'Closed' access code to sites only where informants have requested the information to remain confidential. To preserve the confidentiality of Closed sites, DIA publishes their locations within one or more 2 km square boxes, which act as indicators for the presence of sites rather than the exact boundary.

Atlas has signed a deed of agreement with the Ngarla people, which covers a number of aspects, including ongoing consultation, survey requirements, provision of environmental assessment and management documentation, investigation of employment and contracting opportunities, the establishment of a joint Monitoring and Liaison Committee, cultural awareness training and compensation.

(k) Other important or unique values of the environment

The closest area of conservation significance is the De Grey River, which is approximately 6-km from the nearest proposed minesite operation. The river is designated a wetland of national importance (WA065) from the confluence of the Oakover and Nullagine rivers to the coast.

The Leslie Salt Fields are also listed as wetlands of national importance (WA068) and are located adjacent to the coast at the outlet of the Ridley River. These salt fields form part of the

evaporation pans for the Dampier Salt operation and are located approximately 25-km from the proposed Pardoo DSO Project operations.

It is highly unlikely that the Pardoo DSO Project will affect these locations.

(l) Tenure of the action area (eg freehold, leasehold)

The tenure of the Pardoo DSO Project minesite is leasehold land. The minesite is also covered by existing and pending exploration, mining and other general-purpose tenements: E45/2330, M45/1157, M45/1158, M45/1159, M45/1170, and G45/273.

(m) Existing land uses

The minesite is located within the De Grey pastoral station (pastoral lease 3114/1142/200) a Brahman cattle station covering one million ha with a stocking rate of between 15,000 and 20,000 head of cattle.

The majority of the proposed minesite is also situated within the De Grey River water reserve. This water reserve contains the current and future domestic water supply borefields for Port Hedland. The Western Australian Department of Water (DoW) is responsible for the management of this Priority 1 (P1) water reserve in accordance with the De Grey River Water Reserve Source Protection Plan. Mining and exploration are considered 'compatible with conditions' land uses within a P1 water reserve.

The area surrounding the minesite is also entirely encompassed by mineral exploration leases, which are subject to varying degrees of exploration drilling. An active tiger-eye mine is located within a BHP Billiton State Agreement Act lease adjacent to the minesite. A Main Roads (WA) gravel reserve is also situated within the minesite area where borrow pits are intermittently used as a source of road gravel.

(n) Proposed land uses

Mining as described in Section 3.1, and mineral exploration.

5. Nature and extent of likely impacts

5.1 Likely impacts on matters of national environmental significance (NES)

(a) Likely impact on the world heritage values of a declared World Heritage property

The Pardoo DSO Project will not cause impacts to any World Heritage property.

(b) Likely impact on the heritage values of a listed National Heritage place

The Pardoo DSO Project will not cause impacts to any listed National Heritage place.

(c) Likely impact on the ecological character of a declared Ramsar wetland

The Pardoo DSO Project will not cause impacts to any declared Ramsar wetland.

(d) Likely impact on the members of a listed threatened species or ecological community, or their habitat

Threatened Ecological Communities

No threatened ecological communities listed under the EPBC Act have been recorded in the vicinity of the Pardoo DSO Project minesite. As such, the project is unlikely to cause impacts to any threatened ecological communities of national environmental significance.

Threatened Flora Species

No flora species listed as threatened under the EPBC Act have been recorded in the vicinity of the

Pardoo DSO Project minesite. The project is unlikely to cause significant impacts to the undescribed flora taxa *Sauropus* sp. or *Lotus* affin. *cruentus*.

Threatened Fauna Species

Six threatened fauna species listed under the EPBC Act have the potential to occur in the vicinity of the minesite, namely the Pilbara olive python, mulgara, northern quoll, bilby, orange leaf-nosed bat and the night parrot.

Pilbara Olive Python (Liasis olivaceus barroni)

The Pilbara olive python is regarded as a Pilbara endemic, with a known distribution that coincides roughly with the Pilbara bioregion. This subspecies is restricted to ranges within the bioregion and is often recorded near waterholes (Metcalf *et al.* 2007).

