

26 June 2019

Angus Morten
Lendlease
Level 14, Tower Three, International Towers Sydney
Exchange Place, 300 Barangaroo Avenue
Barangaroo, NSW, 2000

Dear Angus,

Re: Sydney Football Stadium Redevelopment, Moore Park IAA #2: Review of Lendlease Unexpected Finds Protocol

1. Introduction and Background

Jason Clay (the auditor) of Senversa Pty Ltd has been engaged by Lendlease Building Pty Ltd (Lendlease) as a NSW Environment Protection Authority (EPA) accredited site auditor for the redevelopment of the Sydney Football Stadium, located on Diver Avenue Moore Park, NSW. The site is legally defined as Lot 1 on Deposited Plan 205794 and part Lot 1528 on Deposited Plan 752011 and part Lot 1530 on Deposited Plan 752011.

The Department of Planning and Environment has written to Lendlease requiring that it responds to certain issues raised during the exhibition of the development application which ended on 13 June 2019. One of those issues is:

“Unexpected Finds Procedure

As required by the Environment Protection Authority, a copy of the Unexpected Finds Procedure in relation to soil contamination should be submitted to the Department and a Site Auditor’s Statement confirming the adequacy of this procedure should be provided.”

The purpose of this Interim Auditor Advice therefore is to comment on the unexpected finds procedure detailed below.

2. Documents Reviewed

The auditor has been provided with the following documents:

- Lendlease (2018) *Sydney Football Stadium (B12 – Construction Environmental Management Plan) Project EHS Management Plan, Issue 4*. Dated 16 July 2018. This is hereafter referred to as ‘the CEMP’.
- Lendlease (2019) *Unexpected Contamination Finds Protocol_V2.1*. Dated June 2019. This is hereafter referred to as ‘the UFP’ (attached).

The existence of the UFP is noted as a sub-plan in Appendix 1 of the CEMP.



The CEMP and the UFP was reviewed in conjunction with the following reports:

- DP (2018) *Report on Preliminary Site Investigation (Contamination), Sydney Football Stadium Redevelopment, Moore Park, NSW*, dated 18 May 2019 and referenced 86276.00.R.001.Rev0.Stage 1 ESA. This is hereafter referred to as 'the PSI'.
- DP (2019a) *Report on Detailed Site Investigation (Contamination), Sydney Football Stadium Redevelopment, Moore Park, NSW*, dated 15 May 2019 and referenced 86529.00.R.006A.Rev0.DSI S96 Application. This is hereafter referred to as 'the S96 DSI'.
- DP (2019b) *Report on Detailed Site Investigation (Contamination), Sydney Football Stadium Redevelopment, Moore Park, NSW*, dated 15 May 2019 and referenced 86529.00.R.006A.Rev0.DSI. This is hereafter referred to as 'the DSI'.

The auditor notes that there is no technical difference in the S96 DSI or the DSI.

3. Summary of the UFP

The UFP lists the contaminant sources that might typically appear on an urban Sydney redevelopment site that have not shown up in previous investigations to a significant extent. These include:

- Buried waste, including asbestos.
- Putrescible matter.
- Underground storage tanks, pipework, etc.
- Ash or slag.
- Hydrocarbons.
- Unusually odorous material.

The UFP's instructions are to:

1. Stop work.
2. Cordon off the area.
3. Engage a suitably qualified expert to deal with the relevant issue.
4. Where waste is required to be removed from site, it should be waste classified and disposed of at a licensed facility in accordance with regulatory requirements.

4. Auditor's Conclusions

There is no substantive guidance made or approved by the NSW EPA on what should be included in unexpected finds protocol; however, the use of them has become common in NSW and auditors deal with them frequently. They are appropriate where sites have been properly investigated and found to be uncontaminated and where significant demolition or earthworks are to go ahead after investigations have taken place.

An unexpected finds protocol is generally a relatively straightforward set of instructions that set out the actions to be undertaken under certain circumstances. As with all plans of this nature, it must sit within a management regime so that it is not forgotten after works commence. In being part of Lendlease's overall CEMP, it is considered to be part of an appropriate management structure, and if properly executed should lead to the appropriate management of unexpected finds of contamination.

The auditor therefore considers that an adequate UFP has been provided and that it should be executed in accordance with regulatory requirements.



5. Close

We trust this meets your requirements. Should you have any queries or require further information, please do not hesitate to contact the undersigned.

