MARCH 2011

Providing sustainable environmental strategies,
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ecologia
ENVIRONMENT

BROCKMAN RESOURCES
MARILLANA IRON ORE PROJECT
EPBC REFERRAL

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Australian Government

Department of the Environment, Water, Heritage and the Arts

Referral of proposed action

What is a referral?

The *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) provides for the protection of the environment, especially matters of national environmental significance (NES). Under the EPBC Act, a person must not take an action that has, will have, or is likely to have a significant impact on any of the matters of NES without approval from the Australian Government Environment Minister or the Minister's delegate. (Further references to 'the Minister' in this form include references to the Minister's delegate.) To obtain approval from the Environment Minister, a proposed action should be referred. The purpose of a referral is to obtain a decision on whether your proposed action will need formal assessment and approval under the EPBC Act.

Your referral will be the principal basis for the Minister's decision as to whether approval is necessary and, if so, the type of assessment that will be undertaken. These decisions are made within 20 business days, provided that sufficient information is provided in the referral.

Who can make a referral?

Referrals may be made by or on behalf of a person proposing to take an action, the Commonwealth or a Commonwealth agency, a state or territory government, or agency, provided that the relevant government or agency has administrative responsibilities relating to the action.

When do I need to make a referral?

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

- World Heritage properties (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)
- Commonwealth marine environment (sections 23 and 24A)
- Great Barrier Reef Marine Park (sections 24B and 24C)
- The environment, if the action involves Commonwealth land (sections 26 and 27A), including:
    - actions that are likely to 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;
- The environment, if the action is taken by the Commonwealth (section 28)
- Commonwealth Heritage places outside the Australian jurisdiction (sections 27B and 27C)

You may still make a referral if you believe your action is not going to have a significant impact, or if you are unsure. This will provide a greater level of certainty that Commonwealth assessment requirements have been met.

To help you decide whether or not your proposed action requires approval (and therefore, if you should make a referral), the following guidance is available from:

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

Can I refer part of a larger action?

In certain circumstances, the Minister may not accept a referral for an action that is a component of a larger action and may request the person proposing to take the action to refer the larger action for consideration under the EPBC Act (Section 74A, EPBC Act). If you wish to make a referral for a staged or component referral, read 'Fact Sheet 6 Staged Developments/Split Referrals' and contact the Referral Business Entry Point (1800 803 772).

Do I need a permit?

Some activities may also require a permit under other sections of the EPBC Act or another law of the Commonwealth. Information is available on the Department's web site.

Is your action in the Great Barrier Reef Marine Park?

If your action is in the Great Barrier Reef Marine Park it may require permission under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). If a permission is required, referral of the action under the EPBC Act is deemed to be an application under the GBRMP Act (see section 37AB, GBRMP Act). This referral will be forwarded to the Great Barrier Reef Marine Park Authority (the Authority) for the Authority to commence its permit processes as required under the Great Barrier Reef Marine Park Regulations 1983. If a permission is not required under the GBRMP Act, no approval under the EPBC Act is required (see section 43, EPBC Act). The Authority can provide advice on relevant permission requirements applying to activities in the Marine Park.

The Authority is responsible for assessing applications for permissions under the GBRMP Act, GBRMP Regulations and Zoning Plan. Where assessment and approval is also required under the EPBC Act, a single integrated assessment for the purposes of both Acts will apply in most cases. Further information on environmental approval requirements applying to actions in the Great Barrier Reef Marine Park is available from http://www.gbrmpa.gov.au/ or by contacting GBRMPA's Environmental Assessment and Management Section on (07) 4750 0700.

The Authority may require a permit application assessment fee to be paid in relation to the assessment of applications for permissions required under the GBRMP Act, even if the permission is made as a referral under the EPBC Act. Further information on this is available from the Authority:

Great Barrier Reef Marine Park Authority

2-68 Flinders Street PO Box 1379
Townsville QLD 4810
AUSTRALIA

Phone: + 61 7 4750 0700
Fax: + 61 7 4772 6093

www.gbrmpa.gov.au

What information do I need to provide?

Completing all parts of this form will ensure that you submit the required information and will also assist the Department to process your referral efficiently.

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

Instructions

Instructions are provided in green text throughout the form.

Attachments/supporting information

The referral form should contain sufficient information to provide an adequate basis for a decision on the likely impacts of the proposed action. You should also provide supporting documentation, such as environmental reports or surveys, as attachments.

Coloured maps, figures or photographs to help explain the project and its location should also be submitted with your referral. 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.

Please ensure any attachments are below two megabytes (2mb) as they will be published on the Department's website for public comment. To minimise file size, enclose maps and figures as separate files if necessary. If unsure, contact the Referral Business Entry Point for advice. Attachments larger than two megabytes (2mb) may delay processing of your referral.

Note: the Minister may decide not to publish information that the Minister is satisfied is commercial-in-confidence.

How do I submit a referral?

Referrals may be submitted by mail, fax or email.

Mail to:

Referral Business Entry Point
Environment Assessment Branch
Department of the Environment, Water, Heritage and the Arts
GPO Box 787
CANBERRA ACT 2601

- If submitting via mail, electronic copies of documentation (on CD/DVD or by email) are appreciated.

Fax to: 02 6274 1789

- Faxed documents 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.

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.
- Follow up with a mailed hardcopy including copies of any attachments or supporting reports.

What happens next?

Following receipt of a valid referral (containing all required information) you will be advised of the next steps in the process, and the referral and attachments will be published on the Department's web site for public comment.

The Department will write to you within 20 business days to advise you of the outcome of your referral and whether or not formal assessment and approval under the EPBC Act is required. There are a number of possible decisions regarding your referral:

The proposed action is NOT LIKELY to have a significant impact 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 other Commonwealth, state or local government requirements).

The proposed action is NOT LIKELY to have a significant impact IF undertaken in a particular manner

The action can proceed if undertaken in a particular manner (subject to any other Commonwealth, state or local government requirements). The particular 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 particular manner to the Department.

The proposed action is LIKELY to have a significant impact and does NEED approval

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

The controlled action is subject to a public assessment process before a final decision can be made about whether to approve it. The assessment approach will usually be decided at the same time as the controlled action decision. (Further information about the levels of assessment and basis for deciding the approach are available on the Department's web site.)

The proposed action would have UNACCEPTABLE impacts and CANNOT proceed

The Minister may decide, on the basis of the information in the referral, that a referred action would have clearly unacceptable impacts on a protected matter and cannot proceed.

Compliance audits

If a decision is made to approve a project, the Department may audit it at any time to ensure that it is completed in accordance with the approval decision or the information provided in the referral. If the project changes, such that the likelihood of significant impacts could vary, you should write to the Department to advise of the changes. If your project is in the Great Barrier Reef Marine Park and a decision is made to approve it, the Authority may also audit it. (See "*Is your action in the Great Barrier Reef Marine Park,"* p.2, for more details).

For more information

- call the Department of the Environment, Water, Heritage and the Arts 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 the above web site.

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A Map of the Project Area

B EPBC Protected Matters report

C Level 2 Flora Survey Report

D Level 2 Vertebrate Fauna Survey Report

E Map of Conservation Significant Species Identified within the Project Area

F Marillana Groundwater Study

G EPA Report and Recommendations

H Ministerial Statement 855

I DEC Correspondence Email Re: Night Parrot

Referral of proposed action

Project title: Brockman Marillana Iron Ore Project

1 Summary of proposed action

1.1 Short description

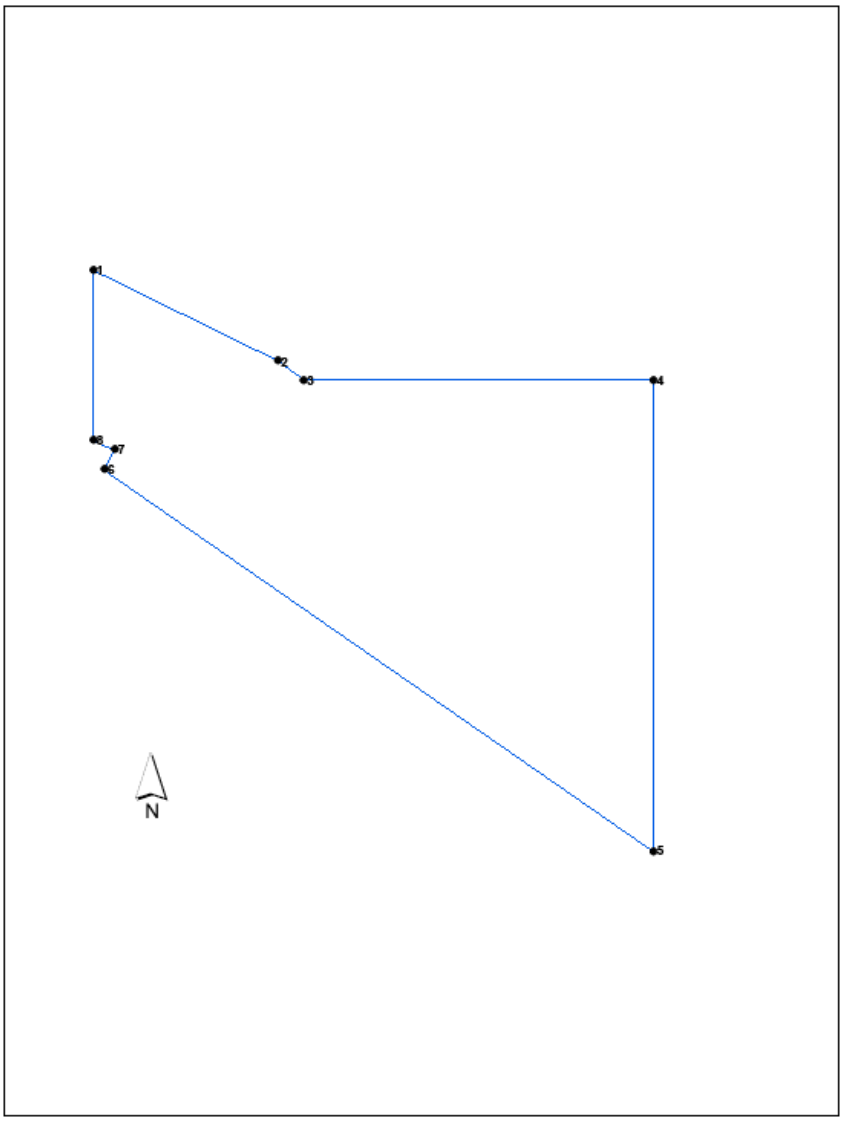
Brockman Iron Pty Ltd, a wholly-owned subsidiary of Brockman Resources Limited (Brockman) proposes to develop the Brockman Marillana Iron Ore Project (the Project), comprising a 700-750 Mt iron ore mine, processing facility and associated infrastructure in the Pilbara region of Western Australia. It is anticipated that traditional open pit mining methods of excavating, load and haul will be utilised for the pit development, and that the mine will produce 17-19 Mt of beneficiated ore per annum.