One specimen of the Pilbara olive python was recorded during the fauna field survey in April 2007. This species favours rocky gorge and gully habitat located throughout the Ord Range.

Clearing of vegetation and mining may result in habitat loss and direct mortality. Construction and operation of the road network within the minesite may also result in direct mortality or injury to this species through contact with vehicles.

The Ord Range is likely to be of high conservation value given the outlying nature of the range. It is estimated that of the 906-ha of gully and minor gorge habitat across the Ord Range, approximately 14-ha or 1.5% will be impacted by the minesite (Table 8). Given that this type of habitat is widespread and typical of the Pilbara, the significance of impacts to this habitat is considered low on a local scale because of the small portion of the habitat within the minesite that will be affected.

Impacts associated with vehicle collisions are unlikely to be significant in duration, magnitude and geographic extent given the short mine life, small disturbance footprint and proposed management measures.

Table 8 Direct disturbance of habitat types found within the Ord Range.

Habitat Type	Total Habitat Area within the Minesite (ha)	Disturbance Area (ha)	Proportion of Total Habitat Area Disturbed (%)
Spinifex and grassland plains on loam soil	6,560	89	1.4
Rocky hills	3,730	170	4.6
Gullies and minor gorges	906	14	1.5
Ephemeral drainage lines	475	0.2	0.1
Major ephemeral watercourses	0	0	0

Northern Quoll (Dasyurus hallucatus)

The northern quoll is found in a disjunct range throughout north Australia, including the Pilbara and Kimberley regions in Western Australia. This species is often associated with rocky areas in the Pilbara, but also occurs along watercourses (Metcalf *et al.* 2007).

During the field survey, tracks of the northern quoll were recorded in a gully to the north of the Ord Range. It is likely that this species occurs throughout the Ord Range in rocky gullies and surrounding areas.

Given that this type of habitat is widespread and typical of the Pilbara, the significance of impacts to this habitat is considered low on a local scale because of the small portion of the habitat within

the minesite that will be affected, i.e. 1.5% of total habitat to be disturbed (Table 8). Impacts associated with vehicle collisions are unlikely to be significant in duration, magnitude and geographic extent given the short mine life, small disturbance footprint and proposed management measures.

Mulgara (Dasycercus cristicauda)

The mulgara was once widespread and common throughout the central desert region, it is now restricted to areas in Queensland, the Northern Territory and Western Australia. The species is found in mature spinifex grasslands on sandy and sandy-loam soils, often associated with (paleo-) drainage lines (Metcalf *et al.* 2007).

Mulgara burrows were recorded in the centre of the minesite lease area in spinifex/loam habitat on the plain, adjacent to an ephemeral drainage line and low hills. It is likely that this species occurs throughout the minesite and surrounding areas in similar habitat.

The Pardoo DSO Project is unlikely to significantly impact the mulgara, as all identified burrows have been recorded outside the disturbance area and given the extensive range of available spinifex/grassland plains, i.e. 6,560-ha of which 1.5% will be impacted (Table 8). Impacts associated with vehicle collisions are unlikely to be significant in duration, magnitude and geographic extent given the short mine life, small disturbance footprint and proposed management measures.

Bilby (Macrotis lagotis)

The bilby historically utilised a wide range of habitat types across the continent. Extant populations are generally restricted to a variety of tall shrublands, open woodlands, hummock grasslands and sparse forblands. This species appears to remain widespread in the Great Sandy Desert and scattered populations occur across the northern Pilbara region, including areas close to Port Hedland (Metcalf *et al.* 2007).

No evidence of the bilby was found during the field survey at the minesite, however suitable habitat was located on the loam plains.

The Pardoo DSO Project is unlikely to significantly impact the bilby given the extensive range of available spinifex/grassland habitat, i.e. 6,560-ha of which 1.5% will be impacted. Impacts associated with vehicle collisions are unlikely to be significant in duration, magnitude and geographic extent given the short mine life, small disturbance footprint and proposed management measures.

