

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: *NSW Department of Planning, Industry and Environment – Crown Lands*
ABN: 72 189 919 072

If not a registered company, your full name(s):

Trading as:

ABN:

Phone:

Fax:

Email:

Postal address:

Postcode:

EPA licence number (if applicable):

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

Name: *Julie Richards*

Employer/Company: *NSW Department of Planning, Industry and Environment – Crown Lands*

Position title: *Group Leader, Landscape Services Centre*

Type of business: *Government Department*

Phone (business): *(02) 6885431*

Phone (after hours): *0437 581 795*

Email: *julie.richards@crownland.nsw.gov.au*

Proponent: NSW Department of Planning, Industry and Environment – Crown Lands

Site: former Arsenic Processing Plant, Jennings NSW

Proposal Date: 11 November 2019

2. Site to which proposal applies

The site to which the proposal applies (“the site”) is the former Jennings Arsenic Processing Plant and adjacent lands. The Regulated Area (being land subject to this VMP), as identified in Figure 1, Attachment A, is situated between Duke, Manor, Robinson, Ballandean and King Streets, Jennings NSW and is formally identified as Lot 114 in DP751490, Lots 6, 7, Part Lots 4, 5 and 8, of Section 12 in DP 758540 and the road reserve for the extension of Gladstone Street.

3. The contamination

On 7 April 2018, the NSW Environment Protection Authority (EPA) declared that the site is contaminated with arsenic. A summary of the contamination detected with the Regulated Area is provided below:

Soils and Sediment

Surface and shallow soils at most locations sampled in the Regulated Area contain arsenic at concentrations in excess of the human health (open space – HIL-C) direct contact screening criteria. Arsenic is present in surface soils to the lateral extent sampled, and the impact appears unlikely to be delineated to within the Regulated Area. Vertically, arsenic impacts are present within the former operational area footprint, within fill and residual soils, generally up to the interface with underlying bed rock. Arsenic impact in the northern and southern portions of the site (i.e. outside the former operational area footprint, and earthworks areas) have reported HIL-C exceedances generally in surface soils only, with underlying samples either not exceeding any criteria, or exceeding only the human health residential (HIL -A) direct contact screening criteria.

Bonded fragments of asbestos containing material (ACM) were observed at isolated locations on the ground surface and in the subsurface fill materials, however no asbestos fines or free fibres have been reported from surface soils assessed. Other substances of concern, including lead and benzo(a)pyrene have been reported in soils above the adopted human health screening criteria at select locations, while copper, nickel, lead, zinc and total recoverable hydrocarbons have been reported in soils above the adopted ecological screening criteria at select locations.

Arsenic in sediment was reported above both the nominated human health (HIL-C) and ecological screening criteria in five out of eight sediment samples collected from the holding pond.

Groundwater

Arsenic has been reported within groundwater above adopted human health (drinking water) and ecological screening criteria within the Regulated Area and the arsenic impacts are not delineated at the downgradient boundary.

Other substances of concern in groundwater which appear to be related to historical site activities include beryllium, chromium, cadmium, cobalt, copper, manganese, nickel and zinc. These metals were also reported in groundwater at concentrations above the adopted screening criteria at multiple locations across the site.

Surface water

All surface water sampling locations within the Regulated Area reported arsenic at concentrations which exceed the nominated irrigation (long term), livestock, human health (drinking water) and ecological (freshwater 95%) screening values.

Copper and zinc are present in all surface waters at concentrations above the nominated ecological screening criteria however these are considered to partly be related to background conditions, with some contribution from the historical site activities.

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See below for site investigation and management reference documents.

4. The management proposal

The management proposal (“the proposal”) comprises:

- a) the information set out above;
- b) the actions, works and other components set out in the following documents:
 - *ERM (2001), Environmental Site Assessment - Former Jennings Arsenic Factory, Jennings NSW, for the NSW Department of Land and Water Conservation, Reference 501017*
 - *ERM (2004), Supplementary Sampling - Former Jennings Arsenic Factory, Jennings NSW, for the NSW Department of Land and Water Conservation, Reference 0019305*
 - *NSW Soil Conservation Service (SCS) (2015), Jennings Site Management Plan, for NSW Crown Lands, prepared by SCS October 2015 (18/11/2015)*
 - *ERM (2017), former Arsenic Processing Plant, Jennings, Conceptual Site Model and Data Gaps Assessment, prepared for the NSW Department of Industry – Crown Lands, June 2017*
 - *ERM (2019), Detailed Site Investigation, former Arsenic Processing Plant, Jennings NSW, prepared for the NSW Department of Industry – Crown Lands, April 2019*
- c) the undertakings set out in Part 2 of this document; and
- d) 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 guidelines made or approved under section 105 of the CLM Act.
(See 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 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 EPA’s *Waste Classification Guidelines Part 1: Classifying Waste*.
(See www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm)
7. All waste transported from the Site that is required by the *Protection of the Environment (Waste) Regulation 2014* to be tracked must be tracked using the EPA’s on-line tracking system or an alternative tracking system approved in writing by the EPA.
(See www.epa.nsw.gov.au/owt/aboutowt.htm)
8. The proponent will make this voluntary management proposal available to the public free of charge and consents to the EPA placing this proposal on its public website.
9. The proponent will make all documents referred to in, and required to be prepared under, this voluntary management proposal available to the public free of charge, unless the

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proponent identifies commercial-in-confidence or private/personal information (including information relating to a third party) within those documents. In these cases, the proponent will remove such information from the documents to make the documents suitable for public release.

