

NOTICE OF APPROVAL OF VOLUNTARY MANAGEMENT PROPOSAL

(Section 17 of the Contaminated Land Management Act 1997)

Approval No.: 20101719
Approval Date: 23rd July 2010
Area No.: 3221

The approved proposal consists of this approval document and the attached proposal, which comprises three Parts: Part 1 – Preliminary Details; Part 2 – Undertakings; and Part 3 – Performance Schedule.

Proponent: Barangaroo Delivery Authority
Site: Hickson Road, Millers Point, 2000
Proposal Date: 14/7/2010

BACKGROUND

The EPA is satisfied that the terms of the proposal, as modified by the conditions of this approval, are appropriate.

For the purposes of section 17(4) of the *Contaminated Land Management Act 1997* (CLM Act), the EPA is satisfied that the proponent has taken all reasonable steps to identify and find every owner and notional owner of the land and every person responsible for significant contamination of the land and given those parties identified an opportunity to participate in the formulation and carrying out of the proposal on reasonable terms.

The contents of Part 1, Part 2 and Part 3 of the attached proposal form part of the terms of the approved proposal.

APPROVAL AND CONDITIONS

The EPA approves the proposal subject to the following conditions. These conditions form part of the terms of the approved proposal.

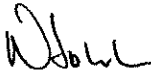
1. Each feature and milestone of the proposal is to be completed by the date specified in the proposal. Failure to satisfactorily complete any component by the due date for that feature or milestone may be taken as a failure to carry out the terms of the proposal for the purposes of section 17(6) of the CLM Act.
2. All documents to be submitted in accordance with the reporting schedule in Part 3 Section 4 must be audited by the NSW EPA Accredited Contaminated Site Auditor.
3. Where this proposal requires the proponent or any other person to give a document to the EPA, that document may be given to the EPA:
 - a. By delivering the document by hand to Level 14 59 Goulburn Street, Sydney
 - b. By posting the document to Manager Contaminated Sites, PO Box A290, Sydney South 1232
 - c. By emailing the document to stephanie.yu@environment.nsw.gov.au

ADDITIONAL INFORMATION

4. The EPA may still exercise any powers it has under the CLM Act, or any other legislation, in relation to the site.

5. The EPA may require the proponent to pay all or any costs incurred by the EPA in connection with any one or more of the following:
- a. Assessing and settling the terms of the approved voluntary management proposal;
 - b. Monitoring action under the approved voluntary management proposal;
 - c. Seeking the compliance of the proponent with the approved voluntary management proposal;
 - d. Any other matter associated with, or incidental to, the matters set out in 5.a. to 5.c. above

Signed:

 23/7/2010

Manager Contaminated Sites
Department of Environment, Climate Change and Water (NSW)

(by delegation)

VOLUNTARY MANAGEMENT PROPOSAL UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997

Part 1

Preliminary Details

1. Proponent's Details

(a) Name and contact details

Company name: Barangaroo Delivery Authority

Postal address: Level 3, Foreshore House, 66 Harrington Street,
The Rocks, NSW

Postcode: 2000

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

Company: Barangaroo Delivery Authority

Position title: Project Manager

Type of business: Statutory authority created under the *Barangaroo Delivery Authority Act 2009* (NSW) to manage the city waterfront development at Barangaroo and to deliver world class benchmarks in urban design, public domain and sustainability.

Proponent: Barangaroo Delivery Authority

Site: Part Lot 5 and Part Lot 3 DP 876514, Hickson Road, Millers Point, NSW 2000 and part of Hickson Road adjacent to 30-34 Hickson Road (11/DP1065410), 36 Hickson Road (5/DP873158) and 38 Hickson Road (SP72797) Millers Point

Proposal Date: 14 July 2010

2. Site to which Voluntary Management Proposal ("Proposal") applies

The site to which this Proposal applies ("Site") is comprised of:

- (a) Part Lot 5 and Part Lot 3 DP 876514, Hickson Road, Millers Point, NSW 2000;
- (b) Part of Hickson Road adjacent to:
 - 30-34 Hickson Road (Lot 11, DP1065410)
 - 36 Hickson Road (Lot 5, DP873158) and
 - 38 Hickson Road (SP72797) Millers Point.