Night Parrot (Pezoporus occidentalis)

The night parrot is a poorly-known and enigmatic species of inland Australia. The little information available on this species suggests that its occurrence is unpredictable but it may be associated with regions where spinifex and chenopod shrubland occur in juxtaposition (Metcalf *et al.* 2007). While such habitat is not present in the Pardoo DSO Project minesite and the species was not identified during the field survey, it is possible that the night parrot may be an occasional visitor.

Orange Leaf-nosed Bat (Rhinonictus aurantius)

The orange leaf-nosed bat is unlikely to be impacted, as a recent habitat search did not locate any cave habitat or existing roosts in the vicinity of the minesite.

(e) Likely impact on the members of a listed migratory species or their habitat

A number of migratory species have been recorded or are expected to occur in the vicinity of the Pardoo DSO Project minesite, as listed in 4.1(e). However, the project is not likely to have a significant impact on a migratory species.

Majority of the migratory species are associated with ephemeral watercourses and riverine pools. Direct disturbance to this habitat type is considered negligible, but there is potential for spatially

restricted and temporary indirect impacts to this habitat associated with changes in natural hydrological and hydrogeological regimes. The impacts to major watercourses habitat are not expected to result in significant long-term changes to fauna abundance or diversity on a local or regional scale. Any local population of a migratory species is unlikely to be dependent upon the area of vegetation that may be directly or indirectly impacted by the Pardoo DSO Project given the occurrence of similar proximal habitat resources, the mobility of the species and/or the ability of many of the species to use a variety of habitat types.

Impacts associated with vehicle collisions are unlikely to be significant in duration, magnitude and geographic extent given the short mine life, small disturbance footprint and proposed management measures.

(f) Likely impact on the environment in part of the Commonwealth marine area

The Pardoo DSO Project will not cause impacts to any Commonwealth marine or terrestrial area.

5.2 Likely impacts for nuclear actions, actions affecting Commonwealth land or actions taken by the Commonwealth

The action is not a nuclear action, nor an action by the Commonwealth or by a Commonwealth agency.

6.0 Measures to avoid or reduce impacts

Matters protected by the EPBC Act with potential to occur or be affected by the Pardoo DSO Project include threatened and migratory fauna. Such fauna may be potential impacted as a consequence of the following:

- Reduced species abundance and distribution as a consequence of disturbing, clearing, fragmenting or reducing habitat.
- Increased collisions between fauna and minesite vehicles, resulting in injury or death.
- Disturbance to fauna from noise, vibration and light generated by the minesite activities.
- Increased abundance and distribution of non-indigenous species, resulting from a potential increase in food and water sources on the minesite and attraction due to water sources.

Proposed management measures to avoid or mitigate potential impacts are outlined below.

A Coordinated Management Approach

The Pardoo DSO Project will operate in accordance with an Integrated Management System, which will include a Flora and Fauna Management Plan. The management plan will be developed and implemented in accordance with relevant government and industry 'best practice' standards and guidelines and in consultation with relevant stakeholders to ensure potential impacts are mitigated as far as reasonably practicable.

Impacts to Habitat

During the design phase, the minesite footprint has been minimised and infrastructure and roads have been located to avoid disturbance and minimise fragmentation of key fauna habitats. Examples of such habitats include gully systems, drainage lines, watercourses and flood plains. In addition to planning and designing initiatives, operational measures that will be implemented during the life of the mine include the following:

- Implementation of vegetation clearing protocols to minimise the disturbance footprint.
- During the construction phase and throughout the life of the mine, significant fauna habitat, such as trees or floristic communities associated with watercourses, will be avoided where possible.
- Rehabilitation requirements will be established prior to ground-disturbing activities and will include the consideration of habitat requirements for fauna species of conservation significance.
- Where roads, mining or other infrastructure cross linear or restricted fauna habitats, methods for facilitating fauna movements between those habitats will be investigated as required.
- Relocation of fauna species of conservation significance will be investigated in consultation with the DEC as required if individuals or populations are at risk of impact from mining activity.
- An employee induction program outlining fauna and habitat of conservation significance will be implemented. This induction program will be undertaken by each employee prior to gaining access to operational areas within the minesite.
- Impacts to surface water and ground water will be minimised and managed in accordance with the proposed Water Management Plan.
- Off-road driving will be prohibited, unless approved for necessary operations. Movement of personnel outside the disturbance footprint will also be prohibited during the life of the mine.
- Signage will be provided to identify significant fauna habitats at risk from minesite-related impacts prior to ground-disturbing activities.

Vehicle Collisions with Fauna

Management measures to reduce the potential for vehicle collisions with fauna include:

- Prior to upgrade of the minesite access road and construction of minesite infrastructure, a speed limit of 50-kph will be imposed in areas of high wildlife activity within the minesite, and enforced during the life of the mine. Vehicle traffic will be restricted to the minesite access and haul roads as far as practicable.
- Any fauna of conservation significance injured or killed as a result of a vehicle collision will be reported to the site environmental personnel and recorded as required. The DEC will be notified if requested by government as required.
- Should repeated mortalities of fauna species of conservation significance occur on the access track or haul road, mitigation measures (such as fauna crossings) will be investigated in consultation with the DEC as required.
- Environmental discharge locations have been designed to be located well away from the mining operations centre and areas of vehicular movement, to discourage terrestrial fauna from areas of mining activity.

Disturbance to Fauna from Noise, Vibration and Light

Noise and vibration control measures will be implemented to ensure that the project presents a safe working environment and to minimise impacts to fauna where practical, i.e. blasting operations will be restricted to daytime hours. These control measures will be implemented during construction of minesite infrastructure and during the life of the mine.

Light spill from the minesite infrastructure will be minimised as far as practicable through design and operational initiatives, which may include directional lighting, light shields, lighting frequency, timing devices and personnel education. Light spill mitigation measures will be finalised prior to commencement of mining.

Increased Abundance of Non-indigenous Species

Management measures to minimise the risk of increasing the abundance of non-indigenous species within the minesite are listed below:

- Existing non-indigenous species populations within the minesite will be managed by methods approved by the DEC and the pastoralist. These methods will be determined prior to commencement of mining operations.
- Waste management procedures, i.e. correct rubbish disposal, will be followed to reduce potential resources for non-indigenous species.
- Areas with a high potential for or susceptibility to increases in abundance of non-indigenous species (e.g., administration facilities, waste storage areas and around water sources) will be monitored regularly for the presence of these species during the life of the mine.

It is possible that the proposed management measures will lower the populations of non-indigenous species at the minesite and will therefore generate a positive impact for native fauna species.

7. Conclusion on the likelihood of significant impacts

Do you THINK your proposed action is likely to have significant impacts? No

7.1 Key reasons proposed action is NOT LIKELY to have significant impacts

Atlas do not consider the Pardoo DSO Project to be a controlled action as defined by the EPBC Act, as the project:

Will not cause impacts to a:

- World Heritage property;
- National Heritage place;
- Ramsar wetland of international importance;
- Commonwealth marine area; or
- Commonwealth land or action taken by the Commonwealth.

Is not:

- a nuclear action.

Is unlikely to cause significant impacts to:

- listed threatened species or communities and/or known habitat for these species or communities; or
- listed migratory species and/or known habitat for these species.

Is unlikely to cause significant impacts to fauna listed under the EPBC Act because:

- the geographic extent of impacts, i.e. 278-ha, is considered low on a local and regional scale.
- fauna habitat within the Ord Range is widespread and typical of the Pilbara.
- potentially impacted listed threatened fauna and migratory species are found outside the minesite, and throughout the Pilbara bioregion.
- any local population of a migratory species is unlikely to be dependent upon the area of habitat that may be directly or indirectly impacted by the Pardoo DSO Project given the occurrence of similar proximal habitat resources, the mobility of the species and/or the ability of many of the species to use a variety of habitat types.
- impacts associated with the mining operations will be limited in duration given the short mine life, i.e. maximum 7 years.
- the magnitude of the impacts is considered low given that potential impacts will be localised to the disturbance footprint and road network. No significant direct or indirect impacts are expected to occur as a consequence of mine dewatering, environmental discharge, surface and ground-water contamination, dust, noise, vibration, light or fire.