This referral relates to the development of the mine and beneficiation components of the Project only. This referral does not relate to the construction of minor roads or the accommodation village, as the low impact nature of these works does not warrant referral (pers. comm. DSEWPaC, 2011).

Brockman intends to commence construction activities by Q3 2011 with the aim of being operational by Q3/4 2013.

1.2 Latitude and longitude

Location Point	Latitude Degrees	Minutes	Seconds	Longitude Degrees	Minutes	Seconds
1	-22	32	37.968	119	12	0
2	-22	33	45.792	119	14	18.31
3	-22	34	0.012	119	14	37.47
4	-22	34	0.012	119	19	0.01
5	-22	39	53.136	119	19	0.01
6	-22	35	7.116	119	12	8.47
7	-22	34	52.14	119	12	15.98
8	-22	34	45.228	119	12	0



1.3	**Locality and property description** The Project is located within mining leases M47/1414 and M47/1419 which have been granted (Attachment A). The Project area is located approximately 100 km north west of the township of Newman, covers 96 km^2 of the Fortescue Valley, borders the Hamersley Range and lies approximately 15 km south of the Fortescue Marsh. It is intersected by distributaries of the Weeli Wolli Creek delta.	
1.4	**Size of the development footprint or work area (hectares)**	2,985 Ha (approximately)
1.5	**Street address of the site**	Not applicable
1.6	**Lot description** M47/1414, M47/1419.	

1.7 Local Government Area and Council contact (if known)

Shire of East Pilbara.

1.8 **Time frame**

Activity	Timeframe
PROJECT APPROVALS	
Submission of Project Referral to DSEWPaC	March 2011
DSEWPaC advise not a controlled action	April 2011
PROJECT IMPLEMENTATION	
Commence Construction	Q3 2011
Commissioning	Q3 2012
Project Life	20 Years

1.9 **Alternatives to proposed action**

Brockman considered the no development option. This option was not considered feasible as the project benefits would not be realised.

The Project will have a significant beneficial impact on the Pilbara region, bringing revenue and jobs to the area.

The Project will result in further substantial regional and state benefits, including:

- Investment of up to $1 billion of capital into Western Australia's regional and state economies.
- Positive contribution to training and business opportunities for the indigenous community in the region.
- Increasing demands for goods and services creating business and employment opportunities.
- Additional Commonwealth and State Government revenues through collection of additional royalties, taxation and other charges.
- Provide employment opportunities and general financial support for traditional land owners.
- Provide permanent employment for an estimated 500 employees.

1.10 **Alternative time frames**

No

1.11	**State assessment** Is the action subject to a state or territory environmental impact assessment?	The Project was referred to the Western Australian Environmental Protection Authority (EPA) in February 2009 before being assessed at a Public Environmental Review (PER) level (EPA Assessment No. 1781). The Project was subsequently recommended for conditional approved by the EPA on 6 December 2010 with the release of the Final Report and Recommended Conditions (Attachment G). On 8 February 2011 the Western Australia Minister for Environment granted conditional approval for the project to proceed (Attachment H).
1.12	**Component of larger action** Is the proposed action a component of a larger action?	No. Refer to Section 2.7.
1.13	**Related actions/proposals** Is the proposed action related to other actions or proposals in the region (if known)?	This Proposal is related to the Brockman Rail Project which was referred to the DSEWPaC in February 2011 (EPBC 2011/5833). The Rail Project was referred to the EPA in February 2011, for formal assessment under the *Environmental Protection Act 1986*. It is anticipated the Rail Project will be assessed at the level of Assessment on Proponent Information (API). The Railway Proposal was not able to be captured under the Mine Project approvals due to timing of third party negotiations and agreements. Thus the projects have been separated for approvals purposes.
1.14	**Australian Government funding** **Has the person proposing to take the action received any Australian Government grant funding to undertake this project?**	No

1.15	**Great Barrier Reef Marine Park** Is the proposed action inside the Great Barrier Reef Marine Park?	No

2 Detailed description of proposed action

2.1 Description of proposed action

The Project consists of a 700-750 Mt iron ore mine, processing facility and associated infrastructure located within the Pilbara of Western Australia. It is anticipated that traditional open pit mining methods of excavating, load and haul will be utilised for the pit development, and that the mine will produce 17-19 Mt of beneficiated ore per annum.

This referral relates to the development of the mine and beneficiation components of the Project only. This referral does not relate to the construction of minor roads or the accommodation village, as the low impact nature of these works does not warrant referral (pers. comm. DSEWPaC, 2011).

The Project is located within mining leases M47/1414 and M47/1419 which have been granted (Attachment A). The Project area (encompassed by E47/1408) is located approximately 100 km north west of the township of Newman, covers 96 km^2 of the Fortescue Valley, borders the Hamersley Range and lies approximately 15 km south of the Fortescue Marsh. It is intersected by distributaries of the Weeli Wolli Creek delta.

The main access to the Project area is via the Great Northern Highway and the unsealed Munjina – Roy Hill Road. Approximately 58 km along the Munjina – Roy Hill road the BHPB rail line into the Yandi Mine intersects the road. The western boundary of the tenement is a further 1 km east of this rail line intersection.

The Project area is subject to two non-overlapping Native Title Claims. The western half of the licence is held by native title claimants of the MIB. The eastern half of the licence is held by the Nyiyaparli people. Brockman have negotiated native title agreements with both parties.

2.2 Alternatives to taking the proposed action

Brockman considered the no development option. This option was not considered feasible as the project benefits would not be realised.

The Project will have a significant beneficial impact to the Pilbara region, bringing revenue and jobs to the area. The Project will result in further substantial regional and state benefits, including:

- Investment of up to $1 billion of capital into Western Australia's regional and state economies.
- Positive contribution to training and business opportunities for the indigenous community in the region.
- Increased demands for goods and services creating business and employment opportunities.
- Additional Commonwealth and State Government revenues through collection of additional royalties, taxation and other charges.
- Provision of employment opportunities and general financial support for traditional land owners.
- Provision of permanent employment (on a Fly in Fly Out basis) for an estimated 500 employees.

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

Not Applicable

2.4 Context, planning framework and state/local government requirements

The Project was approved by the Western Australian Minister for Environment (statement number 855) in February 2011 in accordance with Section 38(1) of the *Environmental Protection Act 1986,* which states that where a development proposal is likely to have a significant effect on the environment, a proponent must refer the proposal to the EPA.

The Project will be considered under the all relevant state and federal listed legislation, as shown in Table 1 below.

Table 1: Legislation Applicable to the Project

Legislation	Responsible Agency	Aspect Relevant to the proposal
Commonwealth Legislation		
Environmental Protection & Biodiversity Conservation Act 1999	Department of Environment, Water, Heritage and the Arts	Environmental and heritage matters of national significance
National Greenhouse and Energy Reporting Act 2007	Department of Climate Change	Greenhouse gas emissions
Native Title Act 1993	National Native Title Tribunal	Community, group or individual rights and interests of Aboriginal peoples or Torres Strait Islanders in relation to land or waters
Protection of Movable Cultural Heritage Act 1986	Department of Environment, Water, Heritage and the Arts	Protection of movable cultural artefacts
State Government Legislation		
Aboriginal Heritage Act 1972	Department of Indigenous Affairs	Archaeological and ethnographic heritage
Agricultural and Related Resources Protection Act 1976	Department of Agriculture and Food	Weeds and pest animals
Bush Fires Act 1954	Fire and Emergency Rail Authority	Wild fire control
Conservation and Land Management Act 1984	Department of Environment and Conservation / Conservation Commission	Conservation Reserves
Contaminated Sites Act 2003	Department of Environment and Conservation	Management of contaminated lands
Country Areas Water Supply Act 1947	Department of Water	Water supply
Dangerous Goods Safety Act 2004	Department of Mines and Petroleum	Explosives and dangerous goods, transport and management
Environmental Protection Act 1986	Department of Environment and Conservation	Environmental impact assessment and management
Health Act 1911	Department of Health	Human health management
Heritage of Western Australia Act 1990	Heritage Council of Western Australia	European heritage management
Local Government Act 1995	Department of Local Government / Shire of East Pilbara	Local Government approvals
Local Government (Miscellaneous Provisions) Act 1960	Department of Local Government / Shire of East Pilbara	Community infrastructure, buildings, facilities
Occupational Safety and Health Act 1984	Department of Commerce	Occupational health and safety
Main Roads Act 1930	Main Roads Western Australia	Construction, maintenance and supervision of main roads
Mines Safety and Inspection Act 1994	Department of Mines and Petroleum	Personnel safety on mine sites

Legislation	Responsible Agency	Aspect Relevant to the proposal
Public Works Act 1902	Department of Treasury and Finance	Land access and operation of public work
Rail Safety Act 1998	Department of Transport	Rail safety and management
Rights in Water and Irrigation Act 1914	Department of Water	Access to and use of water resources
Soil and Land Conservation Act 1945	Department of Agriculture and Food	Protection of soil resources
Waterways Conservation Act 1976	Department of Water	Protection of defined surface water management areas
Wildlife Conservation Act 1950	Department of Environment and Conservation	Protection of indigenous wildlife, including items of state significance.

