

Gas Pipeline To Nifty Copper Operations

Birla (Nifty) Pty Ltd

**Report and recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
Perth, Western Australia
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1. Introduction and background

This report provides the advice and recommendations of the Environmental Protection Authority (EPA) to the Minister for the Environment on the environmental factors relevant to the proposal by Birla (Nifty) Pty Ltd (Birla Nifty) to construct a gas pipeline to provide natural gas to Nifty Copper Operations.

The proposed gas pipeline is a spur line from the “Port Hedland - Telfer Gas Pipeline” (Telfer Gas Pipeline) to Nifty Copper Operations. Natural gas will replace diesel for onsite power generation.

Based on the information provided in the referral document the EPA considered that, while the proposal has the potential to affect the environment, it could be readily managed to meet the EPA’s environmental objectives. Consequently, it was notified in the *West Australian* newspaper on 28 June 2004 that the EPA intended to assess the proposal at the level of Assessment on Referral Information (ARI).

The proponent has submitted a referral document setting out the details of the proposal, potential environmental impacts and appropriate commitments to manage those impacts. The EPA considers that the proposal as described can be managed in an acceptable manner, subject to these commitments and the EPA’s recommended conditions being made legally binding.

The EPA has therefore determined under Section 40(1) of the *Environmental Protection Act 1986* (the Act) that the level of assessment for the proposal is Assessment on Referral Information, and this report provides the EPA advice and recommendations in accordance with Section 44(1).

2. The proposal

Birla Nifty proposes to construct a pipeline to supply natural gas for on-site power generation at Nifty Copper Operations. Nifty Copper Operations are located in the eastern Pilbara region, approximately 350 kilometres south-east of Port Hedland as shown in Figure 1.

The proposed pipeline is a 46 kilometre spur line that extends from the recently constructed Telfer Gas Pipeline to Nifty Copper Operations as shown in Figure 2. The main pipe laying activities are expected to be completed in four to six weeks. Detailed information is provided in Section 2 of the proponent's referral document "*Referral Information for Construction of a Gas Pipeline*" prepared for Birla (Nifty) Pty Ltd by Martinick Bosch Sell Pty Ltd, Amendment December 2005 (MBS Environmental, 2005).

The main characteristics of the proposal are summarised in Table 1.

Table 1: Summary of key proposal characteristics

Project Component	Description
Proponent	Birla (Nifty) Pty Ltd
Location	Nifty Copper Operations (ML271SA), 70 kilometres west of Telfer.
Proposed Action	Construct a buried 150 millimetre diameter gas pipeline to provide natural gas to the Nifty Copper Operations. The gas pipeline would become a spur off the Port Hedland to Telfer gas pipeline.
Route Alignment	The pipeline would run adjacent to the existing Nifty to Telfer vehicle track towards the Telfer Road. A detour across uncleared vegetation will occur approximately eight kilometres from the Telfer Road.
Route Length	46 kilometres.
Proposed Tenure	Birla (Nifty) Pty Ltd has lodged a Miscellaneous Licence application with DoIR.
Temporary Disturbance Area	100 hectares.
Area of Permanent Vegetation Clearance	20 hectares. This is required for a permanent 4-5 metre wide vehicle inspection track. Existing disturbed areas will be used where practicable.
Construction Duration	20 weeks (clear and grade through to hydrotesting and reinstatement). Main pipe laying activities will take about six weeks.
Duration of Operation	Remainder of mine life which is estimated to be about 10-20 years.

The potential impacts of the proposal are discussed by the proponent in the referral document (MBS Environmental, 2005).