Enclosed as Annexure 1 is a map of the Site. The Site is marked as parts of Block 4, Block 5 and Hickson Road. References to "Block 4", "Block 5" and "Hickson Road" in this Proposal mean the parts of Block 4, Block 5 and Hickson Road within the Site.

3. The contamination

The EPA has declared that the Site is contaminated with gasworks waste and particularly waste tar as a result of the previous use of the site as a gasworks plant significant enough to warrant regulation under the *Contaminated Land Management Act 1997* (NSW). The chemical composition of gasworks waste includes the following substances: (the "Contaminants"):

- (a) polycyclic aromatic hydrocarbons (PAHs);
- (b) benzene, toluene, ethylbenzene and xylenes (BTEX);
- (c) total petroleum hydrocarbons (TPHs);
- (d) ammonia;
- (e) phenol and cyanide.

4. The management proposal

The Proposal comprises:

- a) the information set out above;
- b) the undertakings set out in Part 2 of this document;
- c) the performance schedule set out in Part 3 of this document; and
- d) the reports set out below:
 - Environmental Site Assessment East Darling Harbour, Sydney NSW, Site Investigation Report, Final Report Revision 1 (ERM, 21 June 2007);
 - Proposed Sampling, Analysis & Quality Plan for Additional Investigation Works at Barangaroo, Hickson Road, Sydney – draft Revision 2 (ERM, November 2007);
 - Additional Investigation Works at Barangaroo, Hickson Road, Millers Point (ERM, July 2008a);
 - Preliminary Sediment Screening Works at East Darling Harbour, Adjacent to Barangaroo, NSW (ERM, August 2008b);
 - Draft Stage 2 Remedial Action Plan for Barangaroo, Hickson Road, Sydney (ERM, September 2008); and
 - Overarching Remedial Action Plan for The Barangaroo Project Site (ERM, 1 June 2010).

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Part 2

Undertakings Included in Voluntary Management Proposal

THE PROPOSAL INCLUDES THE FOLLOWING UNDERTAKINGS:

General

1. All works or 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 activities.
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.environment.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 activitieswill 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 and classified in accordance with DECCW's *Waste Classification Guidelines Part 1: Classifying Waste*.
(See <http://www.environment.nsw.gov.au/waste/envguidlms/index.htm>)
7. All waste transported from the Site that is required by the *Protection of the Environment (Waste) Regulation 2005* to be tracked must be tracked using DECCW's on-line tracking system or an alternative tracking system approved in writing by DECC.
(See <http://www.environment.nsw.gov.au/waste/wastetracking.htm>)

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8. The proponent will, and acknowledges that the EPA may, make all documents and information relating to the proposal and activities carried out under the proposal available to the public free of charge.
9. The proponent consents to the EPA placing all documents relating to the proposal on its public website.
10. The proponent will:
 - i) prior to the implementation of the proposal provide for the EPA's approval a strategy for communicating about that implementation, particularly the actual management works, with members of the public who are likely to have a real interest in or be affected by that implementation; and
 - ii) implement the strategy as approved in writing by the EPA.

Monitoring, Record Keeping & Reporting

11. At least until the EPA has notified the proponent that the EPA no longer considers that the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*, record and retain all monitoring data and information and provide this record to the EPA at any reasonable time if so requested by the EPA and as specifically provided under the proposal.
12. The EPA will be informed in writing within 7 days of the proponent becoming aware of information or data indicating a material change:
 - a) in conditions at the site, or
 - b) in its surrounding environment,which could adversely affect the prospects of successful management of the site or result in harm to the environment.
13. 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 term of the proposal.
14. 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.environment.nsw.gov.au/licensing/dutytonotify.htm>)

Performance Schedule

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

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Part 3

PERFORMANCE SCHEDULE

1. Objectives of the Proposal

The Proposal envisages a two-phase Voluntary Management Proposal ("VMP") program as follows:

- (a) Phase 1: VMP in which:
 - (1) investigative works would be undertaken with the objective of identifying, and obtaining the Site Auditor's and the EPA's approval of a preferred remedial strategy to address the groundwater contamination on the Site;
 - (2) Remedial Action Plan(s) ("RAP") and Remedial Work Plan(s) ("RWP") would be prepared; and
 - (3) the Site Auditor's endorsement of or confirmation that he has no objection to the RAP(s) would be obtained, and the EPA's approval of the RAP(s) would be obtained.
- (b) Phase 2: VMP in which the remedial measures set out in the RAP(s) would be implemented.