The Project will require additional approvals including the following:

Part V of the Environmental Protection Act 1986

Under Part V of the *Environmental Protection Act 1986,* facilities which are on the prescribed premises list with volumes or outputs above a defined limit, require a works approval and licence to operate.

The following prescribed premises are proposed:

- Class II or III putrescible landfill site (Category 89 – above 20 tonnes per year)
- Category 5 – Process or beneficiation of metallic or non-metallic ore, at a rate of more than 50 000 tonnes per year.
- Category 54 - Sewage Facility treating >100m^3 /day.
- Category 52 – Electric power generation >20 megawatts per year.

Part V of the *Environmental Protection Act 1986* – Clearing of Native Vegetation

A Native Vegetation Clearing Permit will not be required as the EPA formally assessed the proposal.

Rights in the Water and Irrigation Act 1914

Brockman will apply to the DoW for a permit to interfere with the waters, beds or banks of any watercourse within a proclaimed Surface Water Management Area (SWMA) intersected by the proposal.

Local Government Act 1995

The following approvals will be sourced from Local Government:

- extractive industries licence for the development of quarry and borrow sites, and
- approvals for a camp will be sought form the Shire of East Pilbara by the construction contractor.

Dangerous Goods Safety Act 2004

The following approvals will be sourced from the Department of Mines and Petroleum (DMP):

- application for Licences to Store Explosives (Magazine Licence); and

- application for a Licence to Store Dangerous Goods.

Aboriginal Heritage Act 1972

Comprehensive ethnographic and archaeological surveys of the Proposal area have been undertaken to identify all Aboriginal sites that may be impacted by the construction of the Proposal.

The Proposal will avoid impacts where possible. For sites that cannot be avoided, approval for disturbance will be sought under Section 18 of the *Aboriginal Heritage Act 1972* in consultation with the relevant custodians and The Department of Indigenous Affairs (DIA). All works will comply with the *Aboriginal Heritage Act 1972*.

Brockman has actively sought to involve key stakeholders such as the Martu Idja Banyjima (MIB) and Nyiyaparli Native Title claimants in the heritage surveys and development of a Cultural Heritage Management Plan.

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

The Project was referred to the Western Australian Environmental Protection Authority (EPA) in February 2009 before being assessed at a Public Environmental Review (PER) level (EPA Assessment No. 1781). The Project was subsequently approved by the West Australian Minister for Environment in February 2011 (Attachment H).

The Project context, environmental impact assessment and management commitments are detailed in the EPA Report & Recommendations (Attachment G).

2.6 Public consultation (including with Indigenous stakeholders)

Brockman commenced consultation with community and government during the Project scoping stage, and have continued to seek input in an ongoing and proactive manner during the development of this PER.

Consultation has focused on how best to realise the Project with acceptable outcomes for the local community, local indigenous groups and the environment at large.

The objectives of consultation and engagement were to:

- inform stakeholders of the Project scope, highlight potentially significant issues and possible solutions;
- gather specialist knowledge of the area and potential environmental and other impacts resulting from this Project; and
- determine the relative significance of environmental and social issues and develop acceptable management strategies.

Methods of consultation have included letters to neighbouring tenement and land holders, meetings and one-on-one discussions with key government agencies, website updates, newsletters, site visits, community meetings and public presentations.

Brockman has actively sought to involve key stakeholders such as the MIB and Nyiyaparli Native Title claimants in the heritage surveys and development of a Cultural Heritage Management Plan (CHMP).

Key government stakeholders have been, and continue to be regularly consulted to ensure that concerns are identified and proactively addressed. This has particularly been the case concerning issues such as subterranean invertebrate fauna and water management.

A summary of the consultation activities and the issues raised can be found in Table 2.

Table 2: Summary of Stakeholder Consultation

ISSUE	STAKEHOLDER	OUTCOMES
Sampling regime (troglofauna)	DEC (EMB, Brad Durrant)	Sampling requirements met and exceeded although capture rate is very low. Off tenement sampling could not be undertaken.
Sampling regime (stygofauna)	DEC (EMB, Brad Durrant)	Sampling requirements met. Off tenement sampling also undertaken.
Troglofauna habitat boundaries and percentage impact	DEC (EMB, Brad Durrant)	Reasonable approach adopted to quantify level of impact.
Subterranean fauna sampling, access	FMG, BHP Billiton Iron Ore, Rio Tinto, Marillana Station	No useful access arrangements could be negotiated.
Modelling	DoW (Head office, Pilbara region)	The proposed approach was accepted by the DoW.
Potential water disposal options	DoW (Head office, Pilbara region)	The proposed approach was accepted by the DoW.
Groundwater abstraction, water use, management	DoW	DoW is comfortable with level of understanding exhibited to date.
Groundwater abstraction, water use, management	DEC (EMB)	The proposed approach was explained to the DEC.
Surface water diversions	DEC	The proposed approach was explained to the DEC.
Waste water disposal	DEC, DoH	Department of Health guidelines incorporated into Wastewater Treatment design. Disposal
Positioning of infrastructure	DEC	The justification was explained to the DEC.
Accommodation village, waste water treatment plant, road re-alignment, traffic considerations	SoEP	The appropriate process will be followed regarding seeking approval of works from the local shire.
Pit backfilling	DoW, DEC	The proposed approach was explained to the DEC and DoW.
Acid Rock Drainage potential	DMP, DEC	Appropriate guidelines have been addressed. Classed as NAF.
Botanical (bush tucker) surveys	MIB, Nyiyaparli	No surveys conducted
Heritage surveys, Cultural Heritage Management Plan.	DIA, MIB, Nyiyaparli	Interim Cultural Heritage Management Plan (CHMP) will be presented in PER, with a full plan under development in liaison with Native Title Claimants.
Native Title agreement. Heritage sites, surveys	MIB, Nyiyaparli	Native Title Claimants undertook heritage surveys. No sites identified. CHMP to be developed.

Extensive consultation with the DEC, DoW, DIA and EPA took place in regard to the proximity of the project to the Fortescue Marsh. Brockman thoroughly investigated the potential for dewatering activities to impact the marshlands, and to the satisfaction of all stakeholders, has demonstrated that the Projects drawdown footprint will not reach or have any negative impacts to groundwater levels at the Fortescue Marsh.

KEY OUTCOMES

Key outcomes from the consultation process to-date are:

- Brockman has incorporated stakeholder feedback into the design of investigations and where required, commissioned additional investigations to provide appropriate information to inform the PER.
- Brockman has formed partnerships with MIB and Nyiyaparli Native Title groups and will continue to collaborate on cultural heritage matters throughout the life of the Project.
- Brockman has addressed all issues and concerns raised within the scoping phase of the Project, including issues relating to the Fortescue Marsh.
- Brockman has proactively sought advice and input from government departments and knowledgeable individuals.
- Brockman has ensured that the appropriate guidelines and 'best practice' techniques have been incorporated into the design of this Project.
- Brockman will continue to engage with and consult relevant stakeholders and key interest groups throughout the public review period and beyond into the construction, operation and decommissioning phases of the Project.

2.7 A staged development or component of a larger project

This Proposal is related to the Brockman Rail Project which was referred to the DSEWPaC in February 2011 (EPBC 2011/5833).

The Rail Project was referred to the EPA in February 2011, for formal assessment under the *Environmental Protection Act 1986 (WA)*. It is anticipated the Rail Project will be assessed at the level of Assessment on Proponent Information (API).

The Railway Proposal was not able to be captured under the Mine Project approvals due to timing of third party negotiations and agreements. Thus the projects have been separated for approvals purposes.

3 Description of environment & likely impacts

3.1 Matters of national environmental significance

3.1 (a) World Heritage Properties

Description

There are no World Heritage properties in the vicinity of the development (EPBC Act Protected Matters Report, refer to Attachment B).

Nature and extent of likely impact

Not applicable

3.1 (b) National Heritage Places

Description

There are no National Heritage Places in the vicinity of the development (EPBC Act Protected Matters Report, refer to Attachment B).

Nature and extent of likely impact

Not applicable

3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

Description

There are no Wetlands of International Importance in the vicinity of the development (EPBC Act Protected Matters Report, refer to Attachment B).

Nature and extent of likely impact

Not applicable

3.1 (d) Listed threatened species and ecological communities

Description

Flora and Vegetation:

An EPBC Protected Matters (Matters of National Environmental Significance (NES)) search of the Study area was undertaken (Refer to Attachment B) by *ecologia*. The search indicated that:

- no threatened ecological communities of Commonwealth significance occur in the vicinity; and
- one flora species, *Lepidium catapycnon* listed under the Commonwealth *EPBC Act 1999* may potentially occur in the Project area.