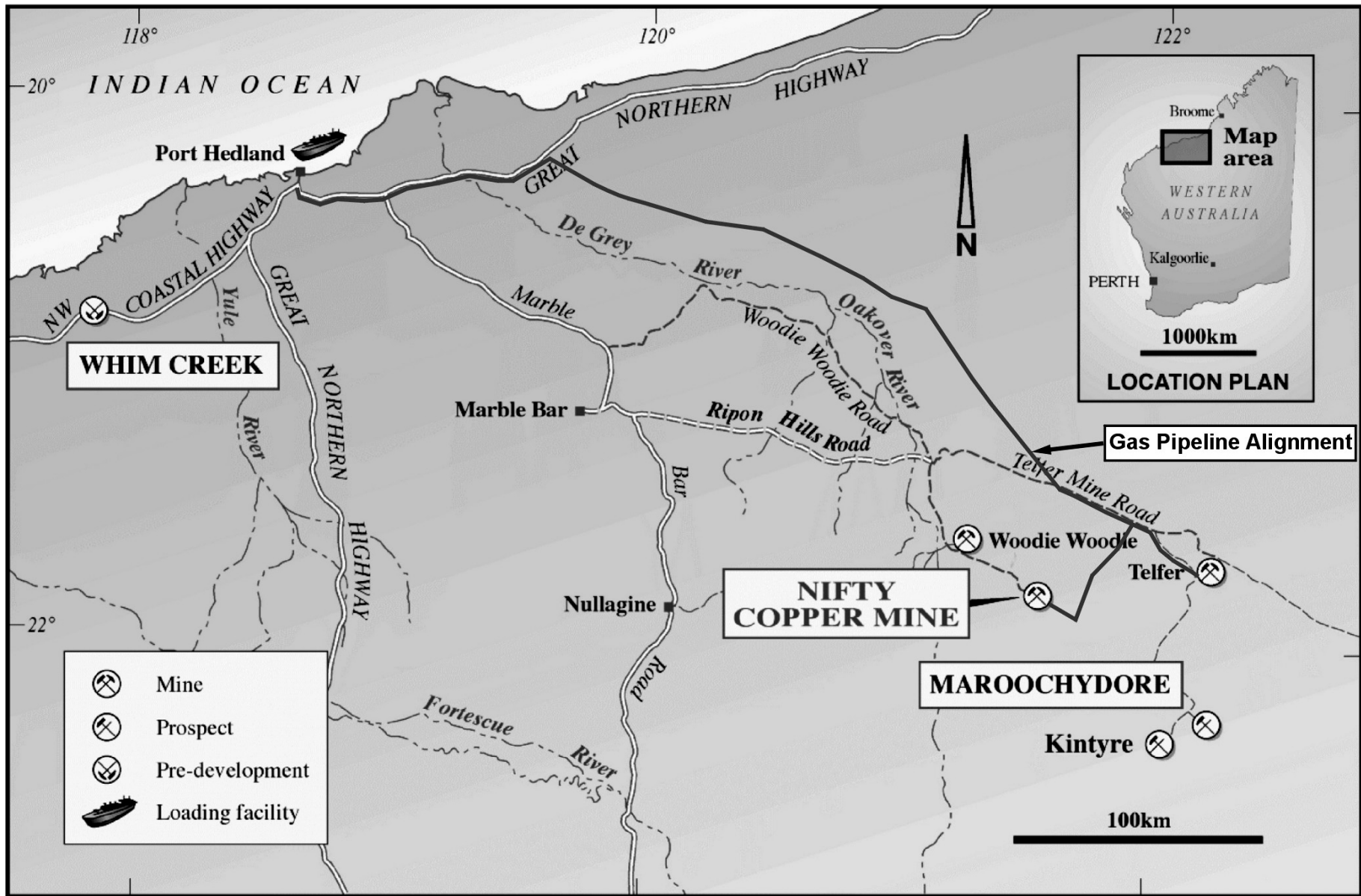


Figure 1: Regional Location (Source: MBS Environmental)

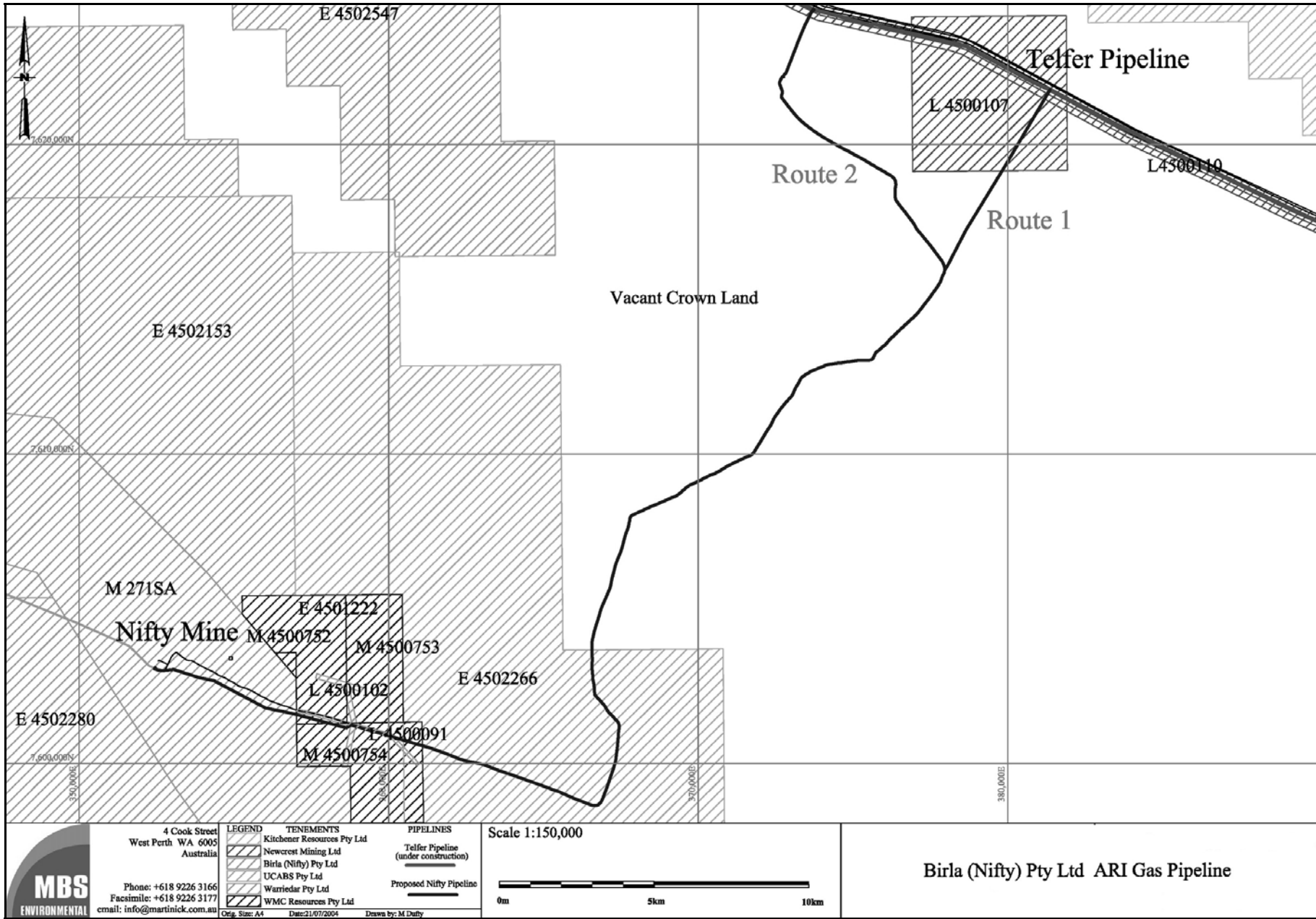


Figure 2: Proposed Pipeline Route (Source MBS Environmental)

3. Consultations

The proponent advised that it has consulted with the following government agencies and stakeholders prior to lodging the ARI document (MBS Environmental, 2005):

- Department of Industry and Resources (DoIR) – Miscellaneous License application;
- Department of Environment (DoE);
- Department of Conservation and Land Management (CALM) – potential impacts on flora and fauna;
- Department of Environment and Heritage (DEH) – consideration under the *Environment Protection and Biodiversity Act 1999* (EPBC Act);
- Water and Rivers Commission (Karratha) – pressure test water disposal;
- Shire of East Pilbara; and
- Western Desert Lands Aboriginal Corporation – heritage clearance surveys.

There are no communities located along the proposed pipeline route. Consultation was undertaken with community members that expressed concern about the high level of fauna mortalities that occurred during construction of the Telfer Gas Pipeline. The community members that were consulted are listed in Section 4.4 of the ARI (MBS Environmental, 2005).