Phase 1

The main objectives of phase 1 will be achieved within the timeframes specified in this Proposal:

- O1. Conduct a Data Gap Investigation for the Site in order to adequately characterise the nature and extent of the Site contamination.
- O2. Prepare a Human Health and Ecological Risk Assessment ("HHERA") which would identify the Site specific soil and groundwater acceptance criteria for the Site and for the remediation works.
- O3. Conduct Surfactant-enhanced In Situ Chemical Oxidation ("S-ISCO") bench scale and pilot trials to determine the applicability of S-ISCO.
- O4. Conduct ex-situ stabilisation treatability trial (i.e., laboratory scale treatability trial) to refine the stabilisation formulations and demonstrate that the ex-situ stabilisation technology can be applied to the Site.
- O5. Conduct Surfactant Enhanced Product Recovery ("SEPR") pilot trial.
- O6. Prepare and submit RAP(s) (which outlines the detailed design and specifications of the remedial measures and how these will be implemented) to the Site Auditor and the EPA; obtain the Site Auditor's endorsement of the RAP(s) or confirmation that he has no objection to the RAP(s); and obtain the EPA's approval of the RAP(s).
- O7. Based on the RAP(s), prepare and submit RWP(s) (which sets out the technical specifications of the remediation works on the Site) to the Site Auditor and the EPA; obtain the Site Auditor's endorsement of the RWP(s) or confirmation that he has no objection to the RWP(s); and obtain the EPA's approval of the RWP(s).

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Phase 2

The objectives of phase 2 will be defined in a separate voluntary management proposal upon completion of phase 1 and will include the following:

O1. Implement the remedial measures set out in the RAP(s).

2. Principal features of phase 1

The principal features of phase 1 include, but are not limited to:

a. Capital works

- P1. Drilling of additional wells to undertake future pilot trials and groundwater monitoring.
- P2. Drilling and test pitting to obtain physical soil samples for material characterisation and future treatment trials.
- P3. Ex-situ stabilisation treatability trial (i.e., laboratory scale treatability trial).
- P4. SEPR pilot trial and S-ISCO bench scale and pilot trials.

b. Investigation

- P5. S-ISCO bench scale trials (i.e., sampling and laboratory treatment trials), and S-ISCO pilot trials.
- P6. Soil and groundwater sampling including sampling to characterise materials in-situ.
- P7. Evaluation of groundwater and soil properties to determine the potential volume of groundwater present, flow direction and velocity.
- P8. Assessment and testing for Potential Acid Sulfate Soils on the Site.
- P9. HHERA to establish site-specific clean-up and soil re-use criteria.
- P10. Completion of RAP(s) and RWP(s).

The principal features of phase 2 will be set out in a separate proposal with the EPA.

3. Key milestones for investigation and other actions

All works set out in the Proposal must be completed by the deadlines specified below:

Works

Deadline

T1.

Undertake data gap investigation.

Completed the data gap investigation and submitted a final Data Gap Investigation Report by end of July 2010

T2.

Conduct a HHERA (including submit draft and final HHERA reports).

Completed the HHERA by mid-August 2010,

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submitted the draft HHERA Report by end of August 2010, and submitted the final HHERA Report within 4 weeks of receipt of EPA comments on the draft HHERA Report

T3.

Undertake ex-situ stabilisation treatability trial (i.e., laboratory scale treatability trial) (including submit the Ex-Situ Stabilisation Treatability Trial Report to the EPA).

Completed by June 2010 and submitted the report within 6 weeks of finalisation of the Headland Park HHERA and Headland Park Remedial Action Plan

T4.

Undertake S-ISCO bench scale trials.

Completed by end of June 2010

T5.

Prepare and submit draft RAP(s).