Yours sincerely,
On behalf of **Senversa Pty Ltd**

Jason Clay

NSW EPA Accredited Contaminated Sites Auditor (0801)

Enc. The Unexpected Finds Protocol

Technical Limitations and Uncertainty – *This Interim Advice is not a Site Audit Report or a Site Audit Statement, as defined in the Contaminated Land Management Act 1997*

Lendlease included limitations in its documents, and therefore this review will also be subject to those limitations. The auditor has prepared this document in good faith but is unable to provide certification outside areas that auditor has had some control over or is reasonably able to check. The auditor has relied on the documents referenced in Section 2 in preparing the auditor's opinion in Sections 4. If the auditor is unable to rely on any of those documents, the conclusions contained herein could change.

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This Unexpected Contamination Finds Protocol (the Protocol) outlines the work requirements in the event of unexpected finds occurring during demolition at the Sydney Football Stadium, inclusive of .

The aim of this Protocol is to manage the risk of potential exposure to asbestos/hazardous materials and limit disturbance from unexpected finds. All PCBU's associated with the demolition works are to adopt the protocol into their own site specific SWMS based on individual tasks and associated risks.

This Protocol has been prepared to satisfy Condition B7 in the Sydney Football Stadium Stage 1 (Demolition) development consent (SSD 9294), which requires that:

Prior to the commencement of any works, the Applicant must prepare an unexpected contamination procedure to ensure that potentially contaminated material is appropriately managed. The procedure must form part of the Construction Environmental Management Plan (CEMP) in accordance with condition B15 and must ensure any material identified as contaminated must be disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the site.

This Protocol has been updated as Version 2 (June 2019) to further satisfy the SSD-9249-Mod-2 (Removal of ground slabs and existing piles) requirement for an Unexpected Finds procedure.

Potential Unexpected Finds

Based on findings of site history and site contamination investigation works undertaken at the site, unexpected finds which could reasonably occur within the site are summarised below.

Potential Unexpected Find	Observed Characteristic
Buried dry waste materials including asbestos	May include a variety of waste materials including wood, plastic, metal fragments, building rubble (e.g. concrete, brick, asphalt, forms of asbestos etc.).
Buried putrescible wastes	Putrescible waste materials typically comprise decomposed organic waste materials intermixed within the fill materials on site, with an associated characteristic rotten egg type odour. Such materials should not be confused with decomposed plant matter and/or marine sediments found within the natural sandy soils.
Structures or conduits containing deleterious materials	<ul style="list-style-type: none"> • A buried tank or former process pipelines; • Deeper sand fill sometimes with visual/olfactory indications of contamination • Presence of small concrete footings surrounding by odorous or visually impacted soils and/or groundwater.
Ash or slag deposits	<p>Ash materials typically light weight, black, grey and/or white and generally gravel sized (1mm to 10mm) particles.</p> <p>Slag materials can be varied in consistency and colour and may comprise pale grey to blue/green/grey/black, and be loose or cemented. Slag gravels can be very angular and appear to have a 'honeycomb' texture.</p>
Hydrocarbon Compounds	<p>May be identified by a hydrocarbon odour which may vary in strength from weak (just detectable) to very strong (easily detectable at a distance from the source).</p> <p>The odour may or may not be accompanied by specific areas of dark staining (black-grey) or larger scale discolouration of strata from a previously identified 'natural colour' e.g. staining of orange and brown clay to dark grey and green.</p> <p>May also be visible as a distinct coloured sheen on water within an excavation.</p>
Other unusual odours	<ul style="list-style-type: none"> • Solvent/acetone odour • Acidic (Acetic/Formic/Citric) odour • Alcohol odour • Ammonia odour • Caustic odour • Sulfur (rotten egg) odour

Phase 2 Environmental Site Assessment (Douglas Partners, 2019) and Auditor Review Letter (Senversa, 2019)

Douglas Partners (DP) conducted a Detailed Contamination Site Investigation (DSI) in 2019 on behalf of Lendlease. This DSI was prepared to support the Section 96 Modification for the existing demolition approval (SSD-9249-Mod-2).

The DP DSI concluded the following with regards to site suitability:

"On the basis of the results outlined in this report, the site is considered suitable for its proposed continued use as a sporting stadium without the requirement for remediation, proved that unexpected finds are managed appropriately during the construction phase of the project. The USTs present in the eastern portion of the site will continue to be used post-development and therefore it is recommend that they are managed in accordance with the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014."

