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NSW EPA Site Audit Report Rushes Creek Poultry Production Farm AL005

Prepared for ProTen Pty Ltd

March 2022



Document Control

Client	ProTen Pty Ltd	
Project	Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 Site Audit Report AL005	
Report Issue	Date	Author
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Executive Summary

Table E- 1 Summary of Audit Report

	Item	Detail
Audit Information	Auditor	Amanda Lee
	Auditor account number	1504
	Date EPA notified of audit	10/08/2021
	Site Audit Reference:	AL005
	Type of Audit	Statutory
	Nature of statutory requirements	SSD-7704-Mod 1 Development Consent under Section 4.38 of the EP&A Act 1979
	Purpose of site audit	To determine land use suitability
	Date of auditor engagement	10/08/2021
	Completion date of the audit	9/03/2022
	Reason for audit	Requirement of SSD-7704-Mod 1, Condition B50, B50A, B52A, B52B
	Conflict of interest	Refer to Appendix A
	Name of person requesting audit	Bill Williams – ProTen Pty Ltd
	Consultant undertaking site investigations/ remediation	SLR Consulting Australia Pty Ltd
Site Information	Name of site owner	ProTen Pty Ltd
	Site/premises name	Rushes Creek Poultry Production Farm
	Address	Rushes Creek Road, Rushes Creek, NSW 2346
	Local Government Area	Tamworth Regional Council
	Current zoning	RU1: Primary Production
	Site area (m ²)	700 m ²
	Lot number	Part Lot 62 DP1276824
	Historical land use	Livestock farming
	Current land use	Agricultural land use
Proposed land use	Residential with accessible soil, including garden (minimal home-grown produce 10%).	
Audit Outcomes	Outcome of environmental audit report	The site is suitable for residential land
	Land use suitability	Residential land use, subject to implementation of the LTEMP SLR 2021h (610.30237.00000-R04).
	Environmental Management Plan (EMP)	Long Term Environmental Management Plan, Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW, Document Reference 610.30237.00000-R04, SLR Consulting Australia (2021h).



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- Appendix B: EPA Site Audit Notification
- Appendix C: SAGE Site Audit Memos
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- Appendix F: Figures by others
- Appendix G: Post-Remediation Photographs
- Appendix H: Long-term Environmental Management Plan (SLR, 2021h)



1. Introduction

SAGE Environmental Services Pty Ltd (SAGE) were engaged by ProTen Pty Ltd (ProTen), to provide statutory contaminated land site auditor services for the State Significant Development (SSD 7704), located at Rashes Creek Road, Rashes Creek, NSW 2346. Site Auditor services are required as per sections B50, B50A, B52A and B52B of the SSD 7704-Mod 1 development consent conditions issued under Section 4.38 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This report has been prepared in accordance with the *Contaminated Land Management Act 1997* (CLM Act), and other relevant guidelines set out in **Section 1.2**. Its purpose is to confirm that remedial works have been completed in accordance with the site's Remedial Action Plan (RAP) (SLR, 2021a), and to assess land use suitability. The area subject to the audit is approximately 700m², part of Lot 62 DP1276824 (**Figure 1, Appendix F, SLR Figure 2**) (the Audit site). When the audit commenced on the 10 August 2021, the original Lot/DP for the site subject to audit was Lot 165, DP752169. This was prior to ProTen completing a consolidation of pre-existing lots in September 2021, where Lot 165 DP752169 was renamed Lot 62 DP1276824.

The Site Auditor appointed is Amanda Lee, of SAGE, Site Auditor 1504.

After commencement of the Site Audit, SAGE was approached by ProTen to undertake separate water resource and supply works on the remainder of the site. A separate SAGE team were identified, and legal advice was sought as to whether the works would present a conflict of interest (**Appendix A**). The Auditor considers that there is no conflict as the works were not related to contamination at the subject site, and separate teams were established to complete the Site Audit (Anika Fechner-Head Thomas Lancaster, Angela Ruthenberg) and water management plan (Angus McFarlane and Braiya White).

EME Advisory are project managing the development site, and have been the point of contact for SAGE during the Audit process.

1.1. Scope of audit

The Audit comprised of the following scope of works:

1. Issuing the Site Audit Notification (SAN) to the NSW EPA, within 7 days of engagement as Site Auditor. SAGE was engaged in this role on the 10th of August 2021, and the SAN was issued on the same day by Amanda Lee (**Appendix B**) NSW EPA Reference DOC21/716966.
2. Project initiation meeting with the environmental consultant SLR Consulting Australia Pty Ltd (SLR), EME Advisory (EME) and the Site Auditor carried out on the 10th of August 2021.
3. Review of historical Detailed Site Investigation Report (SLR, 2019) and Revised Remediation Action Plan (SLR, 2021a) and issue of interim Site Auditor Advice in the form of Site Audit Memos (SAMs) outlined in **Section 3.2** of this report (SAM02 and SAM03) and provided in **Appendix C**.
4. Review of remediation contractor documentation including unexpected finds protocols (SLR, 2021b) and issue of interim Site Auditor Advice (SAM01) (**Appendix C**).



5. Site visit during remediation/validation stages of the project, attended by Angela Ruthenberg (NSW EPA Site Auditor's Representative) and Anika Fechner-Head on the 21st of September 2021 (SAM04) (**Appendix D**).
6. Review of SLR's Site Validation Report (SLR, 2021f) and preparation of Interim Audit Advice, outlined in SAM07 (**Appendix C**).
7. Site visit at the completion of remedial works and inspection of final capping surface, attended by Site Auditor, Amanda Lee on the 2nd of November 2021 (**Appendix D**).
8. Review of Long-Term Environmental Management Plan (LTEMP) (SLR, 2021h), described in SAM08 (**Appendix C**).
9. Issue of Site Audit Report (this document) and Site Audit Statement.

1.2. Applicable Legislation, Regulations and Guidelines

When determining the adequacy of the remediation of the site for its proposed land use, various legislation was taken into consideration and complied with. This included:

- *Contaminated Land Management Act 1997 (CLM Act)*
- *Contaminated Land Management – Guidelines for the NSW Site Auditor Scheme, 3rd Edition, 2017*
- *Contaminated Land Management Regulation 2013 (CLM Regulation)*
- Department of Urban Affairs and Planning and Environment Protection Authority, 1998. *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land*. April 1999.
- *Environmental Planning and Assessment Act 1979*
- *NSW Agriculture - Guidelines for the Assessment and Clean-up of Cattle Tick Dip Sites for Residential Purposes 1996*
- *Protection of the Environment Operations Act 1997 (POEO Act)*
- *National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended 2013) (NEPM)*
- *State Environment Planning Policy No 55 2018 (SEPP 55)*



2. Site Setting

2.1. Background

The audit site relates to an area of 700m², which forms part of Lot 62 on DP1276824, (**Figure 1 and Appendix F, SLR Figure 2**) located on agricultural land, historically used for sheep and cow grazing. The site is surrounded by agricultural land, with a number of farm sheds and buildings located within a 200m radius of the site. The site is bounded by Rushes Creek Road to the east, and the wider ProTen development site to the west and south. There is an existing farm residential house approximately 150 m from the site to the south-east.

The audit site was not occupied and was not used for agricultural purposes at the time of the investigation and remedial works. During post remedial and validation works, the site was enclosed within a designated fenced area (**Appendix G**) further limiting the potential agricultural use of the land.

The site included an abandoned sheep holding shed, which was demolished during the remedial works at the site completed by SLR in 2021. At the time of the remedial works, the site was grassed with the exception of areas where historical test pitting had occurred. There was also a large tree within the cap extent which was removed as part of the remedial works. In addition, there was timber from the demolition of the holding pens and other fencing contained within the site audit area.

ProTen have been granted consent to develop an area which includes the site and surrounding land with four individual poultry farms, eight new residential houses, and various other support/ servicing infrastructure items. The development conditions SSD-7704 were executed by the Department of Planning on the 14 April 2020, and on 15 June 2021 the ProTen Development was granted development consent.

The NSW Department of Planning and Environment (DPIE) approved the original SLR RAP prepared in 2019 in April 2020 under SSD 7704. The original RAP outlined off-site disposal for the contaminated soil excavated from within the footprint of the former sheep dip site to landfill. The remedial approach was changed to an on-site capping solution and SLR revised the RAP (SLR, 2021a) which was approved by the NSW DPIE in SSD7704-Mod1. In addition to this modification, the requirement for engagement of an NSW EPA contaminated land Auditor was also added to the consent conditions for the site.

This Statutory Audit covers an area of approximately 700 m² within Lot 62, DP1276824 (the site). In February 2019, SLR conducted a Detailed Site Investigation (DSI) of this area and identified a formerly abandoned sheep dip (SLR, 2019). This investigation identified that arsenic was present in soil at levels above the health investigation level (HIL) for standard residential with accessible soil (HIL-A) ASC NEPM (amended 2013).

Full report references for documents supplied to SAGE in conducting this audit are contained in **Section 3.1**.