4. Relevant environmental factors

Section 44 of the Act requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and the conditions and procedures, if any, to which the proposal should be subject. In addition, the EPA may make recommendations as it sees fit.

It is the EPA's opinion that the environmental factor "Flora and Fauna" is relevant to the proposal and requires evaluation in this report.

Details on the relevant environmental factor and its assessment are contained in Section 4.1. The description of the factor shows why it is relevant to the proposal and how it will be affected by the proposal. The assessment of the factor is where the EPA decides whether or not a proposal meets the environmental objective set for that factor.

4.1 Flora and fauna

Description

A vegetation and habitat assessment was undertaken on the proposed pipeline route in April 2004 by MBS Environmental (2004) and the findings are reported in Appendix 2 of the ARI document (MBS Environmental, 2005). The four main vegetation associations are sand dunes, sandplains, shallow sand/laterite plains and plains of shallow sand over exposed calcrete. Populations of the Priority 2 species *Goodenia hartiana* were located in disturbed areas along the proposed pipeline route. No declared rare flora or other priority species were located. However, the priority species *Dampiera atriplicina* (Priority 2) and *Comesperma pallidum* (Priority 3) were

found in the region when surveyed by Ecologia (2003) for the Telfer Gas Pipeline proposal. More detailed information on the vegetation in the region is provided in Section 3.5 of the ARI (MBS Environmental, 2005).

The area of disturbance will be approximately 120 hectares, of which approximately 100 hectares will be revegetated following construction. The potential impacts on vegetation include the removal of flora species of conservation significance and the introduction and spread of weed species. The proposed management and mitigation measures are outlined in Section 5.5.2 of the ARI (MBS Environmental, 2005). The disturbed area, apart from the vehicle inspection track, will be progressively rehabilitated and revegetated as outlined in Section 6.1 of the ARI document (MBS Environmental, 2005).

A list of fauna species of conservation significance likely to be present in the area is provided in Section 3.6.6 of the proponent's document (MBS Environmental, 2005). Evidence of the Priority 4 species *Ardeotis australias* (Australian Bustard) was recorded throughout the pipeline route during the habitat assessment (MBS Environmental, 2004). However, no species or evidence of species listed as endangered or vulnerable under State or Federal legislation were recorded. The proposal is not expected to impact critical feeding or breeding habitat for any migratory species.

The potential impacts on fauna include the temporary loss of fauna habitat, impacts with mobile equipment and injury or death as a result of falling into the open trench. The proposed management and mitigation measures are outlined in Section 5.6.2 of the ARI (MBS Environmental, 2005).

Assessment

The area considered for assessment of this factor is the proposed 46 kilometre spur gas pipeline from the Telfer Gas Pipeline to Nifty Copper Operations.

The EPA's environmental objective for this factor is to maintain the abundance, diversity, geographic distribution and productivity of flora and fauna at species and ecosystem levels through the avoidance or management of adverse impacts and improvement in knowledge.

The EPA notes that the proponent investigated two pipeline routes and proposes to follow the most direct route (Route 1). The EPA considers this to be the less preferred route environmentally since it deviates from the existing vehicle track for eight kilometres through uncleared country and crosses three dunes. However, the EPA accepts the proponent's explanation that the alternative route is not a suitable option due to elevated groundwater levels at the tie in point to the Telfer Gas Pipeline.

The EPA notes that the vegetation associations occurring along the proposed pipeline route are all common and widespread (MBS Environmental, 2004). The EPA also notes that the proposal is likely to impact on the Priority 2 species *Goodenia hartiana* and that it may respond positively to disturbance given that it is located along the existing vehicle track. The EPA considers the potential impacts on vegetation will not be significant given the proposed pre-clearance protocols in Section 5.5.2 of the ARI document (MBS Environmental, 2005) and that the width of the construction corridor,

with the exception of borrow pits and dunes, will not exceed 20m. The EPA recommends that prior to ground disturbing activities, the proponent submits a Vegetation Management Plan that addresses pre-clearance surveys, land clearing procedures and weed management. DoIR advised that it will set a performance bond on Birla Nifty to ensure that the vegetation is reinstated to its satisfaction.

The EPA notes that the fauna habitat to be disturbed is widely represented in the Eastern Pilbara and the Great Sandy Desert and that none of the fauna species recorded in surveys at Nifty Copper Operations have ranges restricted to the immediate area (MBS Environmental, 2005). The EPA considers the proposal is unlikely to have a significant impact on fauna species of conservation significance given the limited area of disturbance and proposed management measures that include a pre-clearance survey by a fauna specialist.

However, the EPA considers the high level of fauna mortality that occurred in the open trenches during the recent construction of the Telfer Gas Pipeline to be unacceptable (EPA, 2004). The EPA, on advice from CALM, recommends that this project not be undertaken during the late spring/summer period to avoid high temperatures and the period when most reptiles are reproductively active. CALM also advised the EPA that it considers the employment of adequate numbers of experienced “fauna clearing persons” to be an important factor in reducing the level of fauna mortality.

The EPA recommends that, although the proponent has committed to a large number of management measures in the ARI document, Ministerial conditions be set to ensure that certain aspects of the work are conducted to the Minister for the Environment’s satisfaction. The EPA expects the proponent to closely monitor the work undertaken by the construction contractor to ensure compliance with the Ministerial conditions and proponent commitments and that the work in general meets a high environmental standard. CALM, DoIR and DoE advised that they plan to undertake inspections/audits during construction should the proposal be approved.

The EPA notes that the DEH has advised that this project is not a controlled action under the EPBC Act. However, the DEH advised that it has concerns about the potential impact of the project on *Notoryctes caurinus* (Northern Marsupial Mole) (NMM) and has requested that the proponent undertake a number of measures, including a pre-clearance/pre-excavation survey for the presence of the NMM and a report following completion of the works. The proponent has committed to undertake these activities. The EPA also recommends that the proponent demonstrates, prior to ground disturbing activities, that the area of disturbance at dune crossings will be reduced as far as practicable.