Brockman commissioned *ecologia* to undertake a two-phase, Level 2 assessment of the vegetation and flora within the Project Area (Attachment C).

The survey was carried out in two phases. The first phase was conducted in winter from the 4th – 12th of June 2008 totalling 16 person days. The second phase was conducted in spring from the 10th – 15th of September 2008 totalling 15 person days (*ecologia*, 2009).

Fauna:

An EPBC Protected Matters (Matters of National Environmental Significance (NES)) search of the Study area was undertaken by *ecologia* (Attachment B). The search indicated that based on distribution patterns five threatened fauna species could potentially occur within the Project area including the:

- Northern Quoll *(Dasyurus hallucatus)*;
- Night Parrot *(Pezoporus occidentalis);*
- Pilbara Leaf-nosed Bat *(Rhinonicteris aurantia)*;
- Greater Bilby *(Macrotis lagotis)*; and
- Pilbara Olive Python *(Liasis olivaceus barroni)*.

A two-phase level 2 vertebrate fauna assessment of the Study area was commissioned by Brockman (Attachment D). The survey was conducted in 2008. Phase one was conducted in autumn, from 25th April to 7th May 2008. Phase two was conducted in spring, from 30th August to 10th September 2008 (*ecologia* 2010).

Nature and extent of likely impact

Flora and Vegetation:

No threatened flora species or TEC's listed under the EPBC Act were recorded in the Study area. There are no anticipated direct or indirect affects from the Proposal on any EPBC listed species of TEC's.

Based on the survey undertaken and the habitat preferences of these species it is considered that *Lepidium catapycnon* will not occur within the Project area.

Fauna:

Night Parrot (Pezoporus occidentalis)

Conservation Status: EPBC Act Endangered/Migratory, WC Act Schedule 1

Distribution and Habitat: Historical evidence indicates that Night Parrots were distributed over much of semi-arid and arid Australia (Garnett and Crowley 2000). Extremely secretive and hard to flush, there are only 6 accepted records of Night Parrots since 1935, with three from the Pilbara region (1979, 1980 and 2005; DEWHA 2008b). The most recent record is from Minga well during a fauna survey at Fortescue Metals Group's Cloudbreak lease (Bamford 2005). Preferred habitat is thought to be spinifex grasslands or samphire and chenopod shrublands on claypans, floodplains or the margins of salt lakes, creeks or other water bodies (Johnstone and Storr 1998; Higgins 1999; DEWHA 2008b).

Ecology: The Night Parrot is a rarely encountered, nocturnal parrot that spends much of its time on the ground. It is thought that the Night Parrot roosts during the day under dense vegetation such as spinifex clumps, in caves or even burrows (Higgins 1999). They are thought to be granivorous, particularly feeding on seeding spinifex, but may also eat some herbage. The presence of soil in the upper mandible of museum specimens also suggests that they may dig for roots or tubers (Higgins 1999).

The species has been variously described as sedentary but with large home ranges, nomadic, and seasonally migratory in response to conditions.

The apparent decline of the Night Parrot is most likely attributable to predation by cats and foxes, competition with introduced herbivores (livestock, rabbits, camels), degradation of water holes by livestock and altered fire regimes (Higgins 1999).

Likelihood of Occurrence: The probability of Night Parrots occurring in the project area is difficult to estimate, as the species is unlikely to be recorded even in areas where it may be common. However, previous records of the species have been in very close proximity to the Fortescue Marsh (Bamford 2005) and they are thought to inhabit the samphire and lignum community and fringing hummock grassland of the Marsh (S. van Leeuwin DEC, pers. comm.; Attachment I). As a result, the species is considered highly unlikely to occur in the spinifex grasslands within the Project area.

Potential Impacts: Night Parrots are considered highly unlikely to occur within the mining footprint and as so no impacts are anticipated. Groundwater modelling shows that there will be no impacts to the Fortescue Marsh from dewatering activities (Attachment F).

Relevance of the Significant Impact Criteria (from DEWHA 2009).

Significant Impact Criteria	Relevant	Comment
Long-term decrease in the size of a population	No	No typical habitat will be impacted by the Project.
Reduction in the area of occupancy of the species	No	No parrots were identified as occupants during L2 surveys.
Fragmentation of an existing population into two or more populations	No	No resident population was identified during L2 surveys.
Adverse affect to habitat critical to the survival of a species	No	No critical habitat will be impacted on.
Disruption to the breeding cycle of a population	No	No resident population was identified during L2 surveys.
Modification, destruction, removal, isolation or reduction to the availability or quality of habitat to the extent that the species is likely to decline	No	No resident population was identified during L2 surveys.
Establishment of invasive species that are harmful to an endangered species in the endangered species' habitat	No	Feral fauna are already well established within the region.
Introduction of disease that may cause the species to decline	No	No diseases are expected to be introduced.
Interference with the recovery of the species	No	No resident population was identified during L2 surveys.

Northern Quoll

Conservation Status: EPBC Act Endangered, WC Act Schedule 1

Distribution and Habitat: The Northern Quoll formerly occurred across northern Australia from the Pilbara region in Western Australia to south-eastern Queensland. A 75% range reduction occurred during the 20th century; the species is now only relatively common in the Pilbara and northern Kimberley in Western Australia and a few discreet populations across the Northern Territory and eastern Queensland (Braithwaite and Griffiths 1994) Causes for this decline include loss of habitat, cane toads and exotic disease. Northern Quolls are most common on dissected rocky escarpments, but are also found in eucalypt forest and woodland (Oakwood 2008). They are both arboreal and terrestrial and use a variety of den sites including rock crevices, tree hollows, logs,

termite mounds, house roofs and goanna burrows (Oakwood 2008).

Ecology: Northern Quolls are nocturnal and opportunistic omnivores feeding primarily on large insects, small vertebrates and soft fruits. Breeding tends to occur near surface water, as this appears important when rearing young.

Likelihood of Occurrence: No suitable habitat for the Northern Quoll was identified within the Project area during the survey. No primary or secondary evidence of quolls was identified during the level 2 survey. The likelihood that the species occurs in the Project area is very low.

Potential Impacts: Due to the low likelihood of Northern Quolls occurring within the Project area, no impacts to the species are anticipated.

Relevance of the Significant Impact Criteria (from DEWHA 2009).

Significant Impact Criteria	Relevant	Comment
Long-term decrease in the size of a population	No	Quolls highly unlikely to be resident within the Project area. No long term decrease in of population size is expected.
Reduction in the area of occupancy of the species	No	No suitable quoll habitat. No identified populations.
Fragmentation of an existing population into two or more populations	No	No suitable quoll habitat. No identified populations.
Adverse affect to habitat critical to the survival of a species	No	No critical habitat will be impacted on.
Disruption to the breeding cycle of a population	No	Construction and operation of this Project is not expected to disrupt the breeding cycle of this species. No suitable quoll habitat. No identified population.
Modification, destruction, removal, isolation or reduction to the availability or quality of habitat to the extent that the species is likely to decline	No	No suitable quoll habitat. No identified populations.
Establishment of invasive species that are harmful to an endangered species in the endangered species' habitat	No	Feral fauna are already well established within the region.
Introduction of disease that may cause the species to decline	No	No diseases are expected to be introduced.
Interference with the recovery of the species	No	No suitable quoll habitat. No identified populations.

Pilbara Leaf-nosed Bat

Pilbara Leaf-nosed Bats were not recorded within the Study area during *ecologia*'s surveys, nor was any roosting or breeding habitat identified. Suitable hunting habitat is present throughout the Study area.

Conservation Status: EPBC Act Vulnerable, WC Act Schedule 1

Distribution and Habitat: The Pilbara Leaf-nosed Bat is the Pilbara form of the Orange Leaf-nosed Bat (*Rhinonicteris aurantia*). While it is considered a separate form, formal reclassification has been hampered by the small sample size of the Pilbara population (Armstrong 2008).

Recent evidence suggests two main stronghold areas for the Pilbara Leaf-nosed Bat; in the western Pilbara and north of Marble Bar (Armstrong 2008). In the western Pilbara, they roost in caves formed in gorges that dissect siliceous sedimentary geology. They are most often observed in flight over waterholes in gorges, although they are rare even in the Hamersley Ranges where this habitat is common (Armstrong 2008). The Pilbara Leaf-nosed Bat roosts in disused mines and areas of high relief with gorges and watercourses (Armstrong 2001). Suitable roosting habitat comprises hot humid caves with temperatures of 28-32^{o} C and a relative humidity of 96-100% (Churchill 2008). They are unlikely to occur in the shallow 'breakaway' caves that occur along mesas and strike ridges.

Ecology: At dusk Pilbara Leaf-nosed Bats emerge from their roosting sites to forage in gorges, small gullies and large watercourses for insects (Van Dyck and Strahan 2008). They are susceptible to disturbance and will

including human visitation and the collapse and flooding of disused mines (Armstrong 2008; DEWHA 2008c).

Likelihood of Occurrence: No suitable roosting caves were found within the Project area. The stony spinifex plains may be utilised for hunting grounds, although no individuals were recorded during the surveys. It is considered that the Pilbara Leaf-nosed Bats does not permanently inhabit the Project area.

Potential Impacts: There is the potential for a negligible contsraint through the loss of hunting territory; however the small size of the impact area, and the ability of the species to hunt across a wide area, means the Project is not anticipated to impact Pilbara Leaf-nosed Bats on either a local or regional scale.

Relevance of the Significant Impact Criteria (from DEWHA 2009).