2.2. Site Information

Table 1 Site details

Item	Detail
Site Name	Rushes Creek Road Poultry Production Farm
Address	Rushes Creek Road, Rushes Creek, NSW 2346
Lot/DP	Lot 62 DP 1276824
Local Government Area	Tamworth Regional Council
Current Zoning	RU1: Primary Production
Current Site Use	Agricultural land use, the site is capped and secured
Surrounding Land Use	Agricultural.
Site area m ²	Approximately 700 m ²

2.3. Site History

The title for the ProTen Development indicates that ownership records were either farmer or grazier or it was allocated for Crown Road which was subsequently closed (SLR, 2018a).

The existing residential property, 'Bundah', has been owned by Ray Doyle since 1965. Bundah includes Lot 62 of DP1276824, in which the site is located. Prior to 1965, farmer and grazier Theodore George Tomlinson owned the property.

SLR (2018a) reported that from a review of aerial photography, the site has been used for rural grazing since 1961. Over the years, the property has been used for raising sheep, pigs and cattle and growing wheat.

SLR (2018a) conducted a site walkover in the area surrounding the audit site and inspected the surrounding sheds and workshops to the east. From this they concluded there was "no evidence of wastes being stored in an uncontrolled manner", nor was there evidence of significant or widespread chemical storage. The sheds and workshops were constructed from timber and iron.

A search conducted of the NSW EPA public register of contaminated sites notified under Section 60 of the CLM Act did not identify any records for the site or for land immediately adjacent to the site (SLR, 2018a).

SLR (2018a) identified the sheep yard and former sheep dip area during the Stage 1 Preliminary Site Investigation as an area of environmental concern.

SLR (2018a) reported that the sheep dip had not been used during the 53 years that Ray Doyle had owned the property. The exact location of the sheep dip was not known until the additional works were conducted as part of the remediation and validation works (SLR, 2022). The suspected location of the sheep dip during the Preliminary Site Investigation was incorrect, and the location was found to be immediately adjacent to the former sheep holding shed in the eastern portion of the audit site which was demolished as part of the remedial works (SLR, 2022).

ProTen took ownership of the property sometime between 2016- 2017.

The site which is subject to the Audit is illustrated on **Figure 1** and **Appendix F, SLR Figure 2**.

2.4. Topography

The area subject to audit was relatively flat and level with a slight slope towards the west of the site. SLR (2018a) reported that the elevations ranged between 325 meters Australian Height Datum (AHD) and 410 mAHD.



2.5. Geology

Based on the information provided in SLR (2018a) the site is predominantly characterised by the Carboniferous Namoi Formation. The Carboniferous Tacumba Sandstone is the primary surficial geology with residual eluvial deposits also present at the surface (SLR, 2018a, NSW Government Manilla 1:100,000 Geological Sheet 9036, (Brown et al. 2008)). The site is likely to be underlain by Upper Devonian Mandowa Mudstone which outcrops in areas across the site. This geology provides the site with a combination of thinly bedded and laminated mudstones and siltstones, and coarse, calcareous sandstones with the presence of some conglomerate.

The surface soils encountered at the site during the investigations (SLR, 2019) comprised of:

- Topsoil: Dark brown loam topsoil was generally encountered from surface to approximately 0.1 m in depth. The topsoil was generally described to be soft, dry, with low plasticity, and with vegetation present at the surface.
- Silty Clay: From depths of 0.1 m to 0.7 m, silty clay soil was present and can be generally described as brown to reddish brown, soft, dry, with low plasticity, with presence of angular to sub-angular shale (10-30 mm) at lower depths (0.5-0.7 m).
- Shale: From depths of 0.6 m to 1.3 m angular to sub-angular shale (20-50 mm) was observed. It is noted that excavator refusal was typically encountered at depths of 0.9 m to 1.3 m due to very stiff shale.

2.6. Groundwater

Groundwater at the site is described as a fractured rock system and is stored and transported through the more permeable fractures as opposed to the rock mass itself. The site is also relatively flat and has an elevation of approximately 373-374 mAHD (SLR, 2018a).

There are five registered groundwater bores for agricultural (stock use) within 700 m of the audit site. **Table 2** summarises the available information of these bores, including their approximate distances from the audit site.

Groundwater is expected to occur greater than nine meters below ground level (mbgl) based on the registered groundwater bores in proximity to the audit site (SLR, 2018a).

Table 2 Existing Groundwater Bores surrounding the audit site

Site Id	Easting	Northing	Depth of bore (mbgl)	Date constructed	Use	SWL (mbgl)	Approx. Distance from audit site (m)
GW009093	270877	6588960	8.5	unknown	unknown	-	630
GW011498	270381	6588549	24.4	1/01/1954	Stock	-	170
GW038206	270877	6588960	12.8	unknown	Stock	-	630
GW967028	269648	6588995	55	14/03/2005	Stock	17.3	560
GW967889	270236	6588462	67	17/01/2007	Stock/ domestic	14	30



2.7. Surface Water

According to the site's DSI (SLR, 2019), the closest surface water features are:

- Rushes Creek, approximately 614m to the east.
- Lake Keepit, approximately 3.1km to the west.
- Namoi River, approximately 3.7km to the west and 2.3km to the north.

2.8. Identified Receptors

The audit site is currently zoned RU1, in which under the Tamworth Regional Local Environment Plan (21 January 2011), the following land use is permitted without consent:

- Environmental protection works
- Extensive agriculture
- Forestry
- Home based childcare
- Home occupation
- Moorings
- Roads

Based on the above classifications, the most sensitive land use is residential or home-based childcare. Therefore, identified receptors would include residents (including children) and farm workers.

The site is located within a rural setting, given the distance to the nearest water receiving environments listed in **Section 2.7**, it is considered unlikely the localised contamination present at the audit site would migrate to these water bodies.

The ProTen Development area is being developed for the purpose of operating as a commercial poultry farm.

The environmental setting is largely agricultural and therefore the site would have land based terrestrial receptors who may be present on the audit site and surrounds.

2.9. Potential Exposure Pathways

The identified contamination present at the audit site included arsenic and pesticides which are not volatile in nature. Therefore, potential exposure pathways are from direct contact (dermal and ingestion) with soils, or inhalation of particulates from dust.

Potential exposure pathways for ecological receptors include direct contact with soil, and ingestion of soil attached to vegetation which may be consumed surrounding the site.

2.10. Historical Contamination Investigations

SAGE understands that there have been no prior contamination investigations carried out at the site, apart from those subject to this audit as detailed in **Section 3.1**.



3. Documents and Information

3.1. Documents Considered in the Audit

The following documents have been provided to SAGE, for consideration in the Audit. SAGE notes the documents are listed in chronological order.

1. SLR Consulting Australia Pty Ltd, 2018. *Stage 1 Preliminary Site Investigation: Proposed Poultry Production Farm, Rashes Creek Road, Rashes Creek, NSW*, prepared for ProTen Tamworth Pty Ltd, July 2018, (SLR Ref: 610.16117.00400-R01-v0.2.docx) (SLR, 2018a).
2. SLR Consulting Australia Pty Ltd, 2019. *Detailed Site Investigation- Proposed Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW*, prepared for ProTen Tamworth Pty Ltd, February 2019, (SLR Ref: 610.18456-R01.v1.2.docx) (SLR, 2019).
3. NSW Government, Department of Planning, Industry and Environment, 2020. *Consolidated Consent: Development Consent, SSD 7704*, April 2020 (NSW DPIE, 2020).
4. SLR Consulting Australia Pty Ltd, 2021. *Revised Remedial Action Plan Proposed Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW*, prepared for ProTen Tamworth Pty Ltd, April 2021, (SLR Ref: 610.30237.00000-R01-v2.1-20210422.docx) (SLR, 2021a).
5. EME Advisory, 2021. *Rashes Creek Poultry Production Farm SSD 7704, Section 4.55(1A): Modification Report*, prepared for ProTen Tamworth Pty Ltd, May 2021 (EME, 2021a).
6. EME Advisory, 2021. *Rashes Creek Poultry Production Farm Development Consent SSD 7704 Stage 1: Construction Environmental Management Plan*, prepared for ProTen Tamworth Pty Ltd, v2, August 2021 (EME, 2021b).
7. SLR Consulting Australia Pty Ltd, 2021. *Unexpected Finds Procedure – Contamination Rashes Creek Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW*, 19 August 2021, (SLR Ref: 610.30237.00000-L01-v1.2-20210819.docx) (SLR, 2021b).
8. SLR Consulting Australia Pty Ltd, 2021. *610.30237_Rashes Creek DSI_RAP Auditor comments and SLR response*, [Excel Spreadsheet], September 2021 (SLR, 2021c).
9. SLR Consulting Australia Pty Ltd, 2021. *Memorandum 01 - Audit Comments Rashes Creek DSI and RAP*, 6 September 2021, (SLR Ref: 610.30237.00000-M01-v0.1-20210906.docx) (SLR, 2021d).
10. SLR Consulting Australia Pty Ltd, 2021. *Memorandum 02 - Proposed Asbestos Unexpected Find Capping Rashes Creek*, 27 September 2021, (SLR Ref: 610.30237.00000-M02-v0.1-20210927.docx) (SLR, 2021e).
11. Lance Ryan Consulting Engineers Pty Ltd (LRCE) Soil and Erosion Control Plan, Project 21W023, Drawing No: C19, Revision 1.
12. Email correspondence from SLR (Hugh Selby) to Site Auditor (Amanda Lee) on the 27 September 2021 outlining unexpected find protocol for asbestos detection at the wider site and plan to include within the CAP extent (**Appendix E**).