The EPA notes that CALM has no objections to the proposal. The EPA considers that, subject to the implementation of the recommended conditions and proponent commitments, the impacts on flora and fauna will be acceptable.

Summary

Having particular regard to the:

- vegetation associations and fauna habitat along the proposed pipeline route being relatively common and widespread;
- proposed area of disturbance; and
- proponent's commitments;

it is the EPA's opinion that the proposal can be managed to meet the EPA's environmental objective for this factor subject to implementation of the EPA's recommended conditions.

5. Conditions and Commitments

Section 44 of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposal and on the conditions and procedures to which the proposal should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions for each project, the EPA's preferred course of action is to have the proponent provide an array of commitments to ameliorate the impacts of the proposal on the environment. The commitments are considered by the EPA as part of its assessment of the proposal and, following discussion with the proponent, the EPA may seek additional commitments.

The EPA recognises that not all of the commitments are written in a form which makes them readily enforceable, but they do provide a clear statement of the action to be taken as part of the proponent's responsibility for, and commitment to, continuous improvement in environmental performance. The commitments, modified if necessary to ensure enforceability, then form part of the conditions to which the proposal should be subject, if it is to be implemented.

5.1 Proponent's commitments

The proponent's commitments as set out in the Referral document and subsequently modified, as shown in Appendix 2, should be made enforceable.

6. Conclusions

The EPA has considered the proposal by Birla Nifty to construct a gas pipeline to supply natural gas for on-site power generation at the Nifty Copper Operations. The proposed gas pipeline is a spur line that extends from the Telfer Gas Pipeline to Nifty Copper Operations.

The EPA concludes that the potential impacts upon flora and fauna as a result of the proposed clearing are not likely to be significant given that the vegetation associations and habitats to be impacted are widespread and that the area of permanent disturbance is limited to approximately 20 hectares. The EPA considers it unlikely that this

proposal will result in a high level of fauna mortality subject to implementation of the EPA's recommended conditions and proponent commitments.

The EPA has concluded that the proposal is capable of being managed in an environmentally acceptable manner such that it is most unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation of the recommended conditions and proponent's commitments set out in Appendix 2.

7. Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that the proposal being assessed is for the construction of natural gas pipeline that extends from the "Port Hedland to Telfer Pipeline" to Nifty Copper Operations.
2. That the Minister considers the report on the relevant environmental factors as set out in Section 4;
3. That the Minister notes that the EPA has concluded that it is unlikely that the EPA's objectives would be compromised, provided there is satisfactory implementation by the proponent of the recommended conditions set out in Appendix 2, including the proponent's commitments.
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

Ecologia, 2003. *Telfer Project – Power Supply and Infrastructure Corridor. Rare and Priority Fauna and Flora Survey*. Unpublished report for Newcrest Mining Limited.

EPA, 2002. EPA Bulletin No. 1058. *Telfer Project, Power Supply and Infrastructure Corridor, Port Hedland to Telfer Gold Mine, Great Sandy Desert*. Environmental Protection Authority, Perth. W.A. August 2002.

EPA, 2004. EPA Bulletin No. 1127 *Newcrest Mining Limited, Telfer Project, Power Supply and Infrastructure Corridor, Port Hedland to Telfer Gold Mine, Great Sandy Desert – Change to Environmental Conditions*. Environmental Protection Authority, Perth. W.A. March 2004

MBS Environmental, 2005. *Referral Information for Construction of a Gas Pipeline*, Prepared by MBS Environmental for Birla (Nifty) Pty Ltd, Amendment January 2005. West Perth. W.A.

MBS Environmental, 2004. *Nifty Copper Operation: Power Supply and Infrastructure Corridor Vegetation and Habitat Assessment*. Prepared by MBS Environmental for Birla Nifty Pty Ltd.

Appendix 2

Recommended Environmental Conditions and Proponent's Consolidated Commitments

RECOMMENDED CONDITIONS AND PROCEDURES

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (PURSUANT TO THE PROVISIONS OF THE ENVIRONMENTAL PROTECTION ACT 1986)

GAS PIPELINE TO NIFTY COPPER OPERATIONS, GREAT SANDY DESERT

Proposal: To construct a gas pipeline to supply natural gas for on-site power generation at Nifty Copper Operations located in the eastern Pilbara region. The gas pipeline is a 46 kilometre spur line from the “Port Hedland - Telfer Pipeline” to Nifty Copper Operations, as documented in schedule 1 of this statement.

Proponent: Birla (Nifty) Pty Ltd

Proponent Address: Level 2, 23 Ventnor Avenue, WEST PERTH, WA, 6005

Assessment Number: 1549

Report of the Environmental Protection Authority: Bulletin 1164

The proposal referred to above may be implemented by the proponent subject to the following conditions and procedures:

1 Implementation

1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this statement.

2 Proponent Commitments

2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister’s power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.

- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

4 Commencement and Time Limit of Approval

- 4-1 The proponent shall substantially commence the proposal within five years of the date of this statement or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

1. the environmental factors of the proposal have not changed significantly;
2. new, significant, environmental issues have not arisen; and
3. all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

5 Compliance Audit and Performance Review

- 5-1 The proponent shall prepare an audit program and submit monthly compliance reports to the Department of Environment which address:
1. the status of implementation of the proposal as defined in schedule 1 of this statement;
 2. evidence of compliance with the conditions and commitments; and
 3. the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

- 5-2 The proponent shall submit a performance review report within three months following completion of the construction work, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, which addresses:
1. the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;
 2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
 3. significant improvements gained in environmental management, including the use of external peer reviews; and
 4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed.
- 5-3 The proponent shall submit a report prepared by an independent auditor approved by the Department of Environment under the “Compliance Auditor Accreditation Scheme” to the Chief Executive Office of the Department of Environment on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating that the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.

6 Pipeline Corridor

- 6-1 The width of the area cleared for the pipeline corridor shall not exceed 20 metres, except at borrow pits and dune crossings.
- 6-2 The alignment of the pipeline route shall overlay the existing track wherever practicable, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

7 Dune Protection

- 7-1 Where a dune crossing cannot be avoided, the pipeline shall cross the dunes perpendicularly.
- 7-2 The width of the Right of Way at dune crossings shall not exceed 20 metres.

