

**Environment Protection Authority (EPA)****AGREEMENT NOT TO ISSUE ORDER  
DURING COMPLIANCE WITH A VOLUNTARY PROPOSAL  
(Section 26 of the Contaminated Land Management Act 1997)**

Agreement No.: 26025

Agreement Date: /4 September 2005

This agreement relates to the attached proposal, which comprises three Parts: Part 1 – Preliminary Details; Part 2 – Undertakings; and Part 3 – Performance Schedule.

Proponent: Regional Land Management Corporation, managing the site on behalf of the owner (Her Most Gracious Majesty, Queen Elizabeth II (NSW Treasury, Crown Property Portfolio).

Site: Closure Area of the former BHP steelworks at Mayfield being Lot 3 in DP 1032755 (formerly Lot 221 DP1012964)

Proposal Date: 30 August 2005

1. The EPA is satisfied that the terms of the proposal are appropriate.
2. The EPA notes for the purposes of section 26 of the Contaminated Land Management Act 1997 (CLM Act) that the proponent has undertaken in writing to the EPA not to recover contributions under Part 3, Division 6 of the CLM Act in respect of implementation of the proposal.
3. The EPA agrees, in accordance with the provisions of Part 3 of the CLM Act, that it will not issue a remediation order against the proponent if and for so long as the proposal is complied with.
4. The EPA may issue a remediation order against the proponent in accordance with the CLM Act if the EPA is not satisfied that the proposal is being or has been complied with.
5. The EPA is not prevented by this agreement from making a remediation order against persons (whether or not they were originally parties to the proposal and including public authorities) other than the proponent.
6. The EPA is not prevented by this agreement from exercising its powers under the Protection of the Environment Operations Act 1997 in relation to activities conducted in association with or under the proposal.
7. Each component of the proposal, as described in the proposal is to be completed by the date specified in the proposal. Failure to satisfactorily complete any component by the due date for that component may be taken as a failure to carry out the terms of the proposal for the purposes of section 27 of the CLM Act.
8. This agreement takes effect on the "Agreement Date" specified above and continues in effect subject to satisfactory performance and progress with implementation of the proposal.

Signed:



**CAROLYN STRANGE**  
**Director Contaminated Sites**  
**Department of Environment and Conservation (NSW)**

**Proponent: Regional Land Management Corporation**

**Site: Mayfield**

**Proposal Date: 30 August 2005**

# **VOLUNTARY REMEDIATION PROPOSAL UNDER CONTAMINATED LAND MANAGEMENT ACT 1997**

## **Part 1**

### **Preliminary Details**

#### **1. Proponent's Details**

##### *(a) Name and contact details*

Regional Land Management Corporation  
Administration Building  
99 Selwyn St  
Mayfield NSW 2304

ACN/ABN: 103 702 530 / 38 103 702 530

Phone: 02 4924 4900

Fax: 02 4969 5985

Postal address: PO Box 586, Mayfield 2304

EPA licence number (if applicable): N/A

##### *(b) Who the EPA should contact with technical enquiries about the proposal*

Employer/Company: Regional Land Management Corporation

Phone (business): 02 4924 4908

Fax: 02 4969 5985

**Proponent: Regional Land Management Corporation**

**Site: Mayfield**

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## **2. Site to which proposal applies**

The site to which the proposal applies ('the site') is the 'Closure Area' of the former BHP steelworks site at Mayfield (illustrated below), being Lot 3 in DP 1032755 (formerly Lot 221 DP1013964). This land is generally bound by the Hunter River to the north and east, Selwyn St to the south, Industrial Drive to the south and west, and One Steel to the west.



Title for the site is vested with 'Her Most Gracious Majesty, Queen Elizabeth II (NSW Treasury, Crown Property Portfolio)'. Under a Deed of Agreement between the Crown and the former land owner, the Crown assumes responsibility for remediation of the site. The Crown is not responsible for contamination that has migrated from the site before the land was transferred into Crown ownership, nor for remediation of adjacent land (such as the bed of the Hunter River). The Regional Land Management Corporation (the proponent) is managing this site on behalf of the NSW State Government.