13. SLR Consulting Australia Pty Ltd, 2021. *Interim Site Remediation and Validation Report*, prepared for ProTen Pty Ltd, 20 October 2021, (SLR Ref: 610.30237.00000-R02-v1.0-20211020.docx) (SLR, 2021f).
14. SLR Consulting Australia Pty Ltd, 2021. *610.30237_Rashes Creek LTEMPT Auditor comments and SLR response*, [Excel Spreadsheet], December 2021 (SLR, 2021g).
15. Bath Stewart Associates (BSA), 2021. *Sheep Dip Remediation Area Fence Co-ordinates: 1582 Rashes Creek Rd, Rashes Creek*, [Drawing], prepared for ProTen Pty Ltd, 8 December 2021. (BSA, 2021).
16. SLR Consulting Australia Pty Ltd, 2021. *Long Term Environmental Management Plan Rashes Creek Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW*, prepared for ProTen Pty Ltd, 23 December 2021, (SLR Ref No: 610.30237.00000-R04-v1.0-20211223.docx) (SLR, 2021h).
17. SLR Consulting Australia Pty Ltd, 2022. *Site Remediation and Validation Report Rashes Creek Poultry Production Farm, Rashes Creek Road, Rashes Creek, NSW 2346*, prepared for ProTen Pty Ltd, 16 February 2022, (SLR Ref No: 610.30237.00000-R02-v2.0-20220216.docx) (SLR, 2022).

In addition, the following documents were publicly available:

1. SLR Consulting Australia Pty Ltd, 2018. *Rashes Creek Poultry Production Farm: SSD 7704 – Environmental Impact Statement*, Vol 1, prepared for ProTen Tamworth Pty Ltd, August 2018 (SLR, 2018b).

3.2. Documents provided by the Auditor to the client

1. SAGE Environmental Services Pty Ltd, 2021. *Interim NSW EPA Auditor advice, review of Unexpected Finds Procedure - Contamination, Rashes Creek Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW (SSD-7704)*, prepared for ProTen Pty Ltd, 19 August 2021 (SAM01).
2. SAGE Environmental Services Pty Ltd, 2021. *Interim NSW EPA Auditor advice, review of Detailed Site Investigation - Proposed Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW (SLR Ref: 610.18456-R01.v1.2.docx) (SSD-7704)*, prepared for ProTen Pty Ltd, 16 September 2021 (SAM02).
3. SAGE Environmental Services Pty Ltd, 2021. *Interim NSW EPA Auditor advice, review of Revised Remedial Action Plan - Proposed Poultry Production Farm Rashes Creek Road, Rashes Creek, NSW (SLR Ref: 610.30237.00000-R01.v2.1-20210422.docx) (SSD-7704)*, prepared for ProTen Pty Ltd, 16 September 2021 (SAM03).
4. SAGE Environmental Services Pty Ltd, 2021. *Site Visit Record: ProTen Rashes Creek Poultry Production Farm Rashes Creek Road*, 21 September 2021 (Doc Ref: SAM04).
5. SAGE Environmental Services Pty Ltd, 2021, *Site Visit Record: ProTen Rashes Creek Poultry Production Farm, Rashes Creek Road*, 2 November 2021 (Doc Ref: SAM06)
6. SAGE Environmental Services Pty Ltd, 2021. *Review of Long-Term Environmental Management Plan - Rashes Creek Poultry Production Farm, Rashes Creek Road, Rashes Creek, NSW 2346 (23/12/2021) (SLR Ref: 610.30237.00000-R04.v1.0-20211223.docx)*, prepared for ProTen Pty Ltd, 14 January 2022 (Doc Ref SAM08).



7. SAGE Environmental Services Pty Ltd, 2021. *Review of Site Remediation and Validation Report - Rashes Creek Poultry Production Farm, Rashes Creek Road, Rashes Creek, NSW 2346 (16/02/2022) (SLR Ref: 610.30237.00000-R02.v2.0-20220216.docx)*, prepared for ProTen Pty Ltd, 17 February 2022 (Doc Ref SAM07).

For clarification, the nomenclature used in the above documents was not consistent. Some SAMs are not in chronological (date) order, for example Review of Site Remediation and Validation Report (SAM07), and Review of Long-Term Environmental Management Plan (SAM08) due to the timing in which the Auditor received the documents.

Additionally, separate SAM identification references were generated for the same document in error (SAM05). This was constrained to the two review cycles of Revised Remedial Action Plan, and as such there is no SAM05 in the Audit documentation. These issues were later picked up in an internal quality control audit.



4. Conceptual Site Model and Contamination Extent

4.1. Contaminants of potential concern

The contaminants of potential concern (COPC) were initially identified as those associated with former sheep dip sites (Department of Urban Affairs and Planning, 1998)):

- Organochlorine and organophosphorus pesticides (OCP/OPP);
- Triazine pesticides, carbamate pesticides, and synthetic pyrethroids; and
- Arsenic, Cadmium, Chromium (total), Copper, Lead, Mercury, Nickel and Zinc.

Throughout the course of the remedial works the unexpected finds protocol (see **Section 4.3**) was enacted, and the following additional COPC were identified:

- Total recoverable hydrocarbons (TRH);
- Benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN);
- Organochlorine Pesticides (OCP)/ Organophosphorus Pesticides (OPP); and
- Asbestos.

4.2. Contamination extent

SLR (2019) conducted test pitting across the site in two stages; the initial stage comprised of four test pits, with a secondary stage comprising of 17 test pits. Of the test pits, all four samples were analysed from the initial stage and seven of the seventeen test pits were analysed for the COPC identified in **Section 4.1** in relation to (Department of Urban Affairs and Planning, 1998)

The analysis did not report any concentrations of OCP/OPP, triazine pesticides, carbamate pesticides or synthetic pyrethroids above the laboratory limit of reporting with the exception of TP06_0.2 (analysed 6 December 2018) which reported a-BHC just above the laboratory limit of reporting of 0.05 mg/kg of 0.06 mg/kg.

The concentrations of metals were all below the ASC NEPM (amended 2013) residential with garden access health investigation levels HIL-A.

The ranges of arsenic contamination ranged from 14 mg/kg to 2,600 mg/kg. The contamination extent was not delineated and as such, additional delineation works were conducted during the remediation action plan (RAP) works (2021).

Additional delineation works were conducted by SLR (2022), which included three test pits to the east of the former sheep dip (TP101-103) and within the former shed footprint and two test pits extending west (TP104 and TP105) (refer to **Appendix F, SLR Figure 5**). The additional locations were only tested for arsenic. There was arsenic reported above the HIL-A (ASC NEPM amended 2013) value at TP101 which is within the proposed cap extent. The extent of arsenic impacts below the HIL-A (ASC NEPM amended 2013) value have been delineated to the east and west of the former sheep dip.

In addition, five test pits were conducted outside of the proposed cap extent and 15 soil samples were taken for analysis for arsenic. All locations reported arsenic concentrations below the HIL-A (ASC NEPM amended 2013), delineating the cap extent to the north and south.



The Auditor noted that there was a potential for reworked soils, or for arsenic contamination to extend across the area from placement of slurry from the former sheep dip as it was maintained to ensure complete submersion of the sheep as they ran through the dip. Sedimentation would occur as sheep entered the dip and would likely have had to be removed on a regular basis. However, in light of the proposed remedial strategy discussed in **Section 5**, it is considered that any potential re-worked materials would be captured by the current cap extent.

4.3. Unexpected Finds

In association with the ProTen Development works, potential asbestos containing material (ACM) was found within the proposed detention dam area (LRCE, 2021). The area where asbestos was identified was 10 m by 10 m, approximately 300 m to the west of the audit site. The estimated volume of this material was 130 m³.

SLR (2021e) reported that the area in which the potential ACM was identified was validated by collection of one sample from the floor and one from each wall of the excavations. The potential ACM material was transported to the audit site for classification. One sample of ACM was proposed to be collected, however the Auditor requested that an additional sample be submitted for analysis (**Appendix E**).

There were five samples submitted to the laboratory for analysis of metals, TRH and BTEXN. Two suspected fragments of ACM from the stockpiled material were also submitted to the laboratory for analysis. Both of the fragments reported positive results for asbestos (chrysotile). The results for metals, TRH and BTEXN were below the limit of reporting or the HIL-A and HSL values (for all soil types) (ASC NEPM amended 2013).

The Auditor requested that the validation report for the site include the additional analytes and adopted remedial goals detail as these were not identified as contaminants of potential concern within the audit site.

The stockpiled material remained at the audit site to be included within the capped extent.

4.4. Aesthetics

The Auditors representatives noted during the site inspection on 21 September 2021 that there were timber materials from the demolition of the sheep holding pens stockpiled within the centre of the capped extent.

