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DEC 10694  
CRN 222033  
Colin Murray

20<sup>th</sup> February 2009

Chairman  
Environmental Protection Authority  
Locked Bag 33  
Cloisters Square  
PERTH WA 6850

**Attention: Colin Murray**

Dear Colin,

**RAPID GROWTH PROJECT 5: CHICHESTER RAIL DEVIATION PROJECT**  
**Referral under Section 38 of the *Environmental Protection Act 1986***

In response to the continuing demand for iron ore, BHP Billiton Iron Ore (BHPBIO) is proposing to construct a new section of railway through the Chichester Ranges, approximately 230 kilometres (km) south of Port Hedland, to service the Company's expanding iron ore operations in the Pilbara Region of Western Australia.

This project, known as the Chichester Deviation, forms part of BHPBIO's Rapid Growth Project 5 (RGP5) program of works and will involve the construction of 23km of dual track railway and associated rail infrastructure up to 6km west of the existing Port Hedland to Newman railway.

BHPBIO is seeking to obtain environmental approval for the construction of the Chichester Deviation and enclosed is an environmental referral document, which is submitted in accordance with Section 38 of the *Environmental Protection Act 1986* (EP Act) for setting the level of assessment.

BHPBIO believes that an Assessment on Referral Information (ARI) level of assessment under the EP Act is suitable for the proposal, which is consistent with outcomes of discussions held with the EPA Service Unit.

BHP Billiton Iron Ore Pty Ltd  
ABN 46 008 700 981  
Registered in Australia  
BHP Billiton Iron Ore Pty Ltd acts as  
manager and agent for the participants  
of the Yandi, Mt Goldsworthy Mining  
Associates, Mt Newman, Wheelarra,  
POSMAC and JFE Western 4 Joint  
Ventures

The enclosed environmental referral document outlines how potential impacts to the environment can be managed in accordance with the existing EPA policy framework for an ARI level of assessment. A risk-based approach has also been adopted to avoid, manage and mitigate potential environmental impacts.

BHPBIO has endeavoured to engage with and accommodate suggestions from relevant Government agencies in the preparation of this submission. In December 2008 a draft version of the referral document was submitted to agencies for comment. A copy of the correspondence that has been received from these agencies is attached and comments have been considered in preparing the final referral document.

Your consideration and acceptance of the attached document would be appreciated. If you have any queries please do not hesitate to contact Justin Williams on (08) 6224 4959 or 0400 374 501.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Gavin Price', is written over a circular stamp or seal that is partially obscured.

**Gavin Price**  
Manager Environment

**Enclosed:**

1. Agency comments on draft Environmental Referral Document
2. Section 38 EPA Referral Form
3. CD containing shape file of project area
4. Chichester Deviation - Environmental Referral Document (2 copies)



Government of Western Australia  
Department of Mines and Petroleum

Your ref: Letter dated 3rd December 2008  
Our ref: Reg No 20906  
Enquiries: Philip Boglio - Ph 92223664  
Email: philip.boglio@doir.wa.gov.au

Justin Williams  
Team leader Environmental Approvals  
BHP Billiton Iron Ore Pty Ltd  
PO Box 7122  
Cloisters Square  
WA 6850

Dear Mr Williams

## REVIEW OF DRAFT CHICHESTER DEVIATION REFERRAL DOCUMENT

I have read the Draft Chichester Deviation Document Referral Document sent for review and offer the following comments:

1. Page xii, Factor: Surface hydrology, Proposed management and mitigation includes refinement of alignment design to maximise natural surface water flows. While this is a good idea is this planned pre or post the approval processes? If post the approval process what are the likely changes to the impacts being considered in the documents reviewed and how will those changes be assessed?
2. Page xiv, factor rehabilitation, I would include another potential impact: not recovering or insufficient recovery of the topsoil/subsoil resource as part of prestrip for the project. It is a standard *Mining Act 1978* tenement condition that topsoil be stripped and stockpiled separately as part of mining operations. If there is likely to be a shortfall of topsoil a topsoil/subsoil budget showing how much is required and how much is available is a good idea to document such issues over time and plan on how to remedy a shortfall at the various closure stages. The proposed management and mitigation should refer to a specific topsoil management procedure and borrow pit management procedure.
3. Page 2.1, Section 2.1 and Table 2.1. The overview should state what happens to the old mainline, does it get rehabilitated once the two new lines are constructed or does it remain for operational or other reasons? Noted that the approximate amount of disturbance is given as 400 hectares in table 2.1. The Mining Proposal document will require more defined categories to request the appropriate environmental bond amounts. The table should also show the amount of area in hectares that will be rehabilitated post construction (laydown, borrow pits, any camp

construction of the turkeys nests mentioned. Turkeys nest need to be recorded as separate type of disturbance as they attract a higher bond rate and present more risks. What happens to all the bores/pipelines/turkeys nests mentioned post construction?