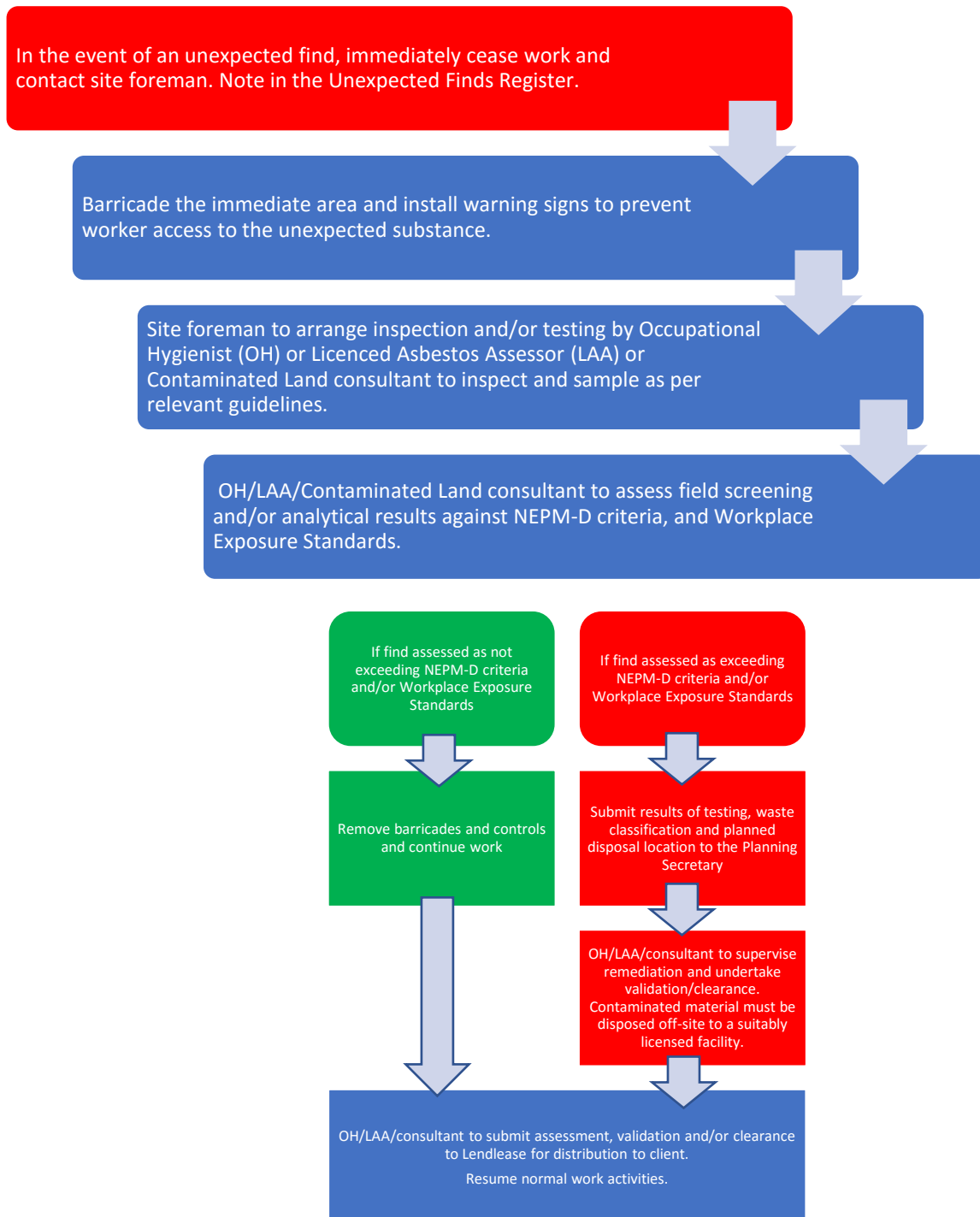
Jason Clay (Auditor) from Senversa was engaged by Lendlease to undertake a review of the DP DSI against the requirements specified in the *Guidelines for the NSW Site Auditor Scheme (3rd edition)* (NSW EPA, 2017) and the *Guidelines for Consultants Reporting on Contaminated Sites* (NSW Office of Environment and Heritage, 2011).

The Auditor review letter concluded the following with respect to unexpected finds:

"The Auditor recommends: A CEMP is developed for the construction phase of the development and must set out clear protocols for unexpected finds encountered."

Unexpected Finds Process

The following process outlines the requirements in the event of unexpected finds occurring on site. The aim of the procedure is to minimise the risk of potential exposure to hazardous substances and limit the disturbance of such substances. Workers should be inducted into the unexpected finds procedure and encouraged to notify the Lendlease project manager or site foreman in the event that unexpected finds are encountered.



Note the development consent requirement in Condition B7 that testing results and disposal location must be submitted to the Planning Secretary prior to removal off site.