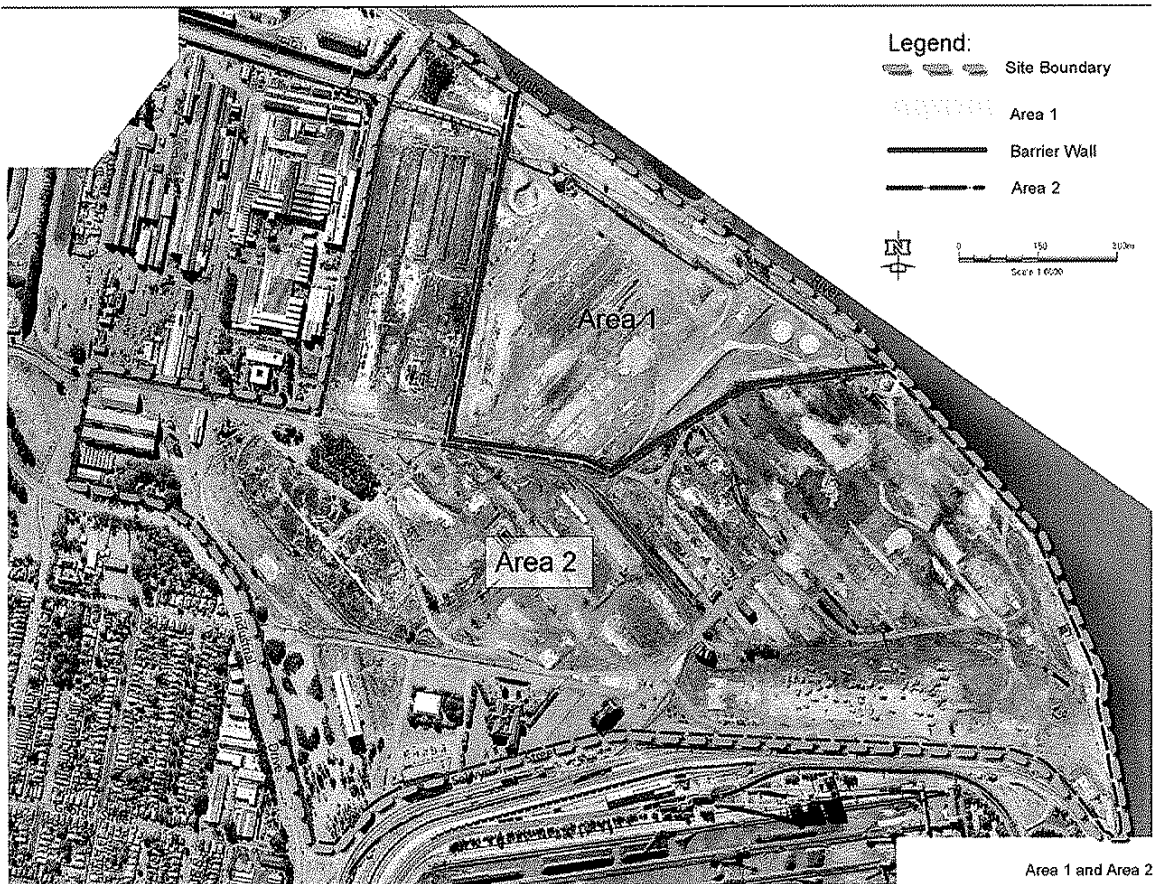
The site has been divided into two areas according to degree of contamination and associated environmental hazard, being Area 1 and Area 2 as delineated on the attached diagram.