10. Page 4-9, Section 4.7.3, last sentence. The vegetation condition index used is not listed in the text. It is also not listed in section 3.2.6 of Ecologia's Flora report. Generally a recognised vegetation condition index is used and referred to. See table 12, page 48 of Bush Forever volume 2 published by the DPI in 2000 for some examples of vegetation condition indexes that are commonly used.
11. Page 4-16, FYI and Ecologia: *Dasyurus hallucatus*, Northern Quoll also recorded (scats and trapped animals) from Talison Minerals Wodgina mine site recently (*Bamford 2008*, to the north of this proposal).
12. Page 4-21, Section 4.11.1, 1<sup>st</sup> bullet point, Bamboo Springs supports thick vegetation and reed beds not weed beds. (Although that may change if cattle/feral animals disrupt the site enough).
13. Page 7-6 and 7-7, figure 7.1 sheet 1 and 2. The location of the access track proposed should be shown as well as it is also a potential disruption to the sheetflow patterns indicated on the maps.
14. Page 9-3, Surface hydrology commitment and required actions listed. Please provide some information on the effectiveness of having minimum 300mm diameter culverts at 50 metre intervals. Is this requirement backed by some research on effective management measures? Why 300mm diameter and 50m spacing? What specs for the riprap? Does culvert maintenance include riprap maintenance as well? Why the twice yearly requirement for maintenance? Is this based on previous experience? Would it not be better/more efficient to carry out such maintenance following large rainfall events?
15. Section 4.1 Page 14, Are quantitative monitoring measures planned to monitor sheetflow impacts as well as the proposed qualitative visual inspections by the site Environmental Officer of the day? This approach requires an assessment of control areas as well. Who will develop and assess the required methodology? Trees tend to be long lived and may not show significant signs of decline for quite some time following sheetflow disruptions. Those impacts may include reduced flowering and seed set which may not be detectable from visual inspections alone. The tenure of site environment officers tends to be a limited nature (less than it would take a mature Mulga tree to decline or die) and the comparisons made by different individuals over time may not be all that useful to assess long term changes. It may be a good idea to look at what is being



# Department of Environment and Conservation

## ENVIRONMENTAL MANAGEMENT BRANCH

Your Ref:  
Our Ref:  
Enquiries: Tania Jackson

17 Dick Perry Drive, Technology Park, Western Precinct, KENSINGTON WA 6151  
Postal Address: Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983  
Tel: (08) 9334 0470 Fax: (08) 93334 0140  
Email: Tania.Jackson@dec.wa.gov.au

**To: Stephen White, BHP Billiton Iron Ore**  
**From: Nick Woolfrey on behalf of Norm Caporn – Manager Environmental Management Branch**  
**Date: 22 December 2008**  
**Subject: Draft Newman - Port Hedland railway Chichester Deviation: Environmental Referral Document**

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Environmental Management Branch (on behalf of Parks and Conservation Services) of the Department of Environment and Conservation (DEC) has conducted a preliminary review of the ERD and associated attachments and provides the following advice relevant to the Department's responsibilities under the *Wildlife Conservation Act 1950* and the *Conservation and Land Management Act 1984*.

The major areas of concern relating to the Newman - Port Hedland Railway Chichester Deviation proposal include the following:

- Changes to sheet flow (impact on mulga communities);
- Monitoring of mulga health; and
- Weed management.

These aspects are discussed in detail below.

### **Surface Water**

The deviation traverses the Fortescue Plain, which contains mulga communities that are dependent on surface water sheet flow. The construction of the rail through these areas has the potential to interrupt natural sheet flow patterns, subsequently affecting the health of mulga. Provided the rail alignment is located wherever possible on higher ground to avoid restriction of water flow in areas where sheet flow is prevalent, and that the proponent locates borrow pits and environmental culverts in suitable positions in the landscape, impacts on the health of mulga communities are likely to be minimal.

DEC requests the opportunity (subject to available DEC resources at the time) to be involved in ground truthing the location of the rail alignment once a trace line has been placed, in order to assess and provide advice on the detailed alignment, the location of borrow pits, and the location of environmental culverts. Ideally this should be undertaken as early as possible in the process, in order to resolve any uncertainties before the project progresses too far to make any necessary changes.