The Auditor sought clarification on to the treatment of these piles before placement under the cap. If un-treated these materials may cause a depression of the cap and therefore potentially cause cracking and preferential pathways for water ingress.

SLR on the 19 October 2021 confirmed by email (**Appendix E**) that the timber would be spread across the cap extent and compacted with an excavator into the existing soil at the site.

4.5. Groundwater

A total of five groundwater bores/wells were identified within 700m of the Audit site. Testing for arsenic at the five operational bores were all below the limit of reporting, which is identified as 0.001 mg/L. Groundwater from the two closest groundwater bores (GW011498 and GW967889) is present at depths greater than 9 mbgl (mbgl), which is significantly deeper than the maximum depth of 1.6 mbgl used in testing.



The presence of clay rich soils, coupled with the relative distance between nearby boreholes and the site, meant that groundwater was not assessed further, as the arsenic contamination was likely localised close to the site (SLR, 2019; SLR, 2018b).

4.6. Sediment

There were no sediment materials identified or sampled as part of the audit site.

4.7. Hazardous Ground Gas

Hazardous ground gases are not applicable to this site, as the primary COPC were arsenic and asbestos, which are not volatile. Chemicals used in dip sites are typically liquids and are not known to produce hazardous ground gas according to the Guidelines for the Assessment and Clean-up of Cattle Tick Dip Sites for Residential Purposes (NSW Agriculture, 1996).

4.8. Capping Materials

Potential capping materials were identified from the wider site. Two samples were collected by Tamworth Precision Excavations (TPE) from shed 18-1 at 0.6-0.9 m and shed 12-2 0-0.3 m. on the 7 September 2021. The samples were tested by Trilab for permeability and density on the 17 September 2021.

The permeability results reported for sample 18-1 4.7×10^{-10} (m/sec) and sample 12-2 2.0×10^{-10} (m/sec), indicating low conductivities.

The capping material was sourced from a cutting at the southern end of the proposed farm 2 as illustrated in **Appendix F, SLR Figure 2**.

4.9. Conceptual Site Model

The DSI did not contain a complete conceptual site model (CSM), which includes receptors, pathways, and details if they are potentially complete or not. After the Auditor identified this data gap (refer to SAM02, **Appendix C**), a CSM was provided in Table 7-1 of the Site Remediation and Validation Report (SLR, 2022).

Prior to remediation works, potentially complete exposure pathways included onsite residents and workers from incidental contact with soils (dermal and ingestion) and via inhalation of dust.

The environmental setting is such that there is no connection between the site and the offsite water receiving environments. Therefore, the contamination present in the former sheep dip area which is subject to this audit is a complete exposure pathway for terrestrial receptors.

The discussion of the revised CSM following from remediation is detailed in **Section 6.2**.

4.10. Data Quality Objectives

The Site Auditor provided interim advice on the adequacy of the DSI report (SLR, 2019) and RAP (SLR, 2021a) in SAM02 and SAM03 respectively (**Appendix C**). The Auditor notes while comments were provided on SLR 2019 and SLR 2021a, these documents were finalised and accepted as part of the SS7704-Mod1 approval prior to the Auditor engagement on the audit site. It is necessary to note that as these documents were prepared prior to Auditor engagement and were already approved by the planning instrument for the wider site (NSW DPIE), the aim of the Auditor advice was to ensure that it



was clear what expectations and inclusions were required in any future reports generated for the site.

SLR (2022) outlined Data Quality Objectives (DQOs) for the RAP and validation works. The DQO's followed the seven-step process with the identification of the problem being the elevated concentrations of arsenic across the audit site. It is noted that the DQOs were specific to the COPC identified prior to the unexpected finds protocol being executed.

The DQO process outlined key Data Quality Indicators (DQIs). The Auditor notes that the DQIs have been met with the exception of:

- The SLR validation report noted that trip blanks were reported less than the laboratory limit of reporting. The Auditor notes that no trip blank samples were analysed for the site. This is presented in Table E1, Summary of Data Quality Indicators, Acceptance and Comment SLR (2022).
- Eurofins (primary laboratory) received samples which were not appropriately preserved. It is noted that this was the rinsate blank samples collected on the 21/09/2021 RB101 and RB201, which required acid preservation. Given that the samples were rinsate blanks, it is not considered as critical as there shouldn't be significant concentrations above the laboratory limit of reporting within these samples as they are a measure of decontamination effectiveness.
- Table 2, QAQC Field Rinsate, Appendix E SLR (2022) has incorrectly labelled the rinsate sample RB201, as it is named on the laboratory chain of custody (COC) and laboratory report, Eurofins 826821.

The Auditor doesn't consider the omission of trip blank samples to be critical for this investigation as there was not grossly contaminated samples present at the site and the laboratory did not indicate that samples were not intact upon receipt.

4.11. Sampling Analysis and Quality Plan

The Auditor notes that a sampling, analysis and quality plan (SAQP) was included in SLR (2022), earlier reports do not appear to have been prepared in accordance with a dedicated SAQP.

4.12. QAQC

The Auditor notes in the validation sampling for the site including additional delineation to the east and west and to the north and south for cap extent, a total of 18 primary additional delineation samples were collected from the Audit site with two field duplicate samples analysed by Eurofins and two field triplicate samples analysed by ALS.

This frequency meets with the requirements of the NEPM (amended 2013). In addition, two rinsate samples RB101 and RB201 were collected as part of this program for arsenic only. SLR have not indicated how the rinsate samples were collected, however, the Auditor notes that the results are less than the laboratory limit of reporting for arsenic. Given that the contaminant of concern within the soils at the site is limited to arsenic, the Auditor can accept the limited analytical suite for testing.

For the analysis of the stockpile as a result of the unexpected find of ACM, six primary samples were analysed and two fragments for asbestos. The chain of custody indicates that sample SP_ACM02 was on hold, however, following on from correspondence between the Auditor and SLR this additional sample was analysed. There were no quality control samples



taken as part of this program. The auditor considers overall the quality assurance and quality control samples met with the ASC NEPM requirements with a total of 24 primary samples, two field duplicates and two field triplicates and two rinsate samples. It is considered however that the quality control samples were biased to the field event captured on the 21 September 2021. Despite this, as the SLR staff collecting the samples was consistent between both programs, the Auditor is comfortable that the same sampling protocols were adopted.



5. Site Remediation

5.1. Notification

Table 1 of EME (2021a) illustrates the Government Agency Consultation in which on the 2 March 2021, the NSW EPA were consulted via a phone call about the revised RAP approach (as applicable to this Audit). The EPA were provided with a copy of the RAP and correspondence with other government agencies such as NSW Department of Planning, Industry and Environment (DPIE).

The NSW DPIE indicated on the 8 March 2021 that as the RAP was requiring modification, the DA consent conditions required modification so SSD 7704 was modified to SSD 7704-1.

Consolidated consent was issued on the 15 June 2021.

When the audit commenced on the 10 August 2021, the original Lot/DP for the site subject to audit was Lot 165, DP752169. This was prior to ProTen completing a consolidation of pre-existing lots in September 2021, where Lot 165 DP752169 was renamed Lot 62 DP1276824.

Tamworth Regional Council has been notified of remedial works which have occurred at the Audit site, and have noted the requirement for the LTEMP to be placed on the land title certificates.

5.2. Remedial Approach

The SLR RAP (2021a) outlined a capping approach and containment onsite of the arsenic contaminated materials. The cap was constructed with a minimum 5% grade to ensure surface water runoff.

The cap also contained timber material identified during the site inspection on the 21 September 2021. This material was spread across the cap extent and crushed and pressed into the soil surface to compact the material. The stockpiled soils and the soils from the unexpected finds were spread within the capping area. The cap contains an ACM marker layer on top of this material. On top of the ACM marker layer, low permeability compacted clay was placed with a minimum thickness of 0.3 m.

A HILF density ratio test was conducted to validate the compaction of the compacted clay. SLR (2022) reported that the HILF density ration of 96.5% and 98% was reported.

A topsoil layer was placed over the low permeability compacted clay. The topsoil was sourced from onsite and was placed over a minimum thickness of 0.2 m thick.

The Auditor completed a site inspection of the finished cap surface on the 2nd November 2021. The cap was noted to be in good condition, no cracking and no visible ACM at the surface.

The Auditor notes within SLR (2022), the cap is now seeded and has grass growing across the surface. The area is fenced with asbestos notification signage (**Appendix G**).

The site is subject to a long-term environmental management plan (LTEMP) (SLR, 2021h) (**Appendix H**).



5.3. Assessment of Validation Criteria

The Auditor was engaged on the 10 August 2021, after the RAP had been approved by NSW DPIE. The RAP was final at the time of Auditor engagement and the Auditor provided a Site Audit Memo SAM03 detailing identified gaps in this document (**Appendix C**).

The Auditor noted that within the RAP (SLR 2021a) the adopted validation criteria for arsenic was the investigation levels presented within the ASC NEPM (amended 2013).

The Auditor outlined to the consultant that investigation levels are not intended as remediation criteria as they are conservative in nature. However, given the rural nature of the subject site, adoption of HIL-A (NEPM amended 2013) residential with 10% of homegrown produce may not be appropriately conservative.