- 7-3 Prior to ground disturbing activities, the proponent shall advise the Environmental Protection Authority of the maximum area of disturbance at each dune crossing. The area of dune disturbance shall be minimised as far as practicable, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 7-4 Within 2 months following completion of construction work, the proponent shall reinstate dunes to their original contours, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 7-5 The proponent shall provide to the Department of Environment comprehensive photographic evidence to demonstrate that management and rehabilitation of each dune is to an acceptable standard and meets the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Photographs shall be taken prior to disturbance, during construction, following rehabilitation and within 1 month following the first rainfall event (in excess of 20mm) after rehabilitation. The photographic evidence shall be provided within 2 months following the first rainfall event after rehabilitation.

- 7-6 Only excess sand from the dune cut may be permanently removed from the dunes.

8 Fauna Management (Open Trench)

- 8-1 The proponent shall undertake open trench work from April to October (inclusive) to minimise fauna deaths during construction.
- 8-2 The proponent shall limit the open trench to twenty kilometres at any one time, except when excavating in “rocky terrain” where an additional ten kilometres is permitted.
- 8-3 No part of the trench shall remain open for more than seven days, except in “rocky terrain” where the trench shall not remain open for more than 15 days.
- 8-4 The proponent shall employ at least six “fauna clearing persons”, to remove fauna from the trench. One fauna clearing person shall be employed on a full-time basis for the duration of the project, and additional persons shall be employed full-time with a minimum of one person for every five kilometres of open trench. The fauna clearing persons shall be able to demonstrate suitable experience to obtain a fauna handling licence from CALM, with approval from CALM’s Pilbara Regional Office.
- 8-5 The full length of open trench shall be cleared by “fauna clearing persons” at least once each day before 10am.

- 8-6 “Shade shelters” shall be installed in open trenches at intervals not exceeding 100 metres.
- 8-7 “Trench plugs” shall be installed at intervals not exceeding 1000 metres along the open trench to allow fauna to exit.
- 8-8 Water in the trench (with the exception of ground water) shall be pumped out on a daily basis and discharged via a mesh (to dissipate energy) to adjacent vegetated areas, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 8-9 Prior to ground disturbing activities, the proponent shall submit to the Department of Environment a Fauna Management Plan that includes an Adverse Weather Action Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 8-10 The proponent shall implement the Fauna Management Plan, required by condition 8-9, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 8-11 The proponent shall make the Fauna Management Plan, required by condition 8-9 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Definitions

1. “Rocky terrain” means areas in the infrastructure corridor which contain material that is too hard to be excavated with the bucket-wheel trenchers and requires ripping, drilling and/or blasting of rock.
2. “Fauna clearing persons” means employees whose responsibility is to daily walk the open trench to recover and record fauna found within the open trench.

9 Northern Marsupial Mole

- 9-1 Prior to ground disturbing activity, the proponent shall conduct a survey of the Northern Marsupial Mole along the length of the route, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 9-2 In the event that the survey required by condition 9-1 indicates the presence of the Northern Marsupial Mole along the pipeline route, the proponent shall implement the Northern Marsupial Mole Management Plan (October 2004), to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 9-3 The proponent shall make the Northern Marsupial Mole Management Plan (October 2004), required by condition 9-2 publicly available, to the requirements

of the Minister for the Environment on advice of the Environmental Protection Authority.

- 9-4 Within 3 months following completion of the works, the proponent shall provide a report to the Department of Environment on the survey required by condition 9-1 and, in the event that the Northern Marsupial Mole Management Plan (October 2004) is required to be implemented by condition 9-2, the report shall indicate the success, or otherwise, of measures used in the management plan to avoid/minimise impacts on the Northern Marsupial Mole, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

10 Pipeline Contractor Management

- 10-1 The proponent shall have a management system in place to ensure that the Pipeline Contractor is aware of and compliant with the conditions and proponent commitments within this statement. The management system shall include daily compliance inspections of the contractors work
- 10-2 During pipeline construction activities, the proponent shall submit a weekly compliance inspection report to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

11 Vegetation Management

- 11-1 Prior to ground disturbing activity, the proponent shall submit to the Department of Environment a Vegetation Management Plan that includes pre-clearance surveys, land clearing procedures and weed management, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 11-2 The proponent shall implement the Vegetation Management Plan, required by condition 11-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 11-3 The proponent shall make the Vegetation Management Plan, required by condition 11-1 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

12 Rehabilitation

- 12-1 Prior to ground disturbing activities, the proponent shall submit to the Department of Environment a Rehabilitation Plan for the pipeline corridor, laydown areas and self draining borrow pits, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Rehabilitation Plan shall addresses significant flora species, dune stabilisation (including matting), dune restoration, weed management, soil erosion/subsidence, monitoring and timelines for completion of the works.

12-2 The proponent shall implement the Rehabilitation Management Plan, required by condition 12-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

12-3 The proponent shall make the Rehabilitation Management Plan, required by condition 12-1 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

13 Fire Management

13-1 Prior to ground disturbing activities, the proponent shall submit to the department of Environment a Fire Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

13-2 The proponent shall implement the Fire Management Plan, required by condition 13-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

13-3 The proponent shall make the Fire Management Plan, required by condition 13-1 publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Procedures

1 Where a condition states “to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority”, the Environmental Protection Authority will provide that advice to the Department of Environment for the preparation of written notice to the proponent.

2 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment.

3 Where a condition lists advisory bodies, it is expected that the proponent will obtain the advice of those listed as part of its compliance reporting to the Department of Environment.

Notes

1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.

2 Within this statement, to “have in place” means to “prepare, implement and maintain for the duration of the proposal”.

3 In matters regarding fauna in conditions 8 and 9, the proponent shall liaise with the Department of Conservation and Land Management.

Schedule 1

The Proposal (Assessment No. 1549)

The proposal is to construct a gas pipeline to supply natural gas for on-site power generation at Nifty Copper Operations which is located in the eastern Pilbara region, approximately 350 kilometres south-east of Port Hedland as shown in Figure 1. The gas pipeline is a 46 kilometre spur line from the “Port Hedland - Telfer Pipeline” to Nifty Copper Operations as shown in Figure 2.