Submitted within 6 weeks of receipt of EPA comments on draft HHERA Report (see T2)

T6.

Submit final RAP(s) to the EPA.

Within 8 weeks of receipt of EPA comments on the draft RAP(s)

T7.

Undertake SEPR and S-ISCO pilot trials (including submit final S-ISCO pilot trials report to the EPA).

Completed within 23 weeks following issue of relevant approvals and permits to allow the S-ISCO pilot trials to be undertaken

T8.

Obtain EPA approval on the remedial strategy.

Approval to be obtained within EPA timeframe

T9.

Prepare and submit a draft RWP.

Submitted within 5 weeks of T8

T10.

Submit a final RWP to the EPA.

Within 8 weeks of receipt of EPA comments on the draft RWP

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The deadlines for the remedial works will be set out in phase 2.

4. Reporting requirements and timeframe for submission of reports

The EPA must be provided with the following reports by the deadlines specified below:

Report	Date submitted/to be submitted
R1. Sampling Analysis and Quality Plan (AECOM Australia Pty Ltd, July 2010)	Early July 2010
R2. Voluntary Management Proposal Workplan: Data Gap Investigation and Remediation Design Works, EPA Declaration Area 21122 (AECOM Australia Pty Ltd, 6 July 2010)	Early July 2010
R3. Final Ex-Situ Stabilisation Treatability Trial Report	Within 6 weeks of finalisation of the Headland Park HHERA and Headland Park RAP
R4. Final Data Gap Investigation Report	End of July 2010
R5. Draft HHERA Report	End of August 2010
R6. Final HHERA Report	Within 4 weeks of receipt of EPA comments on draft HHERA Report
R7. Final S-ISCO Pilot Trials Report	Within 23 weeks following issue of relevant approvals and permits to allow the S-ISCO pilot trials to be undertaken
R8. Draft RAP(s) including the Site Auditor's comments	Within 6 weeks of receipt of EPA comments on draft HHERA Report
R9. Final RAP(s)	Within 8 weeks of receipt of EPA comments on draft RAP
R10. Draft RWP(s) including the Site Auditor's comments	Within 5 weeks of EPA approval of the remedial methodology the

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	(see T8)
R11. Final RWP(s)	Within 8 weeks of receipt of EPA comments on draft RWP

The reports relating to the remedial works that will be undertaken during phase 2 and the deadlines for their submission to the EPA will be set out under a separate voluntary management proposal.

5. Conclusion of this Proposal

This Proposal will cease to be an approved proposal and the obligations and undertakings of the Proponent under this Proposal will be satisfied when the EPA issues a notice of satisfactory completion under section 17(7)(a) of the *Contaminated Land Management Act* 1997 (NSW).

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Signature of proponent

This application for approval of this voluntary management proposal may only be signed by a person(s) with the legal authority to sign it. The various ways in which the application may be signed, and the people who may sign the application, are set out in the categories below.

Please tick (✓) the box next to the category that describes how this application is being signed.

If the proponent is:	The application must be signed and certified by one of the following:
an individual	<input type="checkbox"/> the individual.
a company	<input type="checkbox"/> the common seal being affixed in accordance with the <i>Corporations Act 2001</i> , or <input type="checkbox"/> two directors, or <input type="checkbox"/> a director and a company secretary, or <input type="checkbox"/> if a proprietary company that has a sole director who is also the sole company secretary – by that director.
a public authority other than a council	<input checked="" type="checkbox"/> the chief executive officer of the public authority, or <input type="checkbox"/> by a person delegated to sign on the public authority's behalf in accordance with its legislation (Please note: a copy of the relevant instrument of delegation must be attached to this application).
a local council	<input type="checkbox"/> the general manager in accordance with s.377 of the <i>Local Government Act 1993</i> ('LG Act'), or <input type="checkbox"/> the seal of the council being affixed in a manner authorised under the LG Act.

I/We (the proponent):

- ***apply for approval of the voluntary management proposal set out in this Proposal and in any documents referred to in Part 1.4 of this Proposal***
- ***declare that the information in this Proposal form (including any attachment or document referred to in Part 1.4 of this proposal) is not false or misleading.***

Signed by the Proponent 14 July 2010

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