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 these records 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.epa.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

O1. The key objective of the VMP is to manage contamination onsite and offsite so that it does not pose an unacceptable risk of harm to human health and the environment.

Specific objectives of the Proposal are:

O2. Delineate the extent of offsite contamination down-gradient (to the south) of the site.

O3. To regularly update the stakeholders (community and NSW EPA) on the nature and extent of impacts and how these impacts are being managed.

O4. Establish interim management measures to mitigate potential contamination exposures during site characterisation, risk assessment, and remedial planning works.

O5. Assess the risks posed by arsenic in soil, groundwater, and sediments based on current and approved uses of the land and outline options by which potentially unacceptable risks to human health and the environment may be managed.

O6. Engage a Site Auditor accredited under the CLM Act to certify that:

- The nature and extent of off-site contamination down-gradient of the site has been appropriately determined;
- The options identified in the Remediation Action Plan are appropriate for managing/mitigating potentially unacceptable risks to human health and the environment for current and approved uses of the land and for off-site receptors; and
- The terms of the approved VMP have been complied with.

2. Principal features of the proposal

The principal features of Stage 2 include, but are not limited to:

P1. Stakeholder engagement and communications

- Discuss the detailed site investigation (DSI) findings and refine the approach to investigation of data gaps which remain in the conceptual site model (CSM), proposed interim management measures, and the next steps necessary to progress management of the site contamination.
- Maintain communications with the various stakeholders (residents and regulators) at completion of the stages of site investigation and remediation, including updates regarding findings of the site contamination investigation and planned remediation tasks, via letter drop and/or updates of the Jennings project webpage.
- Contact WaterNSW to identify the surface water access licensees located in the Glen Lyon Creek catchment.

P2. Complete interim management measures

- Prepare an Interim Environmental Management Plan (EMP).

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- Install a perimeter fence around the site.
- Complete asphalt sealing of King Street.

P3. Further investigations

- Prepare a Sampling, Analysis and Quality Plan (SAQP) for the Supplementary DSI covering both onsite and offsite down-gradient areas.
- Undertake a Supplementary DSI to include, but is not limited to, sampling of soils, sediment, groundwater and surface water in accordance with the SAQP, and delineation of contamination down-gradient (south-west) of the site.
- Complete a human health and environmental risk assessment (HHERA).
- Prepare a remediation action plan (RAP) that outlines actions to manage onsite contamination and mitigate contamination migration. This may include, but is not limited to, excavation of contaminated soil, control of groundwater migration, and expansion of sediment pond.
- Preparation of quarterly progress update emails.
- Submission of all interim site audit advice prepared by the Site Auditor following the review of the SAQP, DSI, HHERA and RAP to the EPA.
- Submit a site audit statement and site audit report to the EPA to certify that :
 - The nature and extent of off-site contamination down-gradient of the site has been appropriately determined (Section B1),
 - The options identified in the RAP are appropriate for managing/mitigating potentially unacceptable risks to human health and the environment for current and approved uses of the land and for off-site receptors (Section B2),
 - The terms of the approved VMP have been complied with (Section B4)
- Prepare contingency measures to manage unexpected finds including environmental and remediation issues that may arise.

3. Key milestones for investigation, remediation and other actions

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

Works	Deadline
T1. Various agencies workshop	Completed – 10 May 2019
T2. Engage NSW EPA accredited Site Auditor	Completed – 5 June 2019
T3. Develop Interim EMP and submit for Site Auditor review	Completed – 9 July 2019
T4. Identify surface water access licensees located in the Glen Lyon Creek catchment	Completed – 30 July 2019
T5. Develop SAQP and submit to Site Auditor for review	Completed – 30 July 2019
T6. Submit updated communications plan; complete perimeter fence establishment and road sealing tasks	13 January 2020
T7. Submit the supplementary DSI report for Site Auditor review	29 May 2020
T8. Submit the HHERA for Site Auditor review	31 July 2020
T9. Submit the RAP for Site Auditor review	2 October 2020
T10. Provide interim audit advice (RAP, DSI, SAQP, HHERA)	Ongoing

4. Reporting requirements and timeframe for submission of reports

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

Report	Deadline
R1. Interim Environmental Management Plan	13 January 2020
R2. Sampling, Analysis and Quality Plan	Submitted – 25 September 2019
R3. Supplementary Detailed Site Investigation Report	7 August 2020
R4. Human Health and Environmental Risk Assessment	2 October 2020
R5. Remedial Action Plan	1 December 2020
R6. Site Audit Statement and Report	5 February 2021

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Signature of proponent

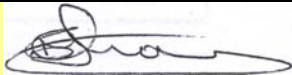
This application for approval of this voluntary management proposal may only be signed by a person(s) with the legal authority to sign it. The various ways in which the application may be signed, and the people who may sign the application, are set out in the categories below.