Significant Impact Criteria	Relevant	Comment
Long-term decrease in the size of a population	No	No roosting or breeding habitat identified. No resident population identified.
Reduction in the area of occupancy of the species	No	No roosting or breeding habitat identified. No resident population identified.
Fragmentation of an existing population into two or more populations	No	No roosting or breeding habitat identified. No resident population identified.
Adverse affect to habitat critical to the survival of a species	No	No roosting or breeding habitat identified. No resident population identified.
Disruption to the breeding cycle of a population	No	No roosting or breeding habitat identified. No resident population identified.
Modification, destruction, removal, isolation or reduction to the availability or quality of habitat to the extent that the species is likely to decline	No	Only a very small area of habitat will be impacted by the project, therefore loss of this habitat is not expected to cause this species to decline.
Establishment of invasive species that are harmful to an endangered species in the endangered species' habitat	No	Feral fauna are already well established within the proposal area.
Introduction of disease that may cause the species to decline	No	No diseases are expected to be introduced.
Interference with the recovery of the species	No	If present, the species appears to be relatively uncommon in the region.

The Greater Bilby

The Greater Bilby was not recorded during the Level 2 fauna assessment within the Project area and no secondary evidence such as burrows was recorded.

Conservation Status: EPBC Act Vulnerable, WC Act Schedule 1

Distribution and Habitat: Once common over 70% of mainland Australia's arid and semiarid regions, Greater Bilbies are currently patchily distributed through the Tanami, Great Sandy and Gibson Deserts (Maxwell *et al.* 1996). There are scattered records from within the Pilbara region, with areas surrounding the Fortescue Marsh appearing to represent the western exremity of their range (Naturemap). Bilbies occur in a variety of habitats, including spinifex grassland on sandy soils, acacia shrubland, open woodland, and cracking clays (Maxwell *et al.* 1996; Johnson 2008).

Ecology: The Greater Bilby is a mainly solitary omnivorous marsupial. As with all bandicoot species, the Greater Bilby are generalists in their diet and very effective opportunists, exploiting their environment by their wide choice of food, fast growth and rapid reproduction, particularly when conditions are favourable (Tyndale-Biscoe 2005). Their typical diet consists of insects and larvae, seeds, bulbs, fruit and fungi (Van Dyck and Strahan 2008). It uses its strong forelimbs and claws to construct an extensive tunnel system of up to 3 metres long and 1.8 metres deep in which it shelters during the day (Johnson 2008).

Likelihood of Occurrence: No suitable habitat for the Greater Bilby was identified within the Project area during the survey. No primary or secondary evidence of bilbies was identified during the level 2 survey. The likelihood that the species occurs in the Project area is very low.

Potential Impacts: Due to the low likelihood of Greater Bilby occurring within the Project area, no impacts to the species are anticipated.

Relevance of the Significant Impact Criteria (from DEWHA 2009)

Significant Impact Criteria	Relevant	Comment
Long-term decrease in the size of a population	No	Bilbies highly unlikely to be resident within the Project area. No long term decrease in of population size is expected.
Reduction in the area of occupancy of the species	No	No suitable habitat. No identified populations.
Fragmentation of an existing population into two or more populations	No	No suitable habitat. No identified populations.
Adverse affect to habitat critical to the survival of a species	No	No critical habitat will be impacted on.
Disruption to the breeding cycle of a population	No	Construction and operation of this Project is not expected to disrupt the breeding cycle of this species. Bilbies are opportunistic breeders in response to environmental conditions.
Modification, destruction, removal, isolation or reduction to the availability or quality of habitat to the extent that the species is likely to decline	No	Loss of habitat from the construction of this project is not expected. The Project is not expected to cause further decline to this species.
Establishment of invasive species that are harmful to an endangered species in the endangered species' habitat	No	Feral fauna are already well established within the region.
Introduction of disease that may cause the species to decline	No	No diseases are expected to be introduced.
Interference with the recovery of the species	No	No suitable bilby habitat. No identified populations.

Pilbara Olive Python

Pilbara Olive Pythons were not recorded during the Level 2 fauna assessments within the Project area.

Conservation Status: EPBC Act Vulnerable, WC Act Schedule 1

Distribution and Habitat: The Pilbara subspecies of the Olive Python only occurs in the ranges of the Pilbara region of Western Australia. It inhabits watercourses and areas of permanent water in rocky gorges and gullies (Pearson 2006).

Ecology: This subspecies is an adept swimmer, often hunting in water, feeding on a variety of vertebrates including rock wallabies, fruit bats, ducks, and pigeons. Individuals spend the cooler winter months sheltering in caves and rock crevices. In the warmer months the pythons can move widely, usually in close proximity to water and rock outcrops (DEWHA 2008a). In late winter or early spring males will travel large distances to find and mate with females.

Likelihood of Occurrence: The species prefers to inhabit the gorges and escarpments more typically found in the nearby Hamersley Range, but may attracted to the Weeli Wolli Creek for hunting, or as a conduit to dispersal, when water is present. For most of the year the species is unlikely to be affected by mining activities in the project area, but individuals may enter the area when the creek is in flood. The preferred habitat along Weeli Wooli Creek will not be impacted and will be an exclusion zone.

Potential Impacts: Pilbara Olive Pythons are widespread in the Pilbara and the impact to the regional population is expected to be negligible due to the small size of the development and the ability of individuals to relocate away from disturbances.

Relevance of the Significant Impact Criteria (from DEWHA 2009).

Significant Impact Criteria	Relevant	
Long-term decrease in the size of a population	No	Pilbara Olive python populations are not expected decrease over the long term due to this project. Impacts are concentrated within a small footprint and suitable habitat exists away from the Study area.

Reduction in the area of occupancy of the species	No	Due to the nature of the project, impacts are not expected to be sufficient to reduce the area of occupancy of this species.
Fragmentation of an existing population into two or more populations	No	The project is not expected to form a barrier that will fragment existing populations. Individual Pythons are expected to be able to pass through the Project area.
Adverse affect to habitat critical to the survival of a species	No	Preferred habitat along Welli Wooli Creek will not be impacted and will be an exclusion zone. While this habitat in the project area is suitable to this species it is not thought to be "critical habitat", with similar habitat present in surrounding areas.
Disruption to the breeding cycle of a population	No	Construction and operation of this project is not expected to cause any disruptions to the breeding cycle of Pilbara Olive Pythons as individuals are expected to be able pass through the Project when searching for mates.
Modification, destruction, removal, isolation or reduction to the availability or quality of habitat to the extent that the species is likely to decline	No	Construction and operation of this project is not expected to impact suitable habitat to the extent that the Pilbara Olive Python populations will decline. Suitable habitat extends away from the project area.
Establishment of invasive species that are harmful to an endangered species in the endangered species' habitat	No	Feral fauna are already well established within the region.
Introduction of disease that may cause the species to decline	No	No diseases are expected to be introduced.
Interference with the recovery of the species	No	Construction and operation of this project is not expected to significantly impact habitat or populations and therefore the recovery of this species.

3.1 (e) Listed migratory species

Description

An *EPBC Act* Protected Matters search was undertaken (Attachment B). The search identified 7 migratory species of Commonwealth Significance that have been previously recorded within the region surrounding the Proposal. These include:

- Rainbow Bee-eater (*Merops ornatus*);
- White-bellied Sea-eagle (*Haliaeetus leucogaster*);
- Fork-tailed Swift (*Apus pacificus*);
- Eastern Great Egret (*Ardea alba*);
- Cattle Egret (*Ardea ibis*);
- Oriental Plover (*Charadrius veredus*); and
- Night Parrot *(Pezoporous occidentalis).*

During field survey work within the Project area, only the Rainbow Bee-eater (*Merops ornatus*) was recorded.

Nature and extent of likely impact

Night Parrot

Refer to section 3.1 (d).

Rainbow Bee-eater

Conservation Status: EPBC Act Migratory, WC Act Schedule 3

Distribution and Habitat: The Rainbow Bee-eater is scarce to common throughout much of Western Australia, except for the arid interior, preferring lightly wooded, preferably sandy, country near water (Johnstone and Storr 1998).

Ecology: In Western Australia the Rainbow Bee-eater can occur as a resident, breeding visitor, post-nuptial nomad, passage migrant or winter visitor. It nests in burrows usually dug at a slight angle on flat ground, sandy banks or cuttings, and often at the margins of roads or tracks (Simpson and Day 2004). Eggs are laid at the end of the metre long tunnel from August to January (Boland 2004). Bee-eaters are most susceptible to predation.

Potential Impacts: Little impact is anticipated to this species due to the presence of similar habitat surrounding the Project Area and throughout Western Australia. The most likely place for this species to breed within the project area would be at Weeli Wolli Creek, where ideal sandy embankments occur. Neither the creek nor longitudinal sand dune is under threat from the Project, both areas will be exclusion zones. No regional impacts to this species are anticipated.

White-bellied Sea-eagle

Conservation Status: EPBC Act Migratory, WC Act Schedule 3

Distribution and Habitat: The White-bellied Sea-Eagle is considered moderately common in the Houtman Abrolhos Islands off Geraldton and in addition to Australia, the species is found in New Guinea, Indonesia, China, south-east Asia and India. White-bellied Sea-eagles occur in coastal and near coastal areas across Australia inhabiting most types of habitats except closed forest.

Ecology: The White-bellied Sea-Eagle feeds mainly off aquatic animals, such as fish, turtles and sea snakes, but it takes birds and mammals as well. It breeds almost wholly on islands, building a large stick nest, which is used for many seasons in succession (Johnstone and Storr 1998; RPS 2008). The breeding season ranges from may to September in the north and in winter and spring in Australia's south (Morcombe 2000).