### **Borrow Pits**

The proposal to widen cuttings in order to avoid the need to create new borrow pits (page 2-4) is supported by DEC. Should new borrow pits be required, there is need to ensure that the location and design of the pits will allow for the best rehabilitation outcomes (e.g. no weeds, self draining etc.). DEC should be involved in determining suitable borrow pit locations.

**Maps**

Vegetation maps were referenced but not included in the environmental referral document. It is requested that these maps should be provided to DEC for information and review in relation to the detailed alignment.

If you wish to discuss any of the advice provided above please contact Tania Jackson on 9334 0470.

**Williams, Justin J**

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**Subject:** RE: Newman - Port Hedland Railway - Chichester Deviation

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**From:** MAILEY Louise [mailto:Louise.MAILEY@water.wa.gov.au]  
**Sent:** Tuesday, 9 December 2008 11:47 AM  
**To:** White, Stephen  
**Cc:** HUMPHREYS Gary  
**Subject:** Newman - Port Hedland Railway - Chichester Deviation

Hi Stephen,

Please find below the DoW's preliminary comments regarding the Newman - Port Hedland Railway - Chichester Deviation draft document.

**Construction water supply**

The proponent will be required to apply for licences under section 26D and 5C of the *Rights in Water and Irrigation Act 1914 (RiWI Act)* to construct bores and abstract groundwater. The licensing process will allow the proponent to prove up water sources for construction phase of the project. It is expected that due to the small volumes of water required from each bore and the short periods of draw that impacts will be minimal.

**Stygofauna habitat**

Due to the short term draw, stygofauna impacts are expected to be minimal, however the Department of Environment and Conservation should be consulted as the experts on this issue.

**Surface Water Management Plan (SWMP)**

Preliminary assessment shows that the SWMP is adequate; however it will be assessed in detail by DoW staff at the formal assessment stage.

If you have any further queries please do not hesitate to contact me. We look forward to the opportunity for formal comment in the future.

Kind regards,

**Louise Mailey**

Natural Resource Management Officer – Pilbara Region  
Department of Water

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PO Box 836  
KARRATHA WA 6714  
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18/02/2009



**Referral of a Proposal to the Environmental Protection  
Authority under Section 38(1) of the Environmental  
Protection Act.  
Referral by the Proponent**

**PURPOSE OF THIS FORM**

Section 38(1) of the *Environmental Protection Act 1986* provides that where a development proposal is likely to have a significant effect on the environment, a proponent may refer the proposal to the Environmental Protection Authority (EPA) for a decision on whether or not it requires assessment under the Act.

A referral to the EPA by a proponent under Section 38(1) must be made on this form.

Before completing this form, proponents are encouraged to familiarise themselves with the EPA's *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* (accessed at the EPA's website at [www.epa.wa.gov.au](http://www.epa.wa.gov.au) or by contacting the EPA on 6467 5419).

Proponents need to complete Parts A and B of the form by marking the appropriate boxes and providing explanatory or additional information where requested. Part B should be completed based on information known to the proponent. Only those sections of Part B that are pertinent to the proposal need to be completed. If space is insufficient, attach additional pages. Where information is contained in a report that is to be submitted with the referral form, the proponent may complete sections of the form by referring to the pertinent section of the report.

Proponents are encouraged to attach any other environmental information they consider may be relevant to the EPA for making a decision on whether or not to assess the proposal, and, if it is to be assessed, the level of assessment. In general, referrals should contain information on the potential environmental impacts of the proposal, the proposed management mechanisms to be implemented to minimise and mitigate for these impacts, and how the principles of the EP Act have been addressed by the proposal.

In addition to providing a hard copy of referral documentation, proponents are also requested to provide an electronic copy of the referral document, noting that section 39(2) of the EP Act provides for a proponent to request that matters of a confidential nature not be kept on the public record. If confidential matters are included in the referral, proponents are requested to identify the confidential information at this stage of the process, specifically request that it be treated as confidential, and submit the confidential information in a separate hard copy attachment to the referral document. The electronic copy of the referral should be identical to the hard copy of the referral document, excluding any confidential attachment.

You may need to contact government agencies or local authorities to obtain information required by this form. A list of key agencies and their contact details is provided in Attachment 1.

Where the EPA decides that a proposal will be assessed at the level of Public Environmental Review or Environmental Review and Management Programme, it will also require the proponent to prepare an Environmental Scoping Document (refer *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002*).