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"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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	<input type="checkbox"/> <input type="checkbox"/>	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 (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.***

Signature		Signature	
Name (printed)	Marwan El-Chamy	Name (printed)	
Position	Group Director Regional Services	Position	
Date	15/11/2019	Date	

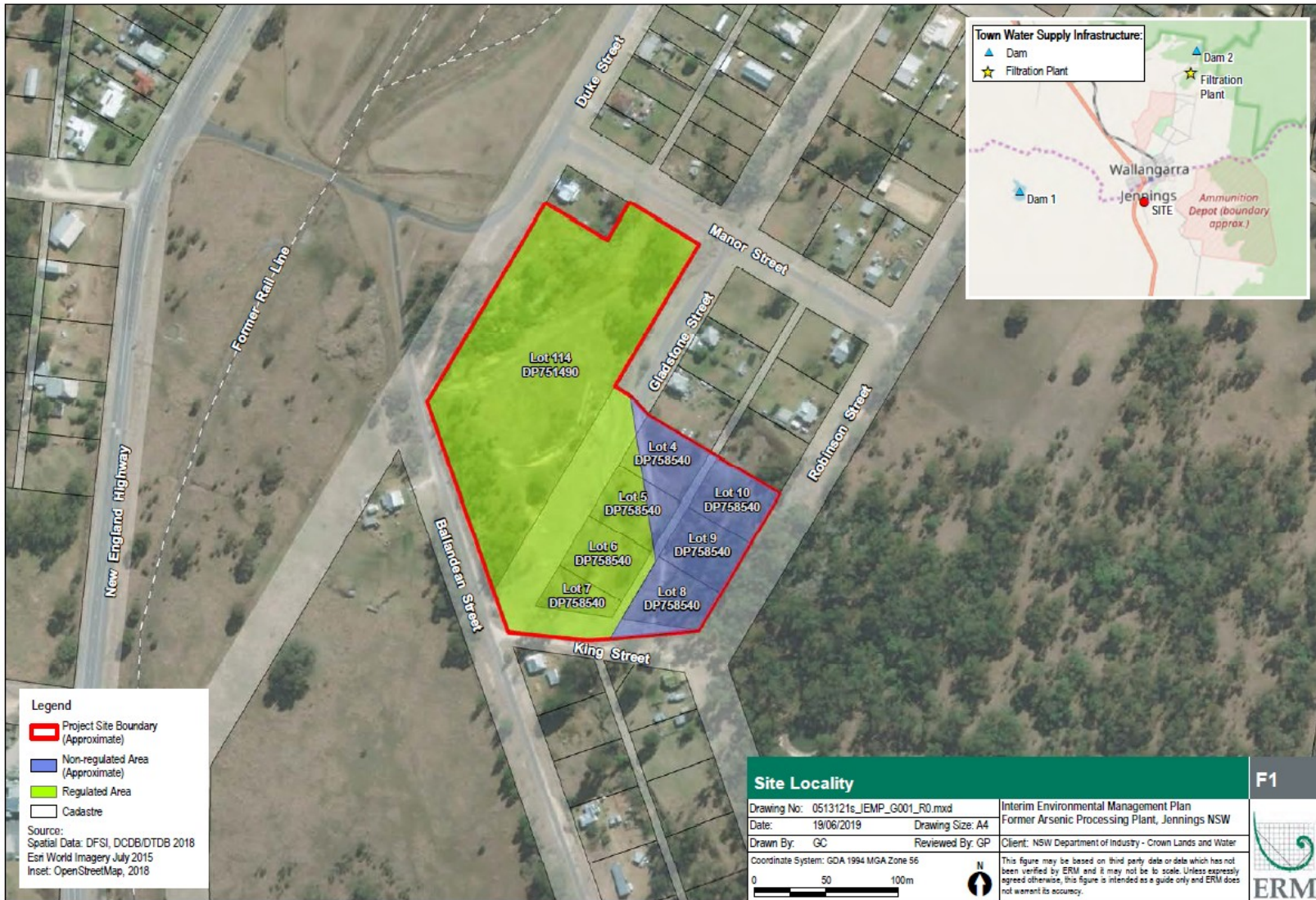
Seal (if signing under seal):

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Attachment A: Site Figure



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