The Auditor concluded that given the conservatism in the derivation of the HIL-A (NEPM amended 2013) guideline value balanced with the agricultural use of the site and the proposed remedial strategy for the site which included a cap, and a LTEMP, adoption of the HIL-A (NEPM amended 2013) guidelines would therefore be suitable for the purpose of assessing land use suitability. The Auditor notes that the site, whilst potentially meeting residential HIL A (NEPM amended 2013) guideline levels, would not be suitable for residential development due to the LTEMP (SLR 2021h) and for geo-technical reasons from the construction of the cap.

During the development of the wider site, the unexpected finds protocol was executed and approximately 130 m² of asbestos contaminated material was stockpiled on the Audit site for inclusion within the cap.

The Auditor requested that the remediation validation report (SLR, 2022) include validation criteria for the additional chemicals of potential concern which were tested for in this unexpected finds stockpile. This included TRH, BTEXN, metals and asbestos.

The adopted remedial goals by SLR for the additional analytes was the HIL-A (NEPM amended 2013) for:

- Arsenic (100 mg/kg)
- Cadmium (20 mg/kg)
- Total Chromium (100 mg/kg)
- Copper (6,000 mg/kg)
- Lead (300 mg/kg)
- Mercury (40 mg/kg)
- Nickel (400 mg/kg)
- Zinc (7,400 mg/kg)
- PAHS (total) (300mg/kg)
- Benzo(a)pyrene TEQ (3 mg/kg)
- Asbestos from ACM in soil (0.01%).

The Auditor notes that asbestos in soil was not tested for in the Site Audit area.

In addition, SLR (2022) note the adoption of the Health Screening Levels (HSLs) within the ASC NEPM (amended 2013) but don't specify which values have been adopted.



The Auditor notes, that the concentrations reported for BTEX, naphthalene and TRH were below the most conservative HSL A for sand type soils 0-1m (ASC NEPM amended 2013):

- Benzene (0.5 mg/kg)
- Toluene (160 mg/kg)
- Ethylbenzene (55 mg/kg)
- Xylene (40 mg/kg)
- Naphthalene (3 mg/kg)
- TRH C6-C9 (45 mg/kg)
- TRH C10-C16 (110 mg/kg)

Whilst the site post remediation may meet the remedial goals and be suitable for residential land use, it will be subject to a LTEMP (SLR 2021h) to ensure that the cap integrity is maintained.

5.4. Site Inspections during remediation

The Auditors assistant conducted a site inspection during the additional validation works during the remedial staging on the 21 September 2021. During the visit, the exact location of the former sheep dip and former sheep holding shed was not apparent as these features had been demolished prior to the inspection. There was a large stockpile of timber observed and metal (which was to be disposed of off-site).

The historical works conducted by SLR did not geo-reference the test pits therefore it was difficult to ascertain whilst on site the exact location of the former sheep dip. The excavation of two test pits were observed TP201 and TP101. The Auditors representative recommended that the location of TP101 be moved further to the east to ensure greater delineation of the extent of the former sheep dip. The Auditors representative also observed the general area of the site where the capping material was being sourced from.

Site inspection documentation is contained with **Appendix D**.

5.5. Site Inspections post remediation

Amanda Lee conducted a site inspection on the 2nd November 2021 following completion of the cap. A walk over of the entire cap extent did not indicate any cracking of the cap material. In addition, there was no evidence of materials within the cap being near surface. The Auditor confirmed that the cap would be seeded to reduce cracking and erosion.

There was discussion about the fencing off the site from the wider site area. The Auditor encouraged a wide enough space to ensure maintenance such as mowing could be conducted easily.

Site inspection documentation is contained within **Appendix D**.

SLR (2022) have provided photographs of the Audit Site post remediation, which are contained in **Appendix G**. These photos show the site is now fenced with asbestos signage and grass cover across the cap extent.



5.6. Waste Management and Disposal

The Auditor is not aware of any waste being generated as a result of the assessment, remediation or validation, and therefore off-site disposal is not considered to be relevant to this Audit.

5.7. Long term management plan

SLR (2021h) details the long-term management plan (LTEMP) for the audit site. The LTEMP will be implemented by ProTen. The LTEMP will be reviewed every three years and will be noted on the planning certificates for the site.

The LTEMP requires ProTen to ensure that all workers are advised of the LTEMP and site area. Should disturbance of the cap be required it will need to be undertaken under Class B asbestos conditions. The cap contains a marker layer under which the asbestos and arsenic contaminated material is contained.

In accordance with the LTEMP, direct access to the audit site will continue to be restricted by 1.2 m high wire fencing, which includes asbestos warning signs. It is noted access to the site requires induction into the LTEMP, with management controls for maintenance workers detailed in the LTEMP.

The cap is required to be inspected every 12 months to record the general condition of unsealed surfaces, the extent of grass cover (required to be >75%), any cracks to be repaired.

The Site Auditor has sighted correspondence from the Tamworth Regional Council on the 25 January and note the commitment for the LTEMP to be placed on land title certificates. It is also noted that it is a requirement of the consent condition B52C(b) of the SSD4404-Mod 1.

A copy of the LTEMP is in **Appendix H**.



6. Determining Land use Suitability

6.1. Chemical thresholds and contaminant criteria

The Auditor has reviewed the available data for the site and can confirm that the site, including the capped area, meets the requirements of HIL-A (NEPM amended 2013) guidelines, subject to compliance with the LEMP (SLR 2021h).

6.2. Risk Assessment

6.2.1. Human Health Risk Assessment

The conceptual site model for the Audit Site has been revised. The material contained within the cap no longer presents a complete exposure pathway for the identified human health receptors including residents, workers and visitors of the site, the ProTen Development Area or off-Site properties.

The site presents a low and acceptable risk to human health whilst the integrity of the cap is maintained. The cap and areas surrounding the cap are below the adopted remedial goals which for this site was the investigation levels for NEPM HIL-A land use.

A LTEMP exists for the site and details the requirements and management should intrusive investigations be required underneath the cap extent to minimise any potential exposure of contamination to the surrounding receptors.

6.2.2. Environmental Risk Assessment

The site presents a low and acceptable risk to the environment and ecological receptors which may be present on or surrounding the site. The presence of a compacted cap will reduce any infiltration of water to the contaminated soil (namely arsenic) and ability to leach to groundwater. The site is underlain by a confining clay layer which naturally reduces vertical migration from the site.

Whilst SLR did not compare the delineation of the cap extent samples tested for arsenic to ecological guidelines, the site would be considered to not be an area of ecological significance given its proposed use as an operational poultry farm. Whilst it doesn't fall within the definition of an urban residential and public open space, it is considered that a comparison between both EIL guidelines within the ASC NEPM (amended 2013) warrants discussion. The EIL for areas of ecological significance is 40 mg/kg and for urban residential and public open space it is 100 mg/kg. Both of these values are based on aged soils (at least two years) which is appropriate for the site. Statistically across the area just outside of the cap, the concentration for arsenic in soil is 69 mg/kg. The Auditor considers that given the site setting, this level falling between the two established guideline levels is acceptable based on the extent (small area) and nature of the use of the site. In addition, given the locality of the contamination to the immediate area outside of the cap, it presents a low and acceptable risk to any potential ecological receptors who may be present on the site.



6.3. Land-use suitability

The Auditor has determined the site is suitable for the allowable land uses within the current zoning, noting however that the land use is restricted as a result of the compliance with the requirements identified in the LTEMP (SLR, 2021h) **Appendix H**.



7. Conclusions

Amanda Lee, NSW EPA Site Auditor 1504, has completed the statutory site audit (AL005) on a portion of approximately 700m² of Lot 62, DP1276824, the location of a former historical sheep dip.

The Audit involved consideration of the proposed remedial approach for the site which included onsite containment beneath a constructed cap. The contaminants of concern were initially limited to arsenic in soils. However, as a result of wider site development being undertaken by ProTen, the unexpected finds protocol was executed and approximately 130m² of material was moved to the audit site which contained two positive asbestos containing fragments (confirmed to be chrysolite).

The contaminated soil and asbestos material is located within the cap extent under a marker layer. The cap extent was validated with eight samples collected from around the outside, with the concentrations of arsenic being below the adopted human health remediation goals adopted which were the residential HIL-A values presented within the ASC NEPM (amended 2013). In addition, the Auditor considered that the risk to ecological receptors was low and acceptable based on the likely extent of contamination outside the cap and the current proposed land use of the wider site development as a commercial poultry farm. The concentrations of arsenic in soil were reported below the urban residential and public open space EILs within the ASC NEPM (amended 2013).

The Auditor inspected the site on two occasions, once during the additional validation works as part of the remediation, and following completion of the remedial works.

The Auditor has been provided with photographic evidence of the completed fence surrounding the site with the asbestos notification. The site is subject to a LTEMP (SLR 2021h) which requires the cap to be maintained and inspected at 12 month intervals. In addition, any workers on site are required to be made aware of the area and the existing LTEMP. The Auditor has made themselves comfortable that the LTEMP is legally enforceable as it is a condition of SSD 7704-Mod 1 B52C (b), and stakeholder communications with the local council have occurred.