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## Area 1 and Area 2



### 3. The contamination

Soil and groundwater at the site are contaminated with substances in such a way as to present a significant risk of harm. The substances of concern ('the contaminants') include:

- Metals (in particular arsenic, chromium, copper, zinc, and lead);
- Total petroleum hydrocarbons (C<sub>6</sub> to C<sub>36</sub> range and include benzene, toluene, ethyl benzene, and xylene); and
- Polycyclic aromatic hydrocarbons

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#### **4. The remediation proposal**

The remediation proposal ('the proposal') comprises:

- a) the information set out above;
- b) the actions, works and other components set out in the following documents:
  - Voluntary Remediation Proposal, Closure Area Former Steelworks Site, RLMC, August 2005;
  - Remedial Action Plan, Former BHP Mayfield Closure Site, Final for VRP, Sinclair Knight Merz, September 2004;
  - Site Audit, Former BHP Steelworks, Newcastle, Environ, October 2004, (Ref:31- 0326 Audit GN 226);
  - Mayfield Site Solid Waste (Soils) Materials Management Plan, Maunsell, June 2005; and
  - Further revisions to any of the above documents, subject to the agreement of the EPA.

Other documents will be required to be submitted to the EPA from time to time e.g. the scope of work for, and details of, the groundwater monitoring plan/network in order to be consistent with Part 3 Section 5 of this agreement.

- c) the undertakings set out in Part 2 of this document; and
- d) the performance schedule set out in Part 3 of this document.

**Signed by Chief Executive Officer, RLMC 30/08/05**

**Proponent: Regional Land Management Corporation**

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## Part 2

### Undertakings Included in Voluntary Remediation Proposal

#### **Explanatory Note:**

Before the EPA can agree with one or more parties to a voluntary remediation proposal not to issue orders against them under section 23 of the Contaminated Land Management Act 1997, it has a statutory obligation to satisfy itself that the terms of the proposal submitted to it under section 26 are appropriate. In addition to including an appropriate remedial action plan, to be acceptable to the EPA a proposal must include the undertakings set out below. These undertakings are important. They must be complied with in order for the EPA to be satisfied that the terms of the proposal have been carried out.

#### **THE PROPOSAL INCLUDES THE FOLLOWING UNDERTAKINGS:**

##### **General**

1. All activities carried out in connection with the proposal including sampling and preparation of associated reports ('the activities') will be carried out in accordance with applicable provisions of *State Environmental Planning Policy 55 – Remediation of Land* and any requirements imposed under it in relation to the works, together with the consent conditions established for DA 293-08-00.
2. All matters listed as relevant to a remediation action plan by the EPA's *Guidelines for Consultants Reporting on Contaminated Sites* (1997) will be taken into account in the carrying out of the activities.
3. All the activities will be carried out consistently with guidelines made or approved under section 105 of the CLM Act.  
(See <http://www.epa.nsw.gov.au/clm/guidelines.htm>)
4. All the activities will be carried out in compliance with applicable NSW environmental legislation, and in particular:
  - i) All the activities, including:
    - (1) the processing, handling, movement and storage of materials and substances used to carry out the activities; and
    - (2) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activities will be carried out in a competent manner.
  - ii) All plant and equipment installed at the site or used in connection with the activities:
    - (1) will be maintained in a proper and efficient condition; and
    - (2) will be operated in a proper and efficient manner.
5. All the activities at the site will be carried out in a manner that prevents or minimises the emission of dust, odour and noise from the site.
6. Waste generated or stored at the site will be assessed, classified and managed in accordance with the EPA's *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.

(See <http://www.epa.nsw.gov.au/waste/guidelines.htm>)

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7. All hazardous, industrial, Group A or controlled waste generated by the activities at the site and which is to be transported from the site will be tracked in accordance with the *Protection of the Environment (Waste) Regulation 1999* and any licence under the *Protection of the Environment Operations Act 1997* in relation to the activities.

(See <http://www.epa.nsw.gov.au/waste/wastetracking.htm>)

8. The proponent acknowledges that the EPA may make all documents and information relating to the activities available to the public free of charge. The proponent will make information available in response to Freedom of Information requests.
9. The proponent will develop a communication strategy that will inform members of the public of the details and timing of the proposed remediation works and will incorporate development of a Community Consultative Committee. The proponent will advise the EPA in writing once the communication strategy has been developed and implemented in accordance with the consent conditions established for DA 293-08-00.