The main characteristics of the proposal are summarised in Table 1 below.

Table 1 – Key Proposal Characteristics

Project Component	Description
Proponent	Birla (Nifty) Pty Ltd
Location	Nifty Copper Operations (ML271SA), 70 kilometres west of Telfer.
Proposed Action	Construct a buried 150 millimetre diameter gas pipeline to provide natural gas to the Nifty Copper Operations. The gas pipeline would become a spur off the Port Hedland to Telfer gas pipeline.
Route Alignment	The pipeline would run adjacent to the existing Nifty to Telfer vehicle track towards the Telfer Road. A detour across uncleared vegetation will occur approximately eight kilometres from the Telfer Road.
Route Length	46 kilometres.
Proposed Tenure	Birla (Nifty) Pty Ltd has lodged a Miscellaneous Licence application with DoIR.
Temporary Disturbance Area	100 hectares.
Area of Permanent Vegetation Clearance	20 hectares. This is required for a permanent 4-5 metre wide vehicle inspection track. Existing disturbed areas will be used where practicable.
Construction Duration	20 weeks (clear and grade through to hydrotesting and reinstatement). Main pipe laying activities will take about six weeks.
Duration of Operation	Remainder of mine life which is estimated to be about 10-20 years.

Figures (attached)

Figure 1 – Location Plan

Figure 2 – Proposed Gas Pipeline

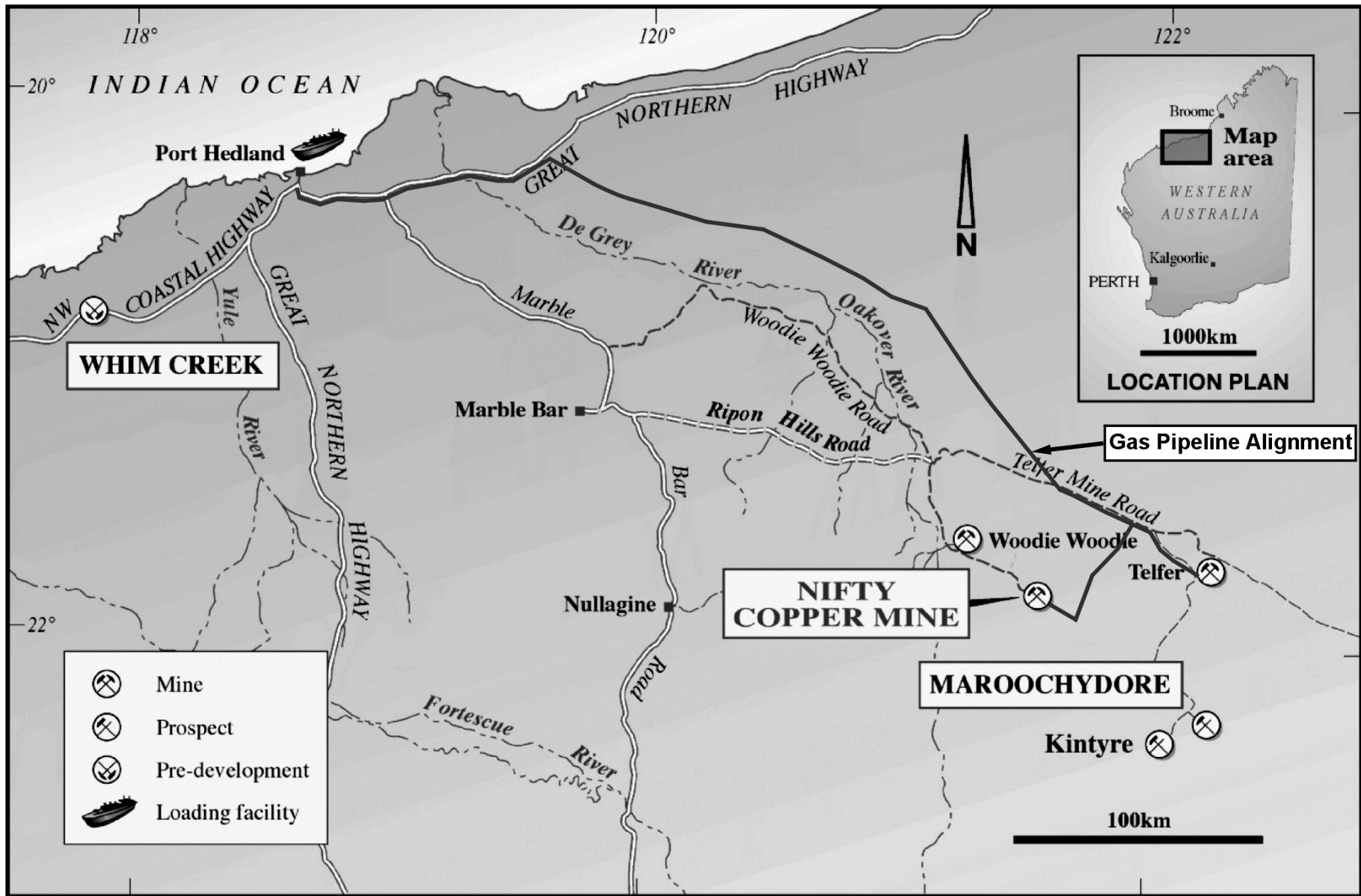


Figure 1: Location Plan

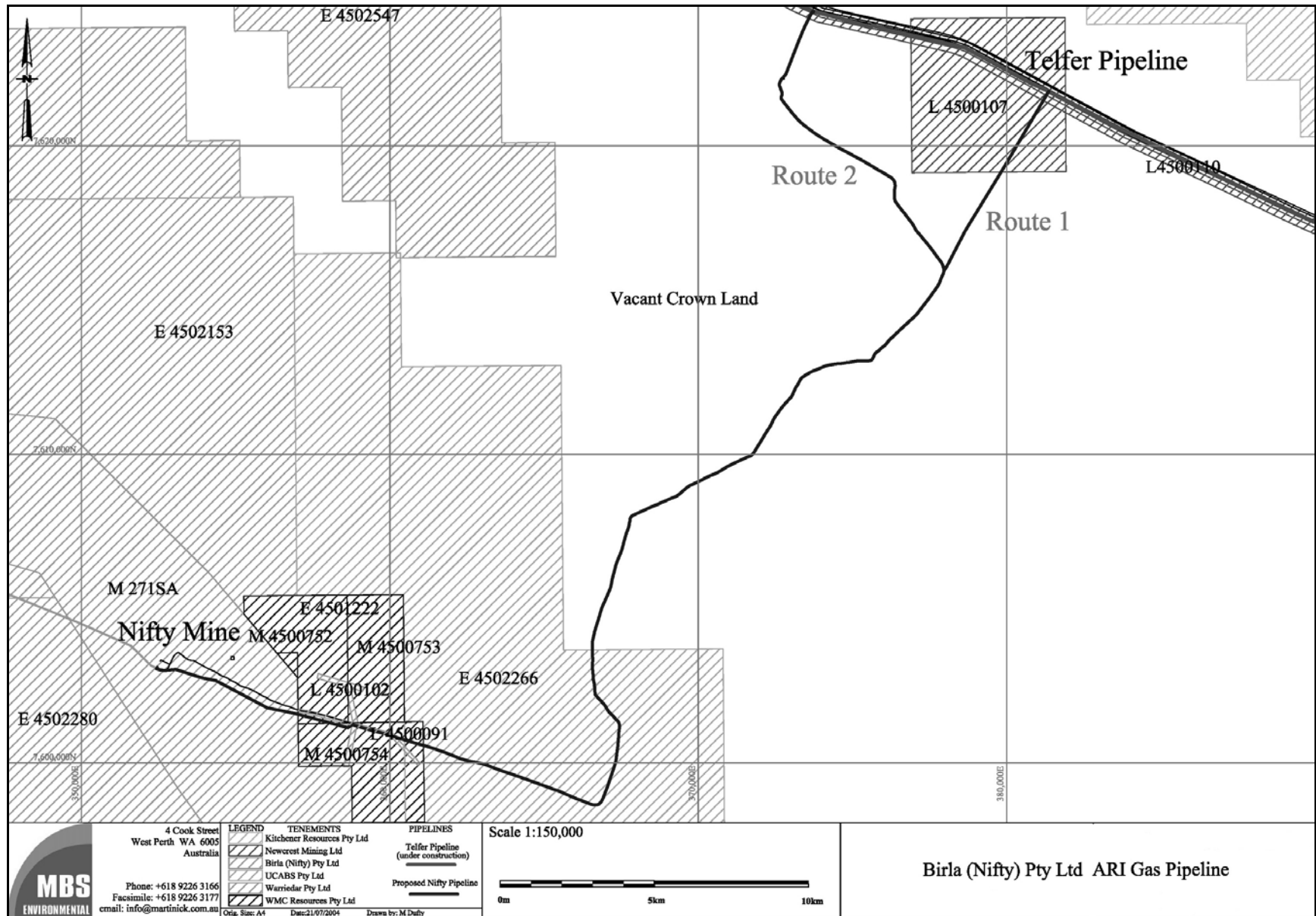


Figure 2: Proposed Gas Pipeline

Proponent's Environmental Management Commitments

9 December 2004

**GAS PIPELINE TO NIFTY COPPER
OPERATIONS, GREAT SANDY DESERT**

(Assessment No. 1549)

Birla (Nifty) Pty Ltd

Proponent's Environmental Management Commitments – December 2004

GAS PIPELINE TO NIFTY COPPER OPERATIONS (Assessment No. 1549)

Note: The term “commitment” as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the objective of the commitment;
- the ‘action’ to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

Proponent's Consolidated Environmental Management Commitments (Assessment No. 1149)

No.	Topic	Action	Objective	Timing	Whose Advice
1	Air Quality	Exposure of soil stockpiles will be minimised by backfilling the trench within five days of pipe laying.	To ensure that air emissions do not adversely affect the environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements.	Construction	DoE
2	Environmental Management	Employees and contractors will be required to attend an approved induction program that included a component relating to environmental management. In particular, the induction would clearly explain employee and contractors' roles and responsibilities in terms of restricting impacts on flora and fauna.	To ensure construction, operation and decommissioning phases of the gas pipeline are managed to reduce unnecessary impacts.	Construction	DoE, DoIR, CALM