Potential Impacts: Any impacts to large rivers may reduce the amount of hunting habitat available to the species; however no impact to the Weeli Wolli Creek system is anticipated from the Project and sea-eagles are uncommon in the Project area. Therefore, no local or regional impacts are anticipated.

Fork-tailed Swift

Conservation Status: EPBC Act Migratory, WC Act Schedule 3

Distribution and Habitat: The Fork-tailed Swift is distributed from central Siberia and throughout Asia, breeding in north-east and mid-east Asia, and wintering in Australia and south New Guinea. It is a relatively common trans-equatorial migrant from October to April throughout mainland Australia (Simpson and Day 2004). In Western Australia the species begins to arrive in the Kimberley in late September, the Pilbara in November and in the South-west by mid-December (Johnstone and Storr 1998). In Western Australia, the Fork-tailed Swift is considered uncommon to moderately common near the north-west, west and south-east coasts, common in the Kimberley and rare or scarce elsewhere (Johnstone and Storr 1998).

Ecology: Fork-tailed Swifts are nomadic in response to broad-scale weather pattern changes. They are attracted to thunderstorms where they can be seen in flocks, occasionally up to 2,000 birds. They rarely land, living almost exclusively in the air and feeding entirely on aerial insects, especially nuptial swarms of beetles, ants, termites and native bees (Simpson and Day 2004).

Potential Impacts: The species is entirely aerial and highly nomadic and thus will not be impacted by the development of the project.

Wading Birds

Conservation Status: EPBC Act Migratory, WC Act Schedule 3

Three species of wading birds of conservation significance may occur in the region of the proposal area: Eastern Great Egret, Cattle Egret, and Oriental Plover.

Distribution and Habitat: Wading birds mainly inhabit shallow water bodies; both fresh (lakes, lagoons, swamps and floodwaters) and saline (mangrove creeks, estuaries and tidal pools) (Johnstone and Storr 1998). Most species of wading bird occur across a large part of Western Australia, including the south-west, Kimberley and Pilbara (Johnstone and Storr 1998).

Ecology: The waders' diet consists predominantly of invertebrate, small fish and crustaceans. Preferred habitat consists of shallow wooded fresh or brackish water, lakes, flooded pasture and occasionally in mangroves (Morcombe 2000).

Potential Impacts: The Weeli Wolli Creek is dry excepting after cyclonic flooding events and wading birds are not expected to inhabit the Project area, instead utilising the near by Fortescue Marsh. As a result no impacts to these species are anticipated.

3.1 (f) Commonwealth marine area

Description

The Project is not located within a Commonwealth marine area.

Nature and extent of likely impact

Not applicable.

3.1 (g) Commonwealth land

Description

The Project is not situated on any Commonwealth land.

Nature and extent of likely impact

Not applicable.

3.1 (h) The Great Barrier Reef Marine Park

Description

The Project is not located within the Great Barrier Reef Marine Park

Nature and extent of likely impact

Not applicable.

3.2 Nuclear actions, actions taken by the Commonwealth (or Commonwealth agency), actions taken in a Commonwealth marine area, actions taken on Commonwealth land, or actions taken in the Great Barrier Reef Marine Park

3.2 (a)	**Is the proposed action a nuclear action?**	✓	No

If yes, nature & extent of likely impact on the whole environment

Not applicable

3.2 (b)	**Is the proposed action to be taken by the Commonwealth or a Commonwealth agency?**	✓	No

If yes, nature & extent of likely impact on the whole environment

Not applicable.

3.2 (c)	**Is the proposed action to be taken in a Commonwealth marine area?**	✓	No

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(f))

Not applicable.

3.2 (d)	**Is the proposed action to be taken on Commonwealth land?**	✓	No

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(g))

Not applicable.

3.2 (e)	**Is the proposed action to be taken in the Great Barrier Reef Marine Park?**	✓	No

If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))

Not applicable.

3.3 Other important features of the environment

3.3 (a) Flora and fauna

Flora

Brockman commissioned *ecologia* Environment (*ecologia*) to undertake a two-phase biological survey of the vegetation and flora of the Project area (Attachment C).

The first phase of the survey was carried out in June 2008 and the second in September 2008. Systematic and opportunistic sampling methods were used. A total of 137 quadrats was assessed over both phases, 82 during phase 1 and 72 during phase 2; 17 quadrats were assessed during both phases.

The Marillana survey area crosses six of the land systems that have been mapped in the Pilbara - the Fortescue, Turee, Fan, Boolgeeda, Divide and River Land Systems.

The vegetation of the survey area was mapped into eight main vegetation units, with some further classified into subunits on the basis of structure and species composition of the dominant strata and on landform. The vegetation types mapped were associated with the following landforms: creek lines, drainage channels on the footslopes, clay pans, minor channel or drainage depressions, floodplains, longitudinal sand dunes, sandy plains and a minor footslope. The eight vegetation units are:

1. *Eucalyptus victrix* and *Acacia citrinoviridis* low woodland (with two sub-units);
2. *Acacia tumida* and *Grevillea wickhamii* tall shrubland;
3. *Acacia aneura* low woodland, over *Acacia synchronicia* tall shrubland, over **Cenchrus* spp. tussock grassland;
4. *Acacia aneura* low open forest (with two sub-units);
5. *Acacia citrinoviridis, Corymbia hamersleyana, Acacia aneura* and *Acacia pruinocarpa* open woodland, over *Acacia* spp. tall shrubland, over **Cenchrus* spp. closed tussock grassland (with three sub-units);
6. *Acacia dictyophleba* tall shrubland, over *Triodia schinzii* open hummock grassland;
7. *Acacia* spp. medium to high open shrubland, over *Triodia basedowii* and *Triodia schinzii* hummock grassland; and
8. *Corymbia hamersleyana* isolated low trees, over *Eucalyptus gamophylla* mallee woodland, over *Acacia* spp. and *Grevillea wickhamii* tall shrubland, over *Triodia basedowii* hummock grassland (with five sub-units).

These vegetation units are similar to the vegetation recorded for other surveys conducted in this area of the Pilbara.

Database searches indicate that no threatened ecological communities occur within 50 km of the Marillana survey area.

A total of 302 taxa resulted from the combined records for both phases of the survey (including opportunistic collections, affinities, and forms). These taxa included 42 families and 116 genera. Of this combined total, 224 taxa from 38 families and 100 genera were recorded during the first phase of the survey and 244 taxa from 39 families and 104 genera during the second.

Diversity at the survey area was slightly higher than, but comparable with, other areas surveyed in the Pilbara.

No declared weeds were recorded in the area.

Fauna

Brockman commissioned *ecologia* Environment (*ecologia*) to undertake a comprehensive biological survey (Level 2 survey) of the vertebrate fauna of the Project area (Attachment D), as part of the environmental impact assessment.

ecologia conducted a two phase Level 2 vertebrate fauna survey in the project area during April/May (autumn) 2008 and August/September (spring) 2008. Field survey methodology was devised in accordance with the Environmental Protection Authority's Guidance Statement No. 56 (Environmental Protection Authority 2004) and Position Statement No.3 (Environmental Protection Authority 2002).

Five main fauna habitat types were identified in the project area. These were sandy spinifex grassland, stony spinifex plain, creekline, longitudinal sand dune and mulga woodland. Six systematic survey sites were established within these five fauna habitats, utilising a combination of pit traps, funnel traps, Elliott traps and cage traps, as well as fixed-time bird censuses. Opportunistic searches were conduced at the systematic sites as well as a further eighteen opportunistic sites.

23 species of mammal (including five introduced), 82 species of bird, and 44 species of reptile, were recorded. No amphibians were recorded, which was likely due to the low rainfall experienced during the surveys.

Of these, two species, the Australian Bustard (*Ardeotis australis*) listed DEC Priority 4, and the Rainbow Bee-eater (*Merops ornatus*), listed EPBC Migratory, were recorded within the project area (Attachment E).

The Rainbow Bee-eater occurs over most of Australia and in south-east Asia and is common throughout its range. The species was recorded throughout the project area favouring the Weeli Wolli creekline. This area is not subject to current mining activities and impacts are likely to be minimal.

The Australian Bustard, DEC Priority 4, is a nomadic species, and even though it was recorded within the project area during this survey, impacts are likely to be minimal as suitable habitat occurs directly adjacent to the Project.

3.3 (b) Hydrology, including water flows

Surface water:

The Hamersley Ranges are located immediately to the south of the Project area. The ranges extend from an elevation of 440 m in the Project area to include peaks of up to 775 m within the catchments which drain through the Project area.

Outside of the Project area catchments, the Hamersley Ranges contain Western Australia's highest peak Mt Meharry reaching 1253 m. The Hamersley Ranges catchments which impact the Project site have a moderately dense network of streams which generally have very steep upper catchments and bed slopes ranging from 3% to 19%. Drainage from these areas occurs via incised, topographically controlled channels.

The catchments typically level out to a wide, flatter plain with bed slopes of 1% to 2% before forming a delta upon leaving the ranges and draining through the Project area. Slopes through the Project area range from 0.2% to 1%. The flow occurs within numerous small and shallow distributary channels which often become indistinct. In major events, runoff through the Project area would occur as wide, shallow slow moving sheet flow (Aquaterra, 2009b).

Weeli Wolli Creek is a major Pilbara drainage system and flows diagonally across the tenement from the south-east to the north-west. In addition there are numerous smaller streams that flow down the Hamersley escarpment and form deltas when they reach the flatter country at the base of the escarpment. They then flow in the form of sheet/overland flow until they reach Weeli Wolli Creek (Aquaterra, 2009b).