Proponents should also be aware of the need to determine their obligations under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act is separate legislation to the Environmental Protection Act and it identifies a number of matters of national environmental significance which are subject to assessment and approval by the Commonwealth. The matters identified as triggers for the Commonwealth assessment and approval regime are World Heritage properties, Ramsar wetlands, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, and nuclear actions (refer to the Department of Environment and Water Resources website at [www.environment.gov.au](http://www.environment.gov.au)). Questions in this referral form that may be relevant to matters of national environmental significance are marked with a #.

- If yes above, have you lodged any of the necessary applications or have you discussed the proposal with any person(s) at the Agency or Local Authority?

Yes

No

If yes, name all Agencies and Local Authorities for which applications have been submitted or with whom the proposal has been discussed.

Refer Sections 1.7.1 and 3 of the Environmental Referral Document.

- What is the current land use on the property, and the extent (area in hectares) of the property?

The current land use on the proposal area is a mix of pastoral activities (under Mulga Downs Pastoral Lease) and mineral exploration (under Mining Leases and Exploration Licences). Miscellaneous Lease L45/147 (pending) covers an area of 2,449 ha.

## 1.2 Proposal Description *(Please attach extra pages where necessary)*

- Provide a description of the proposal.

Refer to Section 2 of the Environmental Referral Document

- What is the proposed ultimate extent (area in hectares) of the activity?

Refer to Section 2 of the Environmental Referral Document

- Provide the timeframe in which the activity or development is proposed to occur. (Include start and finish dates where applicable)

Refer to Section 2.14 of the Environmental Referral Document

- Provide details of any staging of the proposal.

Refer to Section 2.14 of the Environmental Referral Document

- Indicate whether, and in what way, the proposal is related to other proposals in the region.

Refer to Section 1 of the Environmental Referral Document

## 1.3 Location information

- Provide proposal location details in the following two ways:

a) Electronic spatial data

GIS or CAD on CD, depicting the proposal extent, geo-referenced and conforming to the following parameters:

- datum: GDA94
- projection: Geographic (latitude/longitude) or Map Grid of Australia (MGA)
- format: Arcview shapefile, Arcinfo coverages, Microstation or AutoCAD.

AND

b) Maps and/or directions

Any maps or diagrams of the proposal, together with the following directions:

- for urban areas: street address, lot number, the suburb and nearest road intersection;
- for remote localities: the nearest town, together with distance and direction from that town to the proposal site.

*Please also attach the following map/plans, clearly showing the location of the development in its regional and local context.*

For all information, please indicate:

- (a) the source of the information; and
- (b) the currency of the information.

## 2.1 Flora and Vegetation

- Do you propose to clear any native flora and vegetation as a part of this proposal?  
(A proposal to clear native vegetation may require a clearing permit under Part V of the EP Act (*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*). Please contact the Department of Environment and Conservation (DEC) for more information.

(please tick)       Yes      ***If yes, complete the rest of this section***

No      ***If no, go to the next section***

- How much vegetation are you proposing to clear (in hectares)?  
Approximately 400 ha
- Have you submitted an application to clear native vegetation to the DEC (unless you are exempt from such a requirement)?  
 Yes       No      **If yes, on what date and to which office was the application submitted of the DEC?**
- Are you aware of any recent flora surveys carried out over the area to be disturbed by this proposal?  
 Yes       No      **If yes, please attach a copy of any related survey reports and provide the date and name of persons / companies involved in the survey/s. (If no, please do not arrange to have any biological surveys conducted prior to consulting with the DEC.)**

Refer to Sections 4.7 and 4.10 of the Environmental Referral Document

- Has a search of DEC records for known occurrences of rare or priority flora or threatened ecological communities been conducted for the site? #  
 Yes       No      **If you are proposing to clear native vegetation for any part of your proposal, a search of DEC records of known occurrences of rare or priority flora and threatened ecological communities will be required. Please contact DEC for more information.**

Refer to Sections 4.8 and 4.10 of the Environmental Referral Document

- Are there any known occurrences of rare or priority flora or threatened ecological communities on the site? #  
 Yes       No      **If yes, please indicate which species or communities are involved and provide copies of any correspondence with DEC regarding these matters.**

Refer to Sections 4.8 and 4.10 of the Environmental Referral Document

## 2.4 Significant Areas and/ or Land Features

- Is the proposed development located within or adjacent to an existing or proposed National Park or Nature Reserve?

Yes       No      **If yes, please provide details.**

- Are you aware of any Environmentally Sensitive Areas (as declared by the Minister under section 51B of the EP Act) that will be impacted by the proposed development?

Yes       No      **If yes, please provide details.**

- Are you aware of any significant natural land features (e.g. caves, ranges etc) that will be impacted by the proposed development?