3	Environmental Management	Birla (Nifty) Pty Ltd will conduct a monthly compliance audit during construction of the pipeline to ensure construction activities are being undertaken in accordance with conditions of approval and commitments made within this document. The report will be forwarded to DoIR and DoE.	To ensure construction, operation and decommissioning phases of the gas pipeline are managed to reduce unnecessary impacts.	Construction	DoE, DoIR
4	Erosion Control	Where the risk of erosion is identified in specific areas during construction, erosion control structures such as silt fences, diversion and collection bunds, sediment dams and holding sumps will be installed. Such structures will be temporary in nature and will be completely removed as part of rehabilitation of the construction area.	To minimise the potential for unacceptable rates of erosion and sedimentation in high risk parts of the pipeline RoW such as dune crossings.	Construction	WRC, DoE
5	Fauna Management	Groundwater that accumulates in the trench as a result of rainfall will be pumped out on a daily basis and discharged onto a mesh (to dissipate the energy) within the adjacent vegetated areas and allowed to evaporate or	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE, WRC

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		seep into the soil.			
6	Fauna Management	The length of open trench will be kept less than 20 kilometres for trench in sand terrain and less than 15 kilometres in rocky terrain.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE
7	Fauna Management	Open trench will not be left open for more than 25 days.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE
8	Fauna Management	Trench plugs will be left at intervals no greater than 1000 metres along the open trench to allow fauna to exit the trench. The distance between plugs would be reduced in areas considered likely to have higher numbers of fauna.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE
9	Fauna Management	Each trench plug will be ramped up from the base of the trench to the ground surface (rather than having vertical sides) in order to allow larger fauna that fall into the trench to escape. The ramps would be inclined at slopes no greater than 1 (vertical) in 2 (horizontal).	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE
10	Fauna Management	Shade shelters will be installed in open trench at distances not greater than 100 metres apart. Shade shelters will provide shelter for fauna until it is removed from the trench and will reduce the risk of death due to heat stress.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE
11	Fauna Management	An Environmental Officer will be assigned for the duration of the construction period to ensure all open trench is inspected on a daily basis to remove trapped fauna. The Environmental Officer will ensure sufficient suitably qualified personnel are employed to	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE, DoIR

