

Environment Protection Authority (EPA)

**NOTICE OF APPROVAL OF VOLUNTARY MANAGEMENT
PROPOSAL**

(Section 17 of the Contaminated Land Management Act 1997)

Approval No.: 20091707

Approval Date: 19/12/2009

Area No.: 3020

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: Asciano Properties Operations Pty Ltd (Asciano)

Site: Lot 2 DP539890 and Lot 2 DP615549 known as 39 Grand Avenue, Camellia

Proposal Date: 15 October 2009 and signed 29 October 2009

BACKGROUND

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

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 Contaminated Land Management Act 1997 (the CLM Act).
2. 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 59-61 Goulburn St, Sydney, NSW
 - b. By posting the document to the Manager, Contaminated Sites, Department of Environment and Climate Change (NSW) at PO Box A290 Sydney South NSW 1232.
3. The proponent cannot recover contributions under Part 3 Division 6 of the CLM Act.

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:

W. B. L. 19/12/2009

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

If a registered company, company name:

Trading as: Asciano Properties Operations Pty Ltd

ACN: 123 685 496

Postal address: Level 6 , 380 St Kilda Road, Melbourne Victoria

Postcode: 3004

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

Employer/Company: E3 Consulting Australia Pty Ltd

Position title: Senior Principal

Type of business: Environmental consulting

Proponent: Asciano Properties Operations Pty Ltd

Site: 39 Grand Avenue, Camellia, NSW 2142 (Lot 2 DP 539890 and Lot 2 DP 615549)

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2. Site to which proposal applies

The site to which the proposal applies ("the Site") is:

39 Grand Avenue, Camellia, NSW 2142 described as Lot 2 DP 539890 and Lot 2 DP 615549.

3. The contamination

Soil and/or groundwater and/or surface water and/or stormwater at the Site are contaminated with substances and the contamination is significant enough to warrant regulation under the *Contaminated Land Management Act 1997*. The substance of concern ("the contaminant") is hexavalent Chromium (Cr(VI)) and has been identified on the Site as follows:

- (a) Chrome Ore Processing Residues ("COPR") that has been placed on the Site as filling materials used to reclaim land;
- (b) Groundwater that has become contaminated principally with Cr(VI); and
- (c) Stormwater that has become contaminated principally with Cr(VI).

4. The management proposal

The management proposal ("the Proposal") comprises:

- a) the information set out above;
- b) the undertakings set out in Part 2 of this document; and
- c) the performance schedule set out in Part 3 of this document.

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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 relevant 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 the Department of Environment Climate Change and Water's ("DECCW") *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 DECCW.

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

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-staged program as follows:

(a) **Stage 1: Voluntary Management Proposal 1 ("VMP1")** in which investigative works would be undertaken with the objective of identifying a preferred remedial strategy to address the migration of significant quantities of Cr (VI) from the Site; and

(b) **Stage 2: Voluntary Management Proposal 2 ("VMP2")** in which the detailed design of the remedial measures resulting from the assessment of the VMP1 results would be presented in a Remedial Action Plan ("RAP") agreed with the EPA and implemented.

The main objectives of VMP1 will be achieved within the timeframes specified below:

Stage 1: VMP1

General

O1. Install appropriate signage and fencing on the boundary of the Site closest to the Parramatta River where practicable in order to restrict public access to the Parramatta River from this Site;

O2. Provide an appropriate Operational Environmental Management Plan ("OEMP") to the EPA which identifies the management measures that are being/will be undertaken on the Site to prevent occupational exposures to Cr(VI) identified to be present in stormwater, sub-surface soils and groundwater on the Site;

Storm water system

O3. Assess the quality of water present in the stormwater drainage system on the Site;

O4. Identify whether contaminated groundwater enters the present storm water drainage system (to the extent that operational activities allow);

O5. Based on the results of the investigation, assess the most appropriate remedial strategy to address stormwater contamination at the Site;

Groundwater

O6. Assess the velocity of groundwater flow and the flux of Cr(VI) and Cr (Total) in groundwater across the Site, across the up-gradient boundary (western and southern