Weeli Wolli Creek is recharged mainly from Weeli Wolli Springs, located approximately 40 km upstream of the mine site, and Yandicoogina and Marillana Creeks which discharge into Weeli Wolli Creek at approximately 25 km upstream of the mine site. Upon exiting the ranges, Weeli Wolli Creek has formed an extensive delta with numerous flow paths in major events. The split of flow between the channels will vary

with the intensity of the event. For example, during low flow events, flow will be confined exclusively to the main Weeli Wolli Creek channel, however during large events, the flow within the main channel would only represent a small proportion of the total flow. From this delta, the Weeli Wolli Creek channels extend northwards into the Fortescue Marsh, which is an extensive intermittent wetland located on the floor of the Fortescue River valley.

The main creek channel flows in a north westerly direction through the Project area. The channel is typically trapezoidal in shape with steep banks and a flat wide channel. The typical creek width is 50 m with banks typically 1.5 to 2 m high. In places the width between creek banks extends to as much as 200 m. This width typically includes a main channel of around 50 m and islands which typically support eucalypts. Bed slopes through the Project area are typically low at around 0.1%. With the exception of the in-stream islands, and occasional isolated eucalypts, there is little in-stream vegetation. Eucalypts are common on the bank of the creek channel, typically occurring within 20-30 m of the creek bank.

Waterloo gauging station is located approximately 8 km downstream of the confluence of Yandicoogina Creek and Weeli Wolli Creek. A record of streamflow data between 1984 and 2008 shows that on average, Weeli Wolli Creek can be expected to flow a mean of 24 days/year and a median of 7 days/year (DoW, 2009). The duration of a 1 in 2 year flow event is about 7 days, while a 1 in 10 year flow event is approximately 18 days in duration.

The proposed development is located in the Fortescue Marsh catchment. The marsh area is in the physiographic unit known as the Fortescue Valley, and occupies a trough between the Chichester and Hamersley Plateaux (Beard, 1975).

The Goodiadarrie Hills, located on the valley floor just west from the marsh rail crossing, effectively cuts the Fortescue River into two separate river systems. West from the Goodiadarrie Hills, the Lower Fortescue River Catchment drains in a general north-westerly direction to the coast, whereas east of the hills the Fortescue Marsh receives drainage from the Upper Fortescue River Catchment. Several large creek systems discharge to the Fortescue Marsh with a total catchment area of approximately 31,000 km^2. These systems include the Fortescue River, Weeli Wolli Creek, Marillana Creek, Caramulla Creek, Jigalong Creek, Kondy Creek and Kulkinbah Creek. The alluvial outwash fan from the Weeli Wolli Creek and other smaller creek systems abutting the Goodiadarrie Hills is believed to be partially responsible for this obstruction to the Fortescue River and forming the Fortescue Marsh. The DoW considers the upper portion of the Fortescue River which drains to the Marsh as a closed system.

The Fortescue Marsh itself is an extensive intermittent wetland acting as a flood storage and occupying an area around 100 km long by typically 10 km wide, located on the floor of the Fortescue Valley. The marsh has an elevation around 400 m AHD. To the north, the Chichester Plateau rises to over 500 m AHD, whereas to the south the Hamersley Ranges rises to over 1000 m AHD. Following significant rainfall events, runoff from the creeks drains to the marsh. For the smaller runoff events, isolated pools form on the marsh opposite the main drainage inlets, whereas for the larger events the whole marsh area has the potential to flood.

Published topographical mapping indicates that the lower bed levels in the Fortescue Marsh predominantly lie between 400 m and 405 m AHD. Data provided by the DoW states that the flood level in the marsh would need to be marginally higher than 413m AHD to overspill westwards past the Goodiadarrie Hills. No published flood level data are available for the marsh. Anecdotal evidence suggests that over the last 50 years, following major cyclonic events, flood levels of approx 410 m AHD have occurred.

Surface water runoff to the marsh is of low salinity and turbidity, though the runoff turbidity typically increases significantly during peak periods of flooding (WRC, 2000). Following a major flood event (that flooded the whole marsh area), anecdotal data indicates that the water could pond up to 10 m in depth in the lowest elevation marsh areas. Water stored in the marsh slowly dissipates through the processes of seepage and evaporation. During the evaporation process, the water salinity increases and as the flooded areas recede, traces of surface salt can be seen. During the seepage process, the increasingly more saline water is believed to seep into the valley floor alluvial deposits.

Groundwater:

Brockman commissioned a Groundwater Study of the Project area to assess the potential impacts to groundwater (Attachment F).

The Weeli Wolli Creek catchment area is 4,769 km^2, and this upstream catchment includes three major mining areas: Hope Downs, Area C, and Marillana Creek. The Weeli Wolli Creek system has a combination of groundwater and surface water flow, which represents the upstream recharge. During high rainfall events, there is significant surface water flow into the Project area; some of this run-off reaches the Fortescue Marsh, while some infiltrates in the groundwater system.

The most extensive aquifer in the area is associated with an alluvial sequence that extends northeast from the lower slopes of the Hamersley Ranges across to the Fortescue Marsh. The alluvial deposits consist of clays, silts, sands, gravels and calcretes, and extend to depths of 100 m. Over most of the area, low permeability clays with occasional sand and gravel lenses dominate the alluvial sequence. In these areas, the permeability is typically low (0.1 to 1 m/d).

Closer to the base of the Ranges, a Channel Iron Deposit (CID) and detrital sequence lies within a palaeo-valley. The CID is up to 40 m thick, is typically goethitic, and is pisolitic in parts. The CID is typically highly porous and vuggy with significant secondary porosity from joints and solution cavities. It is assumed that the palaeochannel continues downstream beyond the Project area (perhaps aligning to the north towards the Fortescue Marsh west of the Project area), while upstream, it is anticipated that the palaeochannel aligns with the modern drainage line of Weeli Wolli Creek where it extends up into the Hamersley Ranges.

Groundwater levels across the Project area have been measured from existing regional water bores, along with recently installed stygofauna monitoring holes and piezometers. The data shows that groundwater levels on tenement vary from approximately 424 mRL, where Weeli Wolli Creek exits the Hamersley Ranges to the east of the Project area; down to 410 mRL several kilometres into the valley towards the Fortescue Marsh, and also west along strike of the orebody near the base of the Hamersley Ranges. Groundwater levels tend to be a subdued reflection of topography.

Contours of the groundwater levels shows that the water table generally has a low gradient to the north (towards the centre of the valley); while locally within the palaeochannel, the flow is in a north-westerly direction along the base of the Hamersley Ranges, likely an artefact of preferential groundwater flow through the more permeable palaeochannel.

Significant rainfall events can potentially induce a groundwater level increase of several metres, and it is likely that sizeable background seasonal fluctuations occur in the region, and are likely to be accentuated in the vicinity of Weeli Wolli Creek, which sustains numerous channel flow events every year.

3.3 (c) Outstanding natural features

Not applicable.

3.3 (d) Remnant native vegetation

The vegetation of the survey area was mapped into eight main vegetation units, with some further classified into subunits on the basis of structure and species composition of the dominant strata and on landform. The vegetation types mapped were associated with the following landforms: creek lines, drainage channels on the footslopes, clay pans, minor channel or drainage depressions, floodplains, longitudinal sand dunes, sandy plains and a minor footslope. The eight vegetation units are:

1. *Eucalyptus victrix* and *Acacia citrinoviridis* low woodland (with two sub-units);
2. *Acacia tumida* and *Grevillea wickhamii* tall shrubland;
3. *Acacia aneura* low woodland, over *Acacia synchronicia* tall shrubland, over **Cenchrus* spp. tussock grassland;
4. *Acacia aneura* low open forest (with two sub-units);

5. *Acacia citrinoviridis, Corymbia hamersleyana, Acacia aneura* and *Acacia pruinocarpa* open woodland, over *Acacia* spp. tall shrubland, over **Cenchrus* spp. closed tussock grassland (with three sub-units);

6. *Acacia dictyophleba* tall shrubland, over *Triodia schinzii* open hummock grassland;

7. *Acacia* spp. medium to high open shrubland, over *Triodia basedowii* and *Triodia schinzii* hummock grassland; and

8. *Corymbia hamersleyana* isolated low trees, over *Eucalyptus gamophylla* mallee woodland, over *Acacia* spp. and *Grevillea wickhamii* tall shrubland, over *Triodia basedowii* hummock grassland (with five sub-units).

These vegetation units are similar to the vegetation recorded for other surveys conducted in this area of the Pilbara.

3.3 (e) Current state of the environment

The site has previously been subjected to pastoralism and almost 90% of the Project area is either moderately or significantly disturbed. Ten of the 302 taxa recorded by *ecologia* were introduced species. No Declared Rare Flora taxa were recorded during the Marillana survey and one Priority Flora taxon; *Goodenia nuda* (P 3) was recorded in low numbers (< 2% cover) on the banks of the Weeli Wolli Creek; once on a minor channel and once on a clay pan. These habitats are not locally restricted, and *G. nuda*'s distribution range is quite wide in the Pilbara. Because of this, if the *G. nuda* located during the survey were to be impacted at Marillana it is considered unlikely to lead to the local extinction of the species.

3.3 (f) Commonwealth Heritage Places or other places recognised as having heritage values

Not applicable.

3.3 (g) Indigenous heritage values

It is anticipated that the Project will have negligible impact on cultural heritage. However Brockman will ensure that procedures are in place to minimise the risk of disturbing sites that may become apparent in the future. Brockman plan to develop an overarching corporate management plan that will deal with health and safety, environment and heritage issues. A detailed Cultural Heritage Management Plan will also be developed for the project.