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		assist with daily inspection of the trench.			
12	Fauna Management	Daily trench inspections will be completed before 10.00 a.m. to ensure trapped fauna is removed before trench temperatures become excessive.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoE, DoIR
13	Fauna Management	During construction, records will be kept identifying the species of fauna found in open trench, the location of each animal, date observed status (alive or dead), and maximum and minimum daily trench temperature. These records will be submitted to regulatory authorities on a weekly basis.	To ensure that scientific information gained during the project is fully utilised and assists with planning for future development projects within the region.	Construction	CALM, DoE, DoIR WA Museum
14	Fauna Management	If fauna species of conservation significance are observed during construction, regulatory authorities will be notified within 24 hours of the initial observation.	To ensure that scientific information gained during the project is fully utilised and assists with planning for future development projects within the region.	Construction	CALM, DoE
15	Heritage Management	The results of the archaeological study will be forwarded to DIA 4 weeks prior to construction	To ensure that changes to the biophysical environment do not adversely affect historical and cultural associations and to comply with relevant heritage legislation.	Pre Construction	DIA
16	Heritage Management	The Martu will develop and present a cultural awareness presentation to all employees and contractors employed on the pipeline as part of the overall induction, covering protection of any Aboriginal objects found and general conduct on Martu land.	To ensure that changes to the biophysical environment do not adversely affect historical and cultural associations and to comply with relevant heritage legislation.	Construction	DIA
17	Heritage Management	Martu monitors will be employed while initial earthworks are in progress to monitor for, and assist in identifying any Aboriginal objects found.	To ensure that changes to the biophysical environment do not adversely affect historical and cultural associations and to comply with relevant heritage legislation.	Construction	DIA
18	Heritage Management	Specific Aboriginal heritage management strategies (including pre-clearance surveys) will be implemented to minimise the potential	To ensure that changes to the biophysical environment do not adversely affect historical and cultural associations and to comply with	Construction	DIA

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		for construction and operational activities resulting in significant impacts.	relevant heritage legislation.		
19	Land Clearing	Areas to be disturbed will be clearly marked during the pre-clearance survey.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Pre construction and Construction	DoE, DoIR
20	Land Clearing	Pre-clearance surveys along the miscellaneous lease area corridor will be conducted to identify flora species of conservation significance.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Pre construction and Construction	DoE
21	Land Clearing	Vegetation clearing operations will be conducted in a manner that maximises the retention of root stock thereby increasing the potential for rapid regrowth.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	DoIR, DoE
22	Rehabilitation	Topsoil will be stripped from disturbed areas to a depth of 250 millimetres and stockpiled in windrows for reuse in rehabilitation activities.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
23	Rehabilitation	Subsoil will be excavated and stored in separate windrows to the topsoil.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
24	Rehabilitation	Cleared vegetation will be graded into windrows adjacent to the construction area for later use in rehabilitation.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
25	Rehabilitation	Windrowed vegetation will be spread on re-profiled dunes to promote revegetation. A dune reinstatement protocol will be forwarded	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the	Construction	DoIR, DoE

No.	Topic	Action	Objective	Timing	Whose Advice
		to DoIR and DoE prior to reinstatement.	surrounding landscape and other environmental values.		
26	Rehabilitation	Rehabilitation will be performed progressively after backfilling in order to minimise the potential for soil erosion and sedimentation.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
27	Rehabilitation	Areas that may be cleared will be ripped or tyned at the completion of works.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
28	Rehabilitation	Any surface drainage paths disturbed during construction works will be reinstated using adequate stabilisation materials.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Construction	DoIR
29	Rehabilitation	During the first two years of pipeline operation, areas disturbed and subsequently rehabilitated during the construction phase will be regularly inspected (at least six monthly) in order to monitor rehabilitation success, erosion, subsidence and the presence of weeds. If required, additional work will be undertaken to ensure rehabilitation is of an acceptable standard.	To ensure, as far as practicable, that rehabilitation achieves a stable and functioning landform which is consistent with the surrounding landscape and other environmental values.	Post construction	DoIR
30	Vegetation Management	Where weeds are identified during construction and operation of the pipeline, control methods appropriate to the species and growth stage will be implemented. Weed surveys will be conducted along the alignment four weeks after significant rainfall events (ie greater than 5 mm).	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction and Post construction	Dept Ag, CALM

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31	Waste Management	Putrescible and general waste generated during construction will be collected from the pipeline corridor on a daily basis and transported back to Nifty Copper Operations for disposal in the onsite landfill.	Ensure that wastes are contained and isolated and that recycling and reuse is maximised.	Construction	DoE
32	Water Management	Water quality will be checked to ensure it is suitable for the planned use prior to removal from Nifty Copper Operations.	Ensure water use for the project does not adversely affect environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements and acceptable standards.	Construction	WRC, DoE
33	Water Management	The volume of hydrostatic test water required will be minimised through the reuse of water between sections of the pipeline.	Ensure emissions do not adversely affect environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements and acceptable standards.	Construction	WRC, DoE
34	Water Management	Where release of hydrostatic test water is required, it will be disposed of at the Nifty mine site in consultation with relevant regulatory authorities.	Ensure emissions do not adversely affect environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements and acceptable standards.	Construction	WRC
35	Fauna Management	End caps will be used during construction to minimise the risk of fauna entering pipes.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	CALM, DoIR
36	Land Management	Where practicable, existing disturbed areas and borrow pits will be utilised in preference to creating additional disturbance or establishing new borrow pits.	Maintain the abundance, diversity, geographical distribution and productivity of flora and fauna at a species and ecosystem level through the avoidance or management of adverse impacts.	Construction	DoIR, DoE