The Auditor considers the site is suitable for residential land use with accessible soil, including garden with home grown produce contributing less than 10% fruit and vegetable intake) excluding poultry subject to compliance with the LTEMP.



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9. Statement of Limitations

This report was prepared for the exclusive use and benefit of the ProTen and should not be relied upon by any other party without SAGE's prior written consent. Any advice, opinions or recommendations contained in this document should be read and relied upon only in the context of the document as a whole and are considered current to the date of this document. This document has been prepared on the specific instructions of EME Advisory having regard to its particular requirements. SAGE Environmental Services Pty Ltd (SAGE) accepts no liability for the reliance of any third party on this document, or the advice, opinions or recommendations contained within it.

This report, including all findings, conclusions and recommendations are based, in part, on information obtained from various sources including those provided by the Client and are strictly limited to the scope of work set out in the Letter of Engagement. SAGE takes reasonable care to avoid reliance on data and information that is inaccurate or unsuitable, however SAGE is not responsible for verifying the accuracy of completeness of any information and data made available to it.

SAGE assumes no responsibility or liability for:

- (a) Errors in any data obtained from these sources, including from the Client, regulatory agencies, statements from sources outside SAGE or developments resulting or occurring from work outside the scope of works set out in the Letter of Engagement; and
- (b) Deficiencies, inaccuracies or gaps in data used in the report due to the unavailability, lack of cooperation or otherwise through no fault of its own, inability of SAGE to obtain data from the sources, including from the Client regulatory agencies and other sources.

The absence of any adverse findings should not be interpreted as a guarantee that such circumstances do not exist.

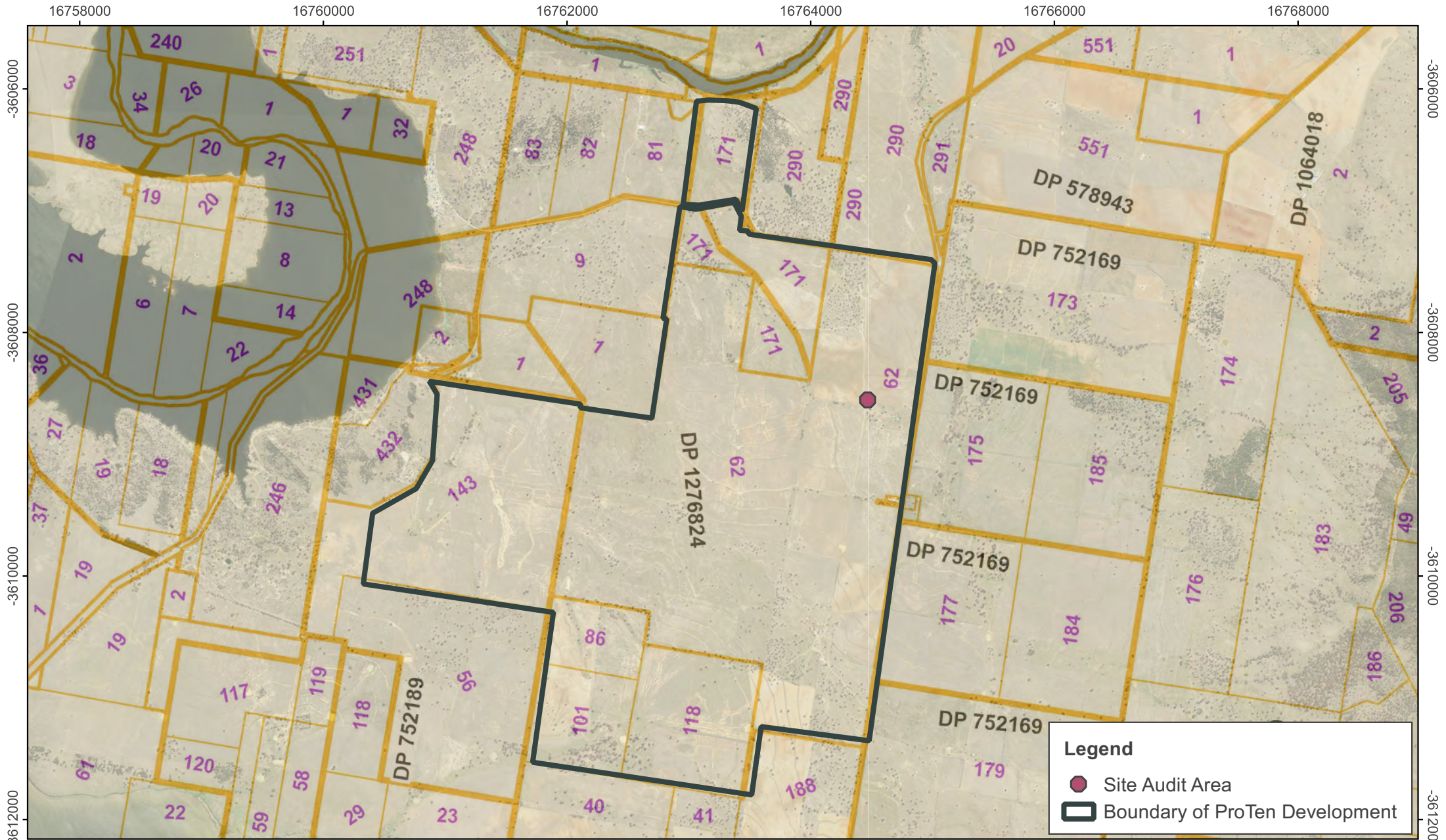
From a technical perspective, the subsurface environment at any site may present substantial uncertainty. It is a heterogeneous, complex environment, in which small subsurface features or changes in geologic conditions can have substantial impacts on water and chemical movement. Uncertainties may also affect source characterisation assessment of chemical fate and transport in the environment, assessment of exposure risks and health effects, and remedial action performance.

SAGE's professional opinions are based upon its professional judgement, experience and training. It is possible that additional testing and analysis might produce different results and or different opinions. SAGE has limited its assessment to the scope agreed upon with the client. SAGE's opinions are based on the professional standard of care for the environmental consulting profession in this area at this time. This standard of care may change as new methods, technology and approaches evolve in the future, which may produce different results and conclusions to those presented herein. SAGE's professional opinions contained in this report are subject to modification if any additional information is obtained through further investigation, observations, testing or analysis during future assessment or remedial activities.



Figures



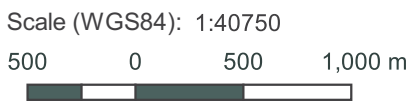


Legend

- Site Audit Area
- ▭ Boundary of ProTen Development



Basemap imagery sourced from NSW SIXMaps
 Lot and DP information sourced as WMS from NSW
 SEED database: <https://geo.seed.nsw.gov.au/>



Rushes Creek Poultry Production Farm, ProTen Pty Ltd

Lot and DP of audit area

Figure 1



Appendix A: Advice on Conflict of Interest

Amanda Lee
SAGE Environmental Services Pty Ltd
Level 16, 175 Pitt Street
SYDNEY NSW 2000

11 October 2021

Our ref NYZ 216478

Dear Ms Lee

Advice on Conflict of Interest

1. You have asked us to advise you on whether a conflict of interest arises exists where:
 - (a) you, as an employee of Sage Environmental Services Pty Ltd (ACN 642 935 546) (**Sage**), have been engaged by Proten Pty Ltd (**Proten**) (ACN 109 715 488) as a NSW Environment Protection Authority Auditor in a statutory function to undertake an audit of a contaminated, former sheep-dip on Lot 165 in Deposited Plan 752169 (**Property**) (**Audit**); and
 - (b) other employees of Sage have been approached by Proten to provide a proposal to undertake water resource works on the Property (**Water Resource Works**).

Summary

2. In summary, we do not consider that the above circumstances give rise to a conflict of interest on the basis that:
 - (a) from the information provided to us, there is no conflict of interest as described under clause 54 of the *Contaminated Land Management Act 1997* (NSW) (**Act**); and
 - (b) the Audit and Water Resource Works are entirely unrelated.

Background

3. We understand that:
 - (a) you are an environmental consultant employed by Sage, and an accredited site auditor under the Act;
 - (b) you are currently engaged by Proten to complete a statutory audit of a contaminated site located on a 700m² portion of the Property (**Site**), where:

122935893 - 216478 (NYZ)

- (i) Sage are not involved in undertaking the remedial works the Audit relates to;
 - (ii) Anika Fechner-head, an employee of Sage, is the only employee of Sage assisting you with the Audit;
 - (iii) you have implemented internal information barriers, including password protections to the online file, for the Audit; and
 - (iv) you do not engage in discussions relating to the Audit with any person other than Ms Fechner-head to ensure the Audit remains confidential and independent; and
- (c) upon being engaged to complete the Audit on the Property, you became aware that other employees of Sage were approached to potentially undertake the Water Resource Works on the Property. The Water Resource Works:
- (i) involve the development of a water management plan to outline how water is to be stored, used and treated on the Property as the Property is intended to be converted into a chicken farm;
 - (ii) will be undertaken by other employees at Sage who are not involved in the Audit;
 - (iii) does not involve any issues regarding contamination; and
 - (iv) does not involve, and is not contingent on, the outcome of the Audit.