- the proposed management measures will mitigate impacts as far as reasonably practicable. Mitigation measures for the purpose of the Pardoo DSO Project include avoidance, minimisation, rectification, reduction and offsets.

7.2 Proposed action is **LIKELY** to have significant impacts

Matters likely to be impacted

<input type="checkbox"/>	sections 12 and 15A (World Heritage)
<input type="checkbox"/>	sections 15B and 15C (National Heritage places)
<input type="checkbox"/>	sections 16 and 17B (Wetlands of international importance)
<input type="checkbox"/>	sections 18 and 18A (Listed threatened species and communities)
<input type="checkbox"/>	sections 20 and 20A (Listed migratory species)
<input type="checkbox"/>	sections 21 and 22A (Protection of the environment from nuclear actions)
<input type="checkbox"/>	sections 23 and 24A (Marine environment)
<input type="checkbox"/>	sections 26 and 27A (Protection of the environment from actions involving Commonwealth land)
<input type="checkbox"/>	section 28 (Protection of the environment from Commonwealth actions)

Key reasons

None of the above. See section 7.1.

8. Assessment approach under the EPBC Act

Level of assessment

<input type="checkbox"/>	Bilateral Agreement applies
<input type="checkbox"/>	Accredited assessment
<input type="checkbox"/>	Assessment on referral information
<input type="checkbox"/>	Preliminary information
<input type="checkbox"/>	Public Environment Report
<input type="checkbox"/>	Environmental Impact Statement
<input type="checkbox"/>	Commission of Inquiry
<input checked="" type="checkbox"/>	No comment/Not sure

Key reasons

Atlas do not consider the Pardoo DSO Project to be a controlled action requiring assessment under the EPBC Act, as it is not likely to have a significant impact upon matters of national environmental significance (see Section 7). Atlas anticipates that the project will be assessed and managed under the provisions of the Western Australian *Environmental Protection Act 1986* and that this public approvals process will adequately address any significant environmental or social issues.

9. Environmental history of the responsible party

	Yes	No
<p>9.1 Does the party taking the action have a satisfactory record of responsible environmental management?</p> <ul style="list-style-type: none"> • If Yes, provide details <p>Atlas is a 'junior' iron ore company and the Pardoo DSO Project will be its first resource development project. However, the company's Board and executive management have considerable experience in mining in Western Australia. The company is committed to its Environmental and Social Policy, and mitigating impacts as far as practicable.</p>		X
<p>9.2 Is the party taking the action subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?</p> <ul style="list-style-type: none"> • If Yes, provide details <p>The proposal has been referred to the Western Australian Environmental Protection Authority (EPA) to determine formal environmental assessment requirements under Part IV of the <i>Environmental Protection Act 1986</i>.</p>		X
<p>9.3 For an action for which a person has applied for a permit under the EPBC Act, is the person making the application subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?</p> <ul style="list-style-type: none"> • If Yes, provide details <p>NA</p>		X
<p>9.4 If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?</p> <ul style="list-style-type: none"> • If Yes, provide details of environmental policy and planning framework <p>The corporate charter and policies that govern Atlas's operations and conduct are listed on the company website (www.atlasgold.com.au/corp_gov.html).</p> <p>Atlas is committed to managing its activities in an environmentally and socially responsible manner as reflected in the Atlas corporate Environmental and Social Policy, which is sanctioned by the Atlas Board (see Box 1).</p> <p>Atlas is committed to developing and working within a corporate Integrated Management System (IMS), which will enable Atlas to document and achieve the company's Environmental and Social Policy.</p>	X	

Box 1 Atlas Iron Limited Environmental and Social Policy

Atlas Iron Limited is an Australian owned mineral exploration and production company, which prides itself on their commitment to principles of environmental and social responsibility.