3.3 (h) Other important or unique values of the environment

No conservation estates are listed as occurring within the Study Area. Karijini National Park is approximately 46 km west of the Project area.

3.3 (i) Tenure of the action area (eg freehold, leasehold)

The Proposal is located within Mining Lease M47/1414 and M47/1419.

3.3 (j) Existing land/marine uses of area

The majority of the land surrounding the Proposal is used for mining and pastoral purposes. Beyond the Project details described within this document, there are no other known or proposed land uses within the area.

3.3 (k) Any proposed land/marine uses of area

There are no proposed land/marine uses of the area beyond that described in this document.

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4 Measures to avoid or reduce impacts

Matters protected under the EPBC Act with the potential to occur or be affected by the Project include threatened and migratory fauna species. One fauna species of conservation significance under the EPBC Act is known or likely to occur in the Project area.

- Rainbow Bee-eater (*Merops ornatus*).

Only the Rainbow Bee-eater was identified as occurring within the project area during surveys.

During the surveys, no threatened flora species listed under the Commonwealth *EPBC Act 1999* were recorded within the Study area. Based on the survey undertaken and the habitat preferences of these species it is not anticipated that *Lepidium catapycnon* will occur within the Study area.

It is anticipated that transient and migratory species will pass through the Project area. The following management strategies will be employed to avoid, minimise and/or mitigate impacts to fauna:

- The extent of clearing for construction and operational activities is to be minimised where possible.
- Clearing control procedures will be implemented during construction; such as the boundary of the proposal will be predetermined and marked before clearing activities start.
- Where practicable, existing disturbed areas will be utilised in preference to creating additional disturbance.
- The detailed design will consider the locations of conservation significant fauna habitat and disturbance will be avoided where possible.
- The Project Environmental Management Plan (PEMP) will detail procedures for fauna management in order to avoid adverse impacts during construction, including:
    - Fencing (barb wire free) will be placed as needed to reduce stock accessibility to the corridor and to restrict access to environmentally sensitive areas. Fencing may also be required near to construction operations to maintain safety standards. Turkey's nests will be fenced to restrict access by fauna.
    - No barbed wire on the proposal area.
    - Access road safety rules including reasonable speed limits and signage.
    - Minimise activities in the vicinity of water bodies.
- An environmental management system will be in place to ensure that general workforce training and induction is undertaken and personnel (including contractors) are aware of and compliant with the environmental management strategies and commitments. This will include stop work procedures and incident reporting procedures.

Given the regional context within which the Project will operate, the following management measures will be implemented.

Rainbow Bee-eater

Management measures to mitigate impacts to the species during Project activities include:

- Avoid blasting and construction in the vicinity of nesting habitats such as river beds during the breeding season (October to March).

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5 Conclusion on the likelihood of significant impacts

5.1 Do you THINK your proposed action is a controlled action?

✓	No, complete section 5.2
	Yes, complete section 5.3

5.2 Proposed action IS NOT a controlled action.

Brockman does not consider that the Project is a "controlled action" due to the following reasons:

No significant impact on items referred to in Section 18, 18A (listed threatened species and communities), 20 and 20A (listed migratory species) of the EPBC Act are proposed (refer to Section 3.1(d) and 3.1(e)).

Commitments to be included in the Project Environmental Management Plan are summarised above in Section 4.

5.3 Proposed action IS a controlled action

	Matters likely to be impacted
	World Heritage values (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)
	Commonwealth marine environment (sections 23 and 24A)
	Great Barrier Reef Marine Park (sections 24B and 24C)
	Protection of the environment from actions involving Commonwealth land (sections 26 and 27A)
	Protection of the environment from Commonwealth actions (section 28)
	Commonwealth Heritage places overseas (sections 27B and 27C)

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6 Environmental record of the responsible party

		Yes	No
6.1	**Does the party taking the action have a satisfactory record of responsible environmental management?** Brockman is an ASX listed Company with its principal project, the Marillana Iron Ore Project ("Marillana Project"), located 100km north-west of Newman in the Pilbara region of Western Australia and lying close to existing rail, road and port infrastructure. The Project has undergone State of Western Australia EIA via a Public Environmental Review process, managed by Brockman in an open, forthright and accountable way. The process has involved long-term, proactive consultation with a range of stakeholders including government regulators, community and indigenous groups. The EPA Bulletin was released on 6th December 2010 and the Project was subsequently approved by the EPA in February 2011. Brockman has committed to a number of management commitments and these have been agreed to by the EPA. Brockman maintains an Environmental Policy which guides their environmental conduct across all aspects of their operations. Brockman's Environmental Policy outlines the following objectives: • Abide by and comply with the *Environmental Protection Act 1986* and all other applicable environmental laws, regulations, policies, standards and codes of practice. • Establish the Company's Environmental Management System to conform to the requirements of the International Standard ISO 14001. • Provide employees with the necessary training, education and resources to fulfil their environmental responsibilities and ensure that operations are performed with appropriate respect for the environment. • Specify the need for all contractors to perform work in accordance with this policy and to supervise such compliance. • Conduct regular review of the Company's environmental performance and act on the results. In addition Brockman have developed an Environmental Management System (EMS) based on ISO14001 criteria. The EMS provides a systematic process for ensuring compliance with legal requirements, minimisation of environmental impacts, and promoting continual improvement in environmental performance.	✓	
6.2	**Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been 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?**		✓

	If yes, provide details		
6.3	**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?** **If yes, provide details of environmental policy and planning framework** Brockman is committed to managing its activities in an environmentally and socially responsible manner as reflected in Brockman's Environmental Policy. Brockman's Environmental Policy outlines the following objectives: • Abide by and comply with the *Environmental Protection Act 1986* and all other applicable environmental laws, regulations, policies, standards and codes of practice. • Establish the Company's Environmental Management System to conform to the requirements of the International Standard ISO 14001. • Provide employees with the necessary training, education and resources to fulfil their environmental responsibilities and ensure that operations are performed with appropriate respect for the environment. • Specify the need for all contractors to perform work in accordance with this policy and to supervise such compliance. • Conduct regular review of the Company's environmental performance and act on the results.	✓	
6.4	**Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?** **Provide name of proposal and EPBC reference number (if known)** Brockman Rail Project EPBC 2011/5833	✓	

7 Information sources and attachments

7.1 References

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Simpson, K. and Day, N. 2004. Field Guide to the Birds of Australia. Penguin Group, Camberwell.

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7.3 Attachments

		✓ attached	Title of attachment(s)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	✓	Attachment A – Proposal Location in Regional Context
	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 3)	✓	Attachment B - EPBC Act Protected Matters Report; Attachment E – Conservation Significant Fauna within the Project Area.
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.3)	✓	Attachment G – EPA Report Attachment H – Ministerial Statement 855
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.4)	✓	Attachment C – Level 2 Flora and Vegetation Survey Attachment D – Level 2 Vertebrate Fauna Survey Attachment F – Project Groundwater Study
	copies of any flora and fauna investigations and surveys (section 3)	✓	Attachment C & D.
	technical reports relevant to the assessment of impacts on protected matters and that support the arguments and conclusions in the referral (section 3 and 4)	✓	Attachment C, D & F.
	report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)	n/a	

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8 Contacts, signatures and declarations

Project title: Marillana Iron Ore Project

8.1 Person proposing to take action

This is the individual, government agency or company that will be principally responsible for, or who will carry out, the proposed action.

If the proposed action will be taken under a contract or other arrangement, this is:

- the person for whose benefit the action will be taken; or
- the person who procured the contract or other arrangement and who will have principal control and responsibility for the taking of the proposed action.

If the proposed action requires a permit under the Great Barrier Reef Marine Park Act[1], this is the person requiring the grant of a GBRMP permission.

The Minister may also request relevant additional information from this person.

If further assessment and approval for the action is required, any approval which may be granted will be issued to the person proposing to take the action. This person will be responsible for complying with any conditions attached to the approval.

If the Minister decides that further assessment and approval is required, the Minister must designate a person as a proponent of the action. The proponent is responsible for meeting the requirements of the EPBC Act during the assessment process. The proponent will generally be the person proposing to take the action[2].

Name	Jason Greive
Title	General Manager – Operations
Organisation	Brockman Resources
ACN / ABN (if applicable)	73 009 372 150
Postal address	1/117 Stirling Highway, Nedlands, WA 6009.
Telephone	08 9389 3000
Email	jason.greive@brockman.com.au
Declaration	I declare that the information contained in this form is, to my knowledge, true and not misleading. I agree to be the proponent for this action.
Signature	Jason Greive
Date	10/3/2011

[1] *If your referred action, or a component of it, is to be taken in the Great Barrier Reef Marine Park the Minister is required to provide a copy of your referral to the Great Barrier Reef Marine Park Authority (GBRMPA) (see section 73A,* EPBC Act*). For information about how the GBRMPA may use your information, see http://www.gbrmpa.gov.au/privacy/privacy_notice_for_permits.*

[2] *If a person other than the person proposing to take action is to be nominated as the proponent, please contact the Referrals Business Entry Point (1800 803 772) to obtain an alternative contacts, signatures and declarations page.*

8.2 Person preparing the referral information (if different from 8.1)

Individual or organisation who has prepared the information contained in this referral form.

Name	Marc Morris
Title	Environmental Advisor
ACN / ABN (if applicable)	63 088 821 425
Postal address	1025 Wellington Street WEST PERTH WA 6005
Telephone	Phone: (08) 9322 1944
Email	marc.morris@ecologia.com.au
Declaration	I declare that the information contained in this form is, to my knowledge, true and not misleading.
Signature	Date 10 March, 2011