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boundaries) and down-gradient boundary (eastern and northern boundaries) of the Site (to the extent that operational activities allow);

O7. Confirm the Cr(VI) concentration gradient in groundwater between the up- and down-gradient Site boundaries;

O8. Assess the influence of tidal dilution by ingress of water from the Parramatta River across the Site;

O9. Identify whether groundwater discharges from the Site to the Parramatta River within the tidal cycles;

O10. Assess the attenuation of Cr(VI) and Cr (Total) in the muds between the locations on the boundary of the Site where the highest concentrations of Cr(VI) in groundwater were previously identified and the Parramatta River; and

O11. Based on the results of the investigation, assess the preferred remedial strategy for groundwater contamination at the Site, if required.

Stage 2: VMP2

The works proposed for VMP2 will be defined in a separate voluntary management proposal upon the completion of VMP1 and will include the following:

O12. Submit and agree with the EPA a detailed design of and specifications for remedial measures based on the preferred remedial strategy identified by VMP1 which may include:

(a) any capping or drainage system works for the Site, if appropriate;

(b) any measures that would prevent, as appropriate:

- (i) infiltration of water into contaminated fill on ground surface of the Site; and
- (ii) ingress of contaminated groundwater into the stormwater system;

A RAP will then be prepared that will present the agreed detailed design and specifications of the remedial measures and how they will be implemented. The RAP will then be submitted to the EPA.

It is noted that the results of VMP1 may require that further investigation works be completed prior to the preparation of the detailed design and RAP. The details of any further investigation works (if required) will be presented and implemented in VMP2.

O13. Submit and agree with the EPA a program for implementation of remedial measures presented in the RAP; and

O14. Implement the remedial measures as set out in the RAP and in accordance with the agreed program.

2. Principal features of VMP1

The principal features of VMP1 include, but are not limited to:

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a. Capital works

- P1.** Installation of approximately eight new groundwater monitoring wells in locations where intrusive investigations have been undertaken (to the extent that operational activities allow), as detailed in P6(f) below.

b. Remediation and/or Investigation

- P2.** Installation of signage along boundary of the Site with the Parramatta River.
- P3.** Maintain fence lines at the property boundaries and install chain mesh barriers around the stormwater outlet to prevent, to the extent practicable, public access to the stormwater outlets, the Parramatta River mudflats and foreshore adjoining the Site.
- P4.** Provision of an OEMP identifying procedures that are/will be implemented to prevent occupational exposures to Cr(VI) at the Site.
- P5.** Review of plans of the stormwater system on the Site and inspect the drainage system and liaise with the Site's engineer and any other relevant parties involved with the installation or maintenance of the system to ensure an understanding of the extent of the installed below ground drainage system and any potential infiltration risks.
- P6.** Develop and implement a sampling and analytical plan for field investigations, which will include the following works:
- (a) Liaison with the Site manager so that work can be planned around continuing operations, inspection and underground service clearance;
 - (b) Inspection of accessible stormwater pits and the storm water outfall and collection of samples of water, if present, for visual identification of chromium contamination and for laboratory analysis, if required;
 - (c) Intrusive investigation at the following number of locations (note the number of locations is approximate and is subject to operational activities):
 - three locations along the western boundary of the Site;
 - three locations immediately down-gradient of identified "hot spots" of COPR and/or Cr(VI) within the Site;
 - two locations between the western boundary of the Site and the nearest stormwater drain within the Site in which chromium contaminated storm water has been identified (to the extent that operational activities allow); and
 - three locations within the inter-tidal mudflats between the northern boundary of the Site and the main course of the Parramatta River;
 - (d) Sampling from fill materials and natural soils from regular depth intervals from each borehole location completed on the Site as proposed in P6(c);
 - (e) Sampling of mud from the inter-tidal zone from 3 depth intervals at each sampling location completed on the Site as proposed in P6(c);
 - (f) Installation of approximately eight new groundwater monitoring wells in locations where intrusive investigations have been undertaken (to the extent that operational activities allow), as follows:
 - three locations along the western boundary of the Site;