Yes       No      **If yes, please provide details.**

Proposal occurs within the Chichester Range.

## 2.5 Coastal Zone Areas (Coastal Dunes and Beaches)

- Will the development occur within 300 m of a coastal area?

(please tick)       Yes      ***If yes, complete the rest of this section***  
 No      ***If no, go to the next section***

## 2.6 Marine Areas and Biota

- Is the development likely to impact on an area of sensitive benthic communities, such as seagrasses, coral reefs or mangroves?

Yes       No      **If yes, please describe the extent of the expected impact.**

- Is the development likely to impact on marine conservation reserves or areas recommended for reservation (as described in *A Representative Marine Reserve System for Western Australia*, CALM, 1994)?

Yes       No      **If yes, please describe the extent of the expected impact.**

- Is the development likely to impact on marine areas used extensively for recreation or for commercial fishing activities?

Yes       No      **If yes, please describe the extent of the expected impact, and provide any written advice from relevant agencies (e.g. Fisheries WA).**

**2.8 Pollution**

- Is there likely to be any discharge of pollutants from this development, such as noise, vibration, gaseous emissions, dust, liquid effluent, solid waste or other pollutants?

(please tick)       Yes      **If yes, complete the rest of this section**

No      **If no, go to the next section**

- Is the proposal a prescribed premise, under the Environmental Protection Regulations? (Refer to the EPA *General Guide for Referral of Proposals to the EPA under section 38(1) of the EP Act 1986* for more information)

Yes       No      **If yes, please describe what category of prescribed premise.**

- Will the proposal result in gaseous emissions to air?

Yes       No      **If yes, please briefly describe.**

Refer to Section 8.5 of the Referral Document

- Have you done any modelling or analysis to demonstrate that air quality standards will be met, including consideration of cumulative impacts from other emission sources?

Yes       No      **If yes, please briefly describe.**

- Will the proposal result in liquid effluent discharge?

Yes       No      **If yes, please briefly describe the nature, concentrations and receiving environment.**

- If there is likely to be discharges to a watercourse or marine environment, has any analysis been done to demonstrate that the State Water Quality Management Strategy or other appropriate standards will be able to be met?

Yes       No      **If yes, please describe.**

- Will the proposal produce or result in solid wastes?

Yes       No      **If yes, please briefly describe the nature, concentrations and disposal location/ method.**

- Will the proposal result in significant off-site noise emissions?

Yes       No      **If yes, please briefly describe.**

- Is the proposal on a property which contains or is near a site of high public interest (for example, a major recreation area or natural scenic feature)?  
 Yes       No      **If yes, please describe.**
  
- Will the proposal result in or require substantial transport of goods, which may affect the amenity of the local area?  
 Yes       No      **If yes, please describe.**

**2.12 Risk**

- Is the proposal located near a hazardous industrial plant or high-pressure gas pipeline?  
 Yes       No      **If yes, please describe.**
  
- Does the proposal have the potential to generate off-site risk?  
 Yes       No      **If yes, will the proposal be a major hazardous facility regulated under the *Explosives and Dangerous Goods Act*?**

**3. MANAGEMENT**

**3.1 Principles of Environmental Protection**

- Have you considered how your project gives attention to the following Principles, as set out in section 4A of the EP Act? (For information on the Principles of Environmental Protection, please see EPA Position Statement No. 7, available on the EPA web.)
 

1. The precautionary principle.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2. The principle of intergenerational equity.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
3. The principle of the conservation of biological diversity and ecological integrity.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
4. Principles relating to improved valuation, pricing and incentive mechanisms.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5. The principle of waste minimisation.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

Refer to Section 1.7 of the Referral Document

- Is the proposal consistent with the EPA's Position Statements (available on the EPA web)?  
 Yes       No

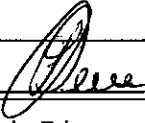
Refer to Table 1.1 of the Referral Document

**3.2 Management Commitments**

- How has the proposal been developed to avoid, minimise and manage potential impacts? Please describe any specific commitments you make as the proponent to minimising the potential environmental impacts of this development.

Refer to Section 9 of the Referral Document

I, Gavin Price declare that I have completed all of the questions in this form and attached the requested information and declare that the information contained in this form is, to my knowledge, true and not misleading.

Signature	
Name	Gavin Price
Position	Manager Environment, BHP Billiton Iron Ore Pty Ltd
Date	20 February 2009

February 2009

# RAIL OPERATIONS



NEWMAN – PORT HEDLAND RAILWAY  
CHICHESTER DEVIATION

ENVIRONMENTAL REFERRAL DOCUMENT

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