In accordance with this Environmental and Social Policy, the following operational specific objectives have been established which represent the company's commitment:

1. We will operate an Integrated Management System, which accurately defines the environmental and social aspects and impacts of what we do, and build what we learn from this knowledge into clear and concise operational systems, which minimise risk to the environment and the community.
2. We will employ, to the extent practicable, the principles of pollution prevention, efficient resource use and waste minimisation in all of our activities.
3. We will set environmental improvement targets based on established criteria and publicly report our environmental performance annually.
4. We will develop a mine closure and progressive rehabilitation plan that addresses regulatory requirements, risk minimisation, potential future land use and stakeholder issues.
5. We will identify, report, and remediate environmental incidents, and employ changes that reduce the likelihood and/or consequence of occurrences.
6. We will actively promote environmental awareness and training to all employees and contractors.
7. We will respect cultural and heritage values and facilitate cross-cultural awareness.
8. We will anticipate and respond to community concerns, aspirations and values regarding our activities and foster open dialogue with employees, contractors and the community.
9. We will strive for continual improvement in environmental and social awareness and performance.
10. We will comply with all legal and regulatory requirements as a minimum operating condition.
11. We will allocate sufficient resources to ensure these objectives can be achieved.

10. Information sources and attachments

10.1 References

Reports:

Eureka. 2005. *Report on the results of an archaeological and ethnographical survey of Atlas Gold Pty Ltd Pardoo tenements, Ord Ranges, Pilbara Western Australia*. Prepared for Atlas Gold. October 2005.

Metcalf, M.J., Bamford, M.J., Harris, I., Bancroft, W. 2007. *Fauna Assessment of the Pardoo Direct Shipping Ore Project Atlas Iron Ltd*. May, 2007. Bamford Consulting Ecologists, Perth.

Woodman Environmental Consulting. 2007. *Atlas Iron Limited. Direct Ore Shipping Project. Flora and Vegetation Studies and Project Impact Assessment*. May, 2007. Woodman Environmental Consulting, Perth.

Websites:

NA

10.2 Reliability of information

See the Pardoo DSO Project Environmental and Social Impact Assessment (ESIA), as attached.

10.3 Attachments

You must attach	figures, maps or aerial photographs showing the project locality (section 2)	Figure 1 & 2
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 4)	Figure 3
If relevant, attach	copies of any state or local government approvals and consent conditions (section 3.4)	NA
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 3.5)	NA
	copies of any flora and fauna investigations and surveys (section 4)	See ESIA
	technical reports relevant to the assessment of impacts on protected matters and that support the arguments and conclusions in the referral (section 4 and 5)	See ESIA
	report(s) on any public consultations undertaken, including with Indigenous Stakeholders (section 4)	See ESIA

11. Signatures and declarations

Project title		Atlas Pardoo DSO Project	
11.1 Party who prepared the referral	I declare that the information contained in this form is, to my knowledge, true and not misleading. I request that the person named in 11.3 below (if any) be designated as the proponent for the action.		
	Signature		
	Date	10/7/2007	
	Full name	Nick Phillips	
11.2 Party who is responsible for action	I declare that the information contained in this form is, to my knowledge, true and not misleading.		
	Signature		
	Date	10/7/2007	
	Full name	Garry Plowright	
11.3 Proponent (complete only if different from 11.2)	I, being the person nominated in Section 1.3 of this referral form as the nominated proponent (or agent acting on behalf of), agree to be designated as the proponent for the action described above if it is decided that the action requires approval under Part 9 of the EPBC Act.		
	Signature		
	Date		
	Full Name		
	If the referring party is a small business (fewer than 20 employees), estimate the time, in hours and minutes, to complete this form (include your time reading the instructions, working on the questions and obtaining the information and time spent by all employees in collecting and providing this information).		
		Hours	Minutes