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- three locations immediately down-gradient of identified "hot spots" of COPR within the Site; and
- two locations between the western boundary of the Site and the nearest stormwater drain within the Site (to the extent that operational activities allow);

(g) Monitoring and sampling of groundwater from accessible existing and newly installed groundwater monitoring wells;

(h) Installation of data loggers in a number (between 2 and 4) of monitoring wells (to assess tidal variations) and review of previous data on tidal and groundwater levels reported by CM Jewell and Associates Pty Ltd, *Investigation of Chromium Contamination in Groundwater 2007*;

(i) Analysis of selected soil and groundwater samples by a NATA accredited laboratory for pH, Cr (VI) and Total Cr(III+VI);

(j) Analysis of selected mud samples collected from the inter-tidal zone at each sampling location for:

- Total Organic Carbon;
- Grain size distribution;
- pH; and
- Cr(VI) and Total Cr(III+VI) in soil pore water and/or in water absorbed to the muds;

(k) Data analysis, including quality control assessment, measurement of flow velocities, Cr(VI) and Total Cr (III+VI) flux, tidal data; and

(l) Preparation of a report detailing the findings of the investigation works and requirements for further investigations (if required) and remediation. The report will also present the preferred remedial strategy for Cr(VI) in groundwater and stormwater at the Site.

The principal features of VMP2 will be set out in a separate voluntary management proposal with the EPA.

3. Key milestones for investigation, remediation and other actions for VMP1

All works set out in VMP1 must be completed by the deadlines specified below:

Works	Deadline
T1. Completion of 30 boreholes across the Site and conversion of 7 boreholes into groundwater monitoring wells. Soil and groundwater sampling and analysis for identified potential contaminants of concern.	Completed from August to September 2008
T2. Investigation of identified locations in the Site, sampling from fill materials and natural soils and muds. Inspection and survey of storm water drainage system.	Within 60 days from EPA's approval of this Proposal

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T3. Installation of groundwater monitoring wells. Collection and analysis of groundwater samples from newly installed and existing groundwater monitoring wells.	Within 60 days from EPA's approval of this Proposal
T4. Completion of OEMP identifying procedures that are/will be implemented to prevent occupational exposure to Cr(VI) on the Site.	Within 60 days from EPA's approval of this Proposal
T5. Completion of installation of signage and fencing on the boundary of the Site closest to the Parramatta River where practicable.	Within 60 days from EPA's approval of this Proposal
T6. Submission of Report detailing findings of investigative works, the requirements, if any, for further investigations and the preferred remedial strategy.	Within 90 days from EPA's approval of this Proposal

The deadlines for VMP2 works will be set out under a separate voluntary management proposal.

4. Reporting requirements and timeframe for submission of reports for VMP1

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

Report	Deadline
R1. <i>Investigation of Chromium Contamination in Groundwater</i> by CM Jewell & Associates (2007).	Submitted to the EPA April 2007.
R2. <i>Additional Investigation: 39 Grand Avenue, Camellia, NSW</i> by ENSR Australia Pty Ltd (21 January 2009).	Submitted to the EPA February 2009
R3. OEMP	Within 60 days from EPA's approval of this Proposal
R4. Sampling and Analytical Plan for Field Investigations and survey and inspections of storm water drainage system.	Within 21 days from EPA's approval of this Proposal
R5. Report upon completion of signage and fencing indicating details of the works undertaken.	Within 60 days from EPA's approval of this Proposal

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R6.

Report summarising results of investigations and preferred remedial strategy.

Within 90 days from EPA's approval of this Proposal

The reports for VMP2 and the deadlines for their submission to the EPA will be set out under a separate voluntary management proposal.

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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	☐ the individual.
a company	☐ the common seal being affixed in accordance with the <i>Corporations Act 2001</i> , or ☐ two directors, or ☐ a director and a company secretary, or ☐ 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	☐ the chief executive officer of the public authority, or ☐ 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	☐ the general manager in accordance with s.377 of the <i>Local Government Act 1993</i> ('LG Act'), or ☐ 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 29 October 2009

Seal (if signing under seal):

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