#### **Monitoring, Record Keeping & Reporting**

10. At least until the EPA has notified the proponent that the EPA considers that the contamination no longer poses a significant risk of harm, the proponent must record and retain all monitoring data and information pertaining to the investigation and remediation of the site and provide this record to the EPA at any reasonable time if so requested by the EPA and as specifically provided under the proposal.
11. The EPA will be informed in writing within 7 days of the proponent becoming aware of information or data indicating a material change in conditions at the site or in its surrounding environment which could adversely affect the prospects of successful investigation or remediation of the site or result in harm to the environment.
12. The EPA will be informed in writing within 7 days of the proponent becoming aware of any failure, either by the proponent or any other person, to comply with any component or aspect of the proposal.
13. The EPA will be informed in writing as soon as practicable of any notification by the proponent, its employees or its agents to an appropriate regulatory authority other than the EPA of any pollution incident at the site within the meaning of the *Protection of the Environment Operations Act 1997*.

(See <http://www.epa.nsw.gov.au/legal/dutytonotify.htm>)

#### **Performance Schedule**

14. The performance schedule which is in Part 3 of this document will be adhered to.

Signed by the Chief Executive Officer, RLMC 30/08/2005

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# Part 3

## Performance Schedule

### 1. Objectives of the Proposal

The objectives of the Proposal are to:-

1. Ensure that the contamination in the soil and groundwater at the site does not pose a significant risk of harm to human health and the environment as identified in the EPA's declaration number 21022 under Section 21 of the *Contaminated Land Management Act*;
2. Prevent, as far as practicable, the off-site migration of contaminants in surface water and groundwater which are impacting on the Hunter River; and
3. Manage areas of the site to ensure suitability for commercial/industrial development and that human health risks are reduced to levels appropriate for the proposed final land use.

### 2. Principal Features of the Proposal

The proposal is for remediation works to be implemented in two stages.

**Stage 1** remediation works include:-

- An up-gradient subterranean barrier wall around three sides of Area 1;
- Construction of new major drains;
- Re-contouring and filling of Area 1;
- Management of excavated material in accordance with the Solid Waste (Soils) Materials Management Plan developed for the site ;
- Capping of Area 1 to a permeability of  $10^{-9}$ m/s and minimum thickness of 0.5m;
- Temporary works to reduce infiltration across Area 2, including temporary drainage works to alleviate areas of ponding or high infiltration;
- Environmental controls including appropriate management of contaminated surface waters; and
- Monitoring of groundwater quality and levels in accordance with EPA agreement prior to commencement of the remediation works;
- Reassessment of the risk of harm to the environment posed by contaminants in the groundwater following the completion of the Stage 1 construction works and groundwater monitoring undertaken to verify the efficacy of the Stage 1 remediation works; and
- Prior to the construction of any buildings in Area 1, assessment of the risk of harm to human health posed by the potential ingress of volatile vapours into buildings or confined spaces. An environmental site management or contingency plan will be developed to address any identified risk of harm.

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**Stage 2** remediation works may be carried out synergistically with site redevelopment. The conceptual scope of Stage 2 works includes:

- Contouring and capping of Area 2 (except parts of Area 2 exempted under the conditions of planning approval);
- Management of excavated material in accordance with the Solid Waste (Soils) Materials Management Plan developed for the site; and
- Reassessment of the risk of harm to the environment posed by contaminants in the groundwater following the completion of the capping of Area 2 and groundwater monitoring to verify the efficacy of the Stage 1 and 2 remediation works; and
- Prior to the commencement of construction of any buildings within Area 2, assessment of the risks to human health posed by potential ingress of volatile vapours into buildings and confined spaces. An environmental site management or contingency plan will be developed to address any identified risk of harm.

The timeline for Stage 2 works, including the proposed capping of Area 2, may be reviewed following the assessment of the Stage 1 works and varied subject to the EPA's agreement.

### **3. Groundwater Monitoring**

Groundwater monitoring will be carried out prior to the commencement of, during, and following the completion of Stage 1 works. When there is sufficient groundwater monitoring data the efficacy of Stage 1 works is to be assessed.