Advice

4. Auditors have a statutory duty under the Act to not carry out an audit if there is a conflict of interest.
5. Under section 54 the Act, a conflict of interest will arise in circumstances where:
- (a) An auditor undertakes an audit of land which is owned or occupied by their employee, employer, spouse, partner, sibling, parent, child, or by a person who is employed by the same employer as the auditor.
You have instructed us that you do not have a relationship as described above with the owner and/or occupier of the Property;
 - (b) The auditor has a contractual arrangement with the person who owns or occupies the land being audited, and the contractual arrangement results in a conflict between the auditor's duties as an auditor and their interests under the contractual arrangement.
Except for your engagement as an Auditor, you have instructed us there is no contractual arrangement between you and the owner and/or occupier of the Property.
 - (c) The auditor has a financial interest in any part of the land, or any activity being carried out on the land, which may influence the audit.
You have instructed us that you have no financial interest in the Property.

- (d) it involves the auditor reviewing any aspect of work carried out by, or reviewing a report written by, themselves or their employee, employer, spouse, parent, child, or by a person who is employed by the same employer as the auditor.

You have instructed us that the Audit does not require you to review any of your own work or reports, or to review any work carried out by, or reports prepared by, your employee, employer, spouse, parent, child or any other person who is employed by Sage in relation to the Property.

In consideration of the above, we do not consider there to be a conflict of interest under section 54 of the Act.

- 6. We have also given general consideration as to whether the circumstances described in paragraph 1 of this letter impact your ability to act independently in performing your duties as an Auditor. Based on the information provided to us, we do not consider that those circumstances will have any adverse impact on your ability to act independently, specifically noting that:
 - (a) the Audit does not relate to, nor have any impact on, the Water Resource Works;
 - (b) the Audit does not relate to any remedial works that have been undertaken by Sage; and
 - (c) appropriate internal information barriers have been utilised to protect the confidentiality and independence of the Audit.

Conclusion

- 7. In the circumstances, we do not consider there to be a conflict of interest that would prevent you from undertaking the Audit independently and in accordance with your obligations.

Yours faithfully
Bartier Perry



Michael Cossetto | Partner
D 8281 7892 F 8281 7838 M 0409 933 511
mcossetto@bartier.com.au

Appendix B: EPA Site Audit Notification



NSW Site Auditor Scheme

Site Audit Notification

Section 53C of the *Contaminated Land Management Act 1997* requires auditors to notify the NSW Environment Protection Authority (EPA) of statutory site audits within seven days of their being commissioned.

Proposed site audit details

Site audit no. AL005

This proposed site audit is a:

- statutory audit
- non-statutory audit

within the meaning of the *Contaminated Land Management Act 1997* (s. 47).

Site auditor details

(As accredited under the *Contaminated Land Management Act 1997*)

Name: Amanda Lee

Company: Sage Environmental Services

Address: Level 16, 175 Pitt Street, Sydney

Postcode: 2000

Phone: 0417755407

Email: Amanda.lee@sageenvironmentalservices.com.au

Site details

Address: Rushes Creek Road, Rushes Creek, NSW

Postcode 2346

Property description

(Attach a separate list if several properties are included in the site audit.)

Approximately 800 m2 – small portion of Lot 165 of DP 752169

Local government area: Tamworth Local Government Area

Area of site (include units, e.g. hectares): 800 m2

Current zoning: RU1 Primary Production

Regulation and notification

To the best of my knowledge:

the site is the subject of a declaration, order, agreement, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*, as follows: (provide the no. if applicable)

Declaration no.

Order no.

Proposal no.

Notice no.

the site is not the subject of a declaration, order, proposal or notice under the *Contaminated Land Management Act 1997* or the *Environmentally Hazardous Chemicals Act 1985*.

To the best of my knowledge:

the site **has** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*

the site **has not** been notified to the EPA under section 60 of the *Contaminated Land Management Act 1997*.

Site audit commissioned by

Name: Bill Williams (CEO)

Company: Proten Tamworth Pty Ltd

Address: Suite 1103, Level 11, 99 Mount Street, North Sydney

Postcode 2060

Phone 02 9458 1700

Email bwilliams@proten.com.au

Purpose of site audit



A1 To determine land use suitability

Intended uses of the land: low density residential with access to soil

OR

A2 To determine land use suitability subject to compliance with either an active or passive environmental management plan

Intended uses of the land:

OR

(Tick all that apply)

- B1** To determine the nature and extent of contamination
- B2** To determine the appropriateness of:
 - an investigation plan
 - a remediation plan
 - a management plan
- B3** To determine the appropriateness of a **site testing plan** to determine if groundwater is safe and suitable for its intended use as required by the *Temporary Water Restrictions Order for the Botany Sands Groundwater Resource 2017*
- B4** To determine the compliance with an approved:
 - voluntary management proposal** or
 - management order** under the *Contaminated Land Management Act 1997*
- B5** To determine if the land can be made suitable for a particular use (or uses) if the site is remediated or managed in accordance with a specified plan.

Intended uses of the land:

Nature of statutory requirements (not applicable for non-statutory audits)

- Requirements under the *Contaminated Land Management Act 1997* (e.g. management order; please specify, including date of issue)
-
-

- Requirements imposed by an environmental planning instrument (please specify, including date of issue)
-



Development consent requirements under the *Environmental Planning and Assessment Act 1979* (please specify consent authority and date of issue)

Department of Planning, SSD 7704, 14th April 2020

- Requirements under other legislation (please specify, including date of issue)

Overall comments:

Auditor's declaration

I certify that the information supplied in this form and any attached pages is, to the best of my knowledge, true, accurate and complete.

I am aware that there are penalties under the *Contaminated Land Management Act 1997* for wilfully making false or misleading statements.

Signed 

Date : 10 August 2021

Please send completed forms to:

NSW Environment Protection Authority
nswauditors@epa.nsw.gov.au or as specified by the EPA

Appendix C: SAGE Site Audit Memos

Site Audit Memo 01 (SAM01): Interim
NSW EPA Auditor Advice - Unexpected
Finds Procedure (SLR, 2021b)



Sage Environmental Services Pty Ltd
Level 16, 175 Pitt Street
Sydney, NSW, 2000

19/08/2021

ProTen Pty Ltd
c/o Eryn Bath EME Advisory
17 Carlotta St
Greenwich NSW 2065
eryn@emeadvisory.com

To Eryn Bath,

**Interim NSW EPA Auditor advice, review of Unexpected Finds Procedure-
Contamination, Rushes Creek Poultry Production Farm Ruses Creek Road, Ruses
Creek, NSW (SSD-7704)**

1. Introduction

This NSW EPA Auditor interim advice is in reference to the Unexpected Finds Procedure prepared by SLR Consulting Pty Ltd prepared on the 11/08/2021 (Doc Ref: 610.30237.00000-L01-v1.1-20210811.docx).

2. Background

The Ruses Creek Poultry Production Farm is considered a state significant development (SSD) and was given a consolidated consent from the NSW DPIE on 14/04/2020 (SSD-7704). Condition B50 of this consolidated consent states that an unexpected finds procedure be created and reviewed by an NSW EPA site Auditor. This letter forms our interim advice on the unexpected finds procedure prepared by SLR Consulting Pty Ltd on the 11/08/2021.

SAGE Environmental Services Pty Ltd (SAGE) have been engaged by ProTen Pty Ltd as the accredited Site Auditor for the Ruses Creek Poultry Production Farm. Amanda Lee is the NSW EPA accredited Site Auditor.

3. Document Reviewed

For the preparation of this letter, the Site Auditor has reviewed the following document:

- Unexpected Finds Procedure- Contamination Ruses Creek Poultry Production Farm Ruses Creek Road, Ruses Creek, NSW (Doc Ref: 610.30237.00000-L01-v1.1-20210811.docx).

Please see the attached Site Auditor Changelog detailing the Auditor's comments on this document.

4. Closing

The Auditor Considers that the points raised in the changelog are now closed.

Please contact the undersigned should you require any additional information.

Yours faithfully,



Amanda Lee

NSW EPA Accredited Contaminated Site Auditor (1504)

Director

Sage Environmental Services

P: +61 (0)417 755 407

E: amanda.lee@sageenvironmentalservices.com.au



Table 1 Auditor Comments on Unexpected Finds Procedure 11/08/2021 (Doc Ref: 610.30237.00000-L01-v1.1-20210811.docx)

Number	Section Reference	Subject	Auditor Comment 17/08/2021	Consultant Response 19/08/2021	Auditor Comments 19/08/2021
1	1.1	Background	“The approved remediation plan” Please confirm by who?	NSW Department of Planning, Industry and Environment. It is noted that as the UFP forms part of the overarching CEMP where most of this information is contained.	Closed
2	1.3	Scope	This procedure applies to all intrusive investigations undertaken as part of the project. Therefore, the procedure needs further detail in how a non-environmental scientist may identify “potential contamination” some worked examples of what might be found on the site would be beneficial such as buried metal 44L gallon drums, redundant services which may have treated with pesticides, transformers, buried asbestos etc	Examples included under Section 1.3.	Closed
3	1.3	Scope	Please define the timeframe of the steps.	Included timeframes for the first steps Section 2.	Closed
4	1.3	Scope	Please use the same terminology in the document the flow diagram. Who is the Project Site Manager and Environmental Manager? What role does the SLR contamination team play?	Updated to Construction Site Manager and National Construction Manager for consistency with Tables 7 and 8 in the CEMP. SLR’s role is specific to the remediation and if required any Unexpected Finds.	Closed. Noted the roles are defined in table 7 of the CEMP. Please refer to the section of the CEMP with in the Unexpected Finds Procedure.
5	1.3	Scope	How will this procedure work in a COVID environment where SLR cannot mobilise to the site?	Whilst it is not possible to pre-empt government advice, as it currently stands SLR believes the appropriate permits are in place to mobilise to site. If this changes, typically site photographs and video is appropriate.	Closed



6	1.3	Scope	Is the Environment Manager suitability qualified to determine if the material is hazardous? Have they had appropriate health and safety training to understand what PPE to adopt in response to a hazard?	This is addressed as part of the sit inductions.	Closed
7	1.3	Scope	Please confirm that retrospectively all investigations have followed this plan.	Noted.	Closed
8	2	Procedure	Please identify and define what potentially contaminated material includes. As per comment 2 above.	Reference to Section 1.3 included as well as stained, discoloured or odorous soils.	Closed
9	2.1 1.	Step 1 – Stop Work	Please provide examples of what is to be assessed in the risk assessment.	Examples included	Closed
10	2.1 1.	Step 1 – Stop Work	Please provide examples of what constitutes an appropriate control review.	Example included	Closed
11	2.1 2.	Step 1 – Stop Work	As noted in point 3. Who is the environmental manager and who is the project site manager? Where are the relevant roles defined?	Updated to Construction Site Manager and National Construction Manager for consistency with Tables 7 and 8 in the CEMP.	Closed
12	2.1 2.	Step 1 – Stop Work	How big should the exclusion zone be around the area? How do you establish the zone?	Further detail included regarding fencing and setback.	Closed
13	2.2 2.	Step 2 - Assess	<i>(The level of reporting must be appropriate for the identified contamination in accordance with relevant NSW Environment Protection Authority (EPA) guidelines, including Contaminated Land Guidelines: Consultants Reporting on Contaminated Land (EPA, 2020). The report should also assess the</i>	In 2.2.1 included notifying the auditor if a contamination investigation is required.	Closed



			<i>requirement to notify the EPA.)</i> And the contaminated site auditor. Should reporting be required, it is recommended that this be discussed prior to issue.		
14	2.3 1.	Step 3 - Act	Please include auditor review in this process	Included the Site Auditor in 2.3.1	Closed
15	Figure 1	Figure 1: Unexpected Finds Procedure - Contamination	You have referenced the environment manager, project site manager and relevant authority and the NSW EPA throughout, these people are not mentioned in the flow diagram. As per point 4 above.	No change. Roles are clear in the CEMP.	Closed
16	Figure 1	Figure 1: Unexpected Finds Procedure - Contamination	What is suitable PPE? Where is the suitable PPE defined for varying hazard levels?	Examples of PPE have been included in Section 3. It is not feasible to define PPE for an unknown.	Closed
17	Figure 1	Figure 1: Unexpected Finds Procedure - Contamination	How are you defining is the material is Hazardous?	SafeWork NSW provides a list of hazardous chemicals and examples of hazardous waste are provided in the CEMP.	Closed. Please refer to the section of the CEMP with in the Unexpected Finds Procedure.



Site Audit Memo 02 (SAM02): Interim
NSW EPA Auditor Advice – Detailed Site
Investigation (SLR, 2019)



Sage Environmental Services Pty Ltd
Level 16, 175 Pitt Street
Sydney, NSW, 2000

16/09/2021

ProTen Pty Ltd
c/o Eryn Bath EME Advisory
17 Carlotta St
Greenwich NSW 2065
eryn@emeadvisory.com

To Eryn Bath,

Interim NSW EPA Auditor advice, review of Detailed Site Investigation- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW (Doc Ref: 610.18456-R01.v1.2.docx). (SSD-7704)

1. Introduction

This NSW EPA Auditor interim advice is in reference to the Detailed Site Investigation prepared by SLR Consulting Pty Ltd prepared on the 04/02/2019 (Doc Ref: 610.18456-R01.v1.2.docx).

2. Background

The Rushes Creek Poultry Production Farm is considered a state significant development (SSD) and was given a consolidated consent from the NSW DPIE on 14/04/2020 (SSD-7704). Condition B50 of this consolidated consent states that an unexpected finds procedure be created and reviewed by an NSW EPA site Auditor. This letter forms our interim advice on the Detailed Site Investigation prepared by SLR Consulting Pty Ltd on the 04/02/2019.

SAGE Environmental Services Pty Ltd (SAGE) have been engaged by ProTen Pty Ltd as the accredited Site Auditor for the Rushes Creek Poultry Production Farm. Amanda Lee is the NSW EPA accredited Site Auditor.

3. Document Reviewed

For the preparation of this letter, the Site Auditor has reviewed the following document:

- Detailed Site Investigation- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW (Doc Ref: 610.18456-R01.v1.2.docx).

Please see the attached Site Auditor Changelog detailing the Auditor's comments on this document.

4. Closing

The Auditor Considers that the points raised in the changelog are now closed.

Please contact the undersigned should you require any additional information.

Yours faithfully,



Amanda Lee

NSW EPA Accredited Contaminated Site Auditor (1504)

Director

Sage Environmental Services

P: +61 (0)417 755 407

E: amanda.lee@sageenvironmentalservices.com.au



Table 1 Auditor Comments on Detailed Site Investigation- Proposed Poultry Production Farm Ruses Creek Road, Ruses Creek, NSW (Doc Ref: 610.18456-R01.v1.2.docx).

Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
1	Basis of report	3rd party reliance	The Site Auditor needs to be able to rely on the information presented within the report.	Noted	Please ensure in future the site Auditor is listed as an intended recipient: "This report is for the exclusive use of the Client <i>and appointed site auditor.</i> " Closed
2	1	Introduction	What guidelines were consulted and referred to in the planning and preparation of the DSI? At a minimum, it is expected that the following guidelines were consulted: ASC NEPM- Schedule B2 and B1(NEPM), NSW EPA-Consultants Reporting On Contaminated Land Guidelines (NSW EPA 2020), McDougall, K.W. and Macoun, T.W., 1996. Guidelines for the assessment and cleanup of cattle tick dip sites for residential purposes. NSW Agriculture.	Noted. Guidelines listed were referred to and are generally discussed in Section 6. These guidelines will be referred to and listed in the validation report	Closed
3	2	Background	How does the footprint of former sheep dip site relate to the overall development site? Can a plan please be provided to the Auditor.	Refer to Figure 1 in Memorandum 1	Closed
4	2	Background	The auditor recommends a copy of the PSI (SLR 2018) be provided to the auditor.	PSI conducted in 2018. Provided 06.09.21	Closed
5	5.1	Site History	When did ProTen buy the site? Did SLR review historical aerial photographs as part of the PSI? This would aid in confirmation of the former sheep dip layout. Did they discuss the use of the area with former owners of the site?	· Date of ProTen purchase is unknown to SLR · Available historical aerial photographs (1961 to 2005) were reviewed as part of the PSI (Table 1). Due to the scale and resolution of these images further definition of the former sheep dip layout could not be achieved.	Closed



Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
				<ul style="list-style-type: none"> Interviews as part of the PSI (Section 6.10.3) with Ray Doyle owner of the property for 53yrs indicated that the sheep dip had not been used in this time. 	
6	5.1	Site History	Who was the site owner before Ray Doyle? Has SLR reviewed the certificate title for the site?	<ul style="list-style-type: none"> SLR reviewed the certificate title for the site. Lot 165 was owned by Theodore George Tomlinson (Farmer & Grazier) from 1954 to 1964 as identified in the PSI. 	Closed
7	5.1	Site History	<p>Given the lack of accurate understanding of exact positioning of the sheep dip and the infilling of sheep dip, it is highly probable that arsenic contaminated material has been spread across the site. Consideration of reworking of land should not be dismissed for remedial planning.</p> <p>“Where disturbance has occurred and the dip cannot be located exactly, photogrammetry (...) should be used to accurately pinpoint the dip bath. (...) sampling will need to be planned on a suitable grid to cover the whole area suspected of being contaminated following disturbance.”</p> <p>(Guidelines for the assessment and cleanup of cattle tick dip sites for residential purposes 1996)</p>	The location of the sheep dip is shown on Figure 2 and supported by Photograph 8 in Appendix A. A number of test pits have been excavated across the area, with the logs included in Appendix E not indicating that the area has been reworked to spread arsenic impacted material across the site.	The Auditor notes the position of the sheep dip related infrastructure is approximate. The sheep dip may have historically had a mound adjacent which would contain the impacted slurry removed at the base of the dip periodically. The absence of a mound