Monitoring of groundwater will continue during the Stage 2 works and be ongoing until the EPA is satisfied that either there is no significant risk of harm or there is equilibrium in the groundwater conditions.

A scope of the works detailing the groundwater monitoring program is to be submitted to the EPA for approval before implementation of the monitoring program.

### **4. Reporting requirements and timeframes for submission of reports**

The proponent is to provide the EPA with the following reports by the completion dates listed in section 5 below:

- A Remediation Action Plan and associated voluntary remediation proposal.
- A detailed scope of works for the proposed groundwater monitoring for EPA review and approval before implementation.
- A detailed report of the results of groundwater monitoring following the completion of Stage 1 works. The report is to detail how the monitoring results may be changing over time, and how they compare to the predicted groundwater conditions, together with an assessment of the efficacy of the completed works in addressing the remediation objectives.
- Reports on reassessment of risk of harm to the environment and human health (in particular the risks posed by potential ingress of volatile vapours into buildings and confined spaces and risks posed by off-site migration of contaminated groundwater into the Hunter River will need to be reassessed).

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- Environmental Management Plans or Contingency Plans are to be prepared to address risks of harm to human health and/or the environment identified by the report on reassessment of risk of harm.
- Site audit reports: The proponent will engage a site auditor accredited under the *Contaminated Land Management Act* to review the above reports on groundwater monitoring and efficacy of the remediation works; reassessment of risk of harm to the environment and human health; and the environmental management plans or contingency plans (as required). The auditor is also to be engaged to provide a site audit statement and report in light of the auditor's review of the above reports for the purpose of determining whether the remediation works have been undertaken appropriately in accordance with the remediation Proposal and whether the completed remediation works have satisfied the objectives of this proposal.
- Yearly reporting on ongoing analysis of groundwater trends and assessment of the risk the site poses to the environment following completion of Stage 2 remediation works.

#### 5. Key milestones for investigation and remediation activities (conceptual)

The proponent needs to demonstrate to the satisfaction of the EPA that there have been reasonable attempts to meet the target dates set out below, and that failure to meet the target dates was not reasonably within the control of the proponent .

The demolition of above ground structures was completed by BHP in July 2004.

Stage / Task	Target Start Date	Target Completion Date
<b>REMEDIATION PLAN</b>		
Develop a Remediation Action Plan and Voluntary Remediation Proposal.	July 2004	August 2005
Complete Environmental Management Plans/Contingency Plans.	May 2005	December 2005
Develop a scope of work for the groundwater monitoring program to be approved by the EPA. The groundwater monitoring program is to be approved by the EPA prior to any cut and fill operations commencing on site (in accordance with DA 293-08-00 clause 8.14).	April 2005	October 2005
<b>STAGE 1 REMEDIATION WORKS</b>		
Develop a communication strategy and notify the EPA upon implementation	February 2005	October 2005
Geotechnical investigation for proposed barrier wall	October 2004	February 2004 (Completed)
Design and contract document preparation for barrier wall construction.	February 2005	September 2005
Tendering and award of barrier wall construction contract.	September 2005	December 2005

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<b>Stage / Task</b>	<b>Target Start Date</b>	<b>Target Completion Date</b>
Construction of Area 1 barrier wall.	December 2005	December 2006
Detailed design and tender document preparation for: <ul style="list-style-type: none"> <li>• Landform and capping of Area 1.</li> <li>• Construction of western and eastern drains.</li> <li>• Temporary Area 2 works.</li> </ul>	July 2005	July 2006
Tendering and award of: <ul style="list-style-type: none"> <li>• Landform and capping of Area 1.</li> <li>• Construction of western and eastern drains.</li> <li>• Temporary Area 2 works.</li> </ul>	July 2006	September 2006
Construction of western and eastern drains. Landform and capping of Area 1.	October 2006	June 2008
Construction of temporary drainage and surface conditioning works in Area 2.	October 2006	June 2008
<b>EVALUATION OF STAGE 1 EFFICACY</b>		
Establish pre-remedial baseline groundwater monitoring data.	July 2005	November 2005
Undertake groundwater monitoring during Stage 1 remediation construction works.	November 2005	June 2008
Undertake groundwater monitoring on completion of Stage 1 construction works, analyse trends, and re-assess risk of harm to environment posed by contaminants in groundwater.	June 2008	July 2009
Assess the risk of harm to humans posed by the potential ingress of volatiles into buildings proposed to be built on the site and into confined spaces.	June 2005	July 2009
<ul style="list-style-type: none"> <li>• Prepare an environmental plan or contingency plan to address risks identified by the above reassessments.</li> <li>• Submit a Stage 1 efficacy report including re-evaluation of the timeline and capping requirements for Stage 2 remedial works.</li> <li>• Site auditor is to review reports pertaining to Stage 1 works.</li> </ul>	July 2009	August 2009

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Stage / Task	Target Start Date	Target Completion Date
<b>STAGE 2 REMEDIATION WORKS</b> <i>(Timeline may be reviewed)</i>		
<p>Landforming and capping of Area 2. The arrangement of this work will be dependent upon determination of the final land use and ideally will be carried out synergistically with development.</p> <p><b>OR</b></p> <p>Appropriately assess Area 2 to determine if portions of Area 2 may not require capping to be protective of human health and that non-capping of these areas does not diminish the groundwater capture rate. This assessment will be reviewed by the Site Auditor prior to submission to the EPA.</p>	<p>2009</p> <p>Capping of parts of the MPT area (within Area 2) may start earlier than 2009, subject to outcomes from commercial processes</p>	<p>2012</p>
Undertake groundwater monitoring during Stage 2 construction works.	2009	2012
Reassess the risk of harm to human health and the environment - in particular the ingress of volatiles into buildings proposed to be built on the site and into confined spaces and risks posed by off site migration of contaminated groundwater into the Hunter River at the completion of Stage 2 remediation works.	2012	June 2013
Prepare an environmental management plan or contingency plan to address the risks identified in the above reassessments.	June 2013	August 2013
<p>Site auditor is to review reports pertaining to Stage 2 works and Stage 1 works as appropriate.</p> <p>Provide a Site Audit Statement and Report on the completed remediation works.</p>		December 2013
Determine if an on-site emplacement cell is required. This requirement will be determined based on the volume and chemical characteristics of excavated contaminated material within Area 2 following completion of the Stage1 remediation works. The design of any cell will be approved by the EPA prior to any material being emplaced (in accordance with DA 293-08-00 clause 5.33).	As required by remediation activity.	
Continue with the groundwater monitoring following the completion of Stage 2 construction works until it can be established that the risk to the environment is not significant. This will involve an assessment of the risk to the environment from offsite migration of remaining contaminated groundwater. This assessment will be reviewed by the Site Auditor prior to submission to the EPA.	Yearly groundwater report following completion of Stage 2	Ongoing

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**Environment Protection Authority (EPA)**

**VARIATION TO AGREEMENT NOT TO ISSUE ORDER  
DURING COMPLIANCE WITH A VOLUNTARY PROPOSAL  
(Section 44 of the *Contaminated Land Management Act 1997*)**

**Agreement No.: 26025**

The Environment Protection Authority\* ("EPA") varies the agreement number 26025 not to issue an order during compliance with the voluntary remediation proposal relating to the Closure Area of the former BHP steelworks at Mayfield, being Lot 3 in DP 1032755 (formerly Lot 221 DP1012964), dated 14 September 2005 by:

changing the name of the proponent **from:**

- Regional Land Management Corporation, managing the site on behalf of the owner (Her Most Gracious Majesty, Queen Elizabeth II (NSW Treasury, Crown Property Portfolio)),

**to:**

- The Hunter Development Corporation (ABN 946 887 820 63) managing the site on behalf of the owner (Her Most Gracious Majesty, Queen Elizabeth II (NSW Treasury, Crown Property Portfolio)).



**NIALL JOHNSTON**  
**A/ Manager Contaminated Sites**  
**Department of Environment and Climate Change (by delegation)**

Date: 24 April 2008

\*The EPA is now part of the Department of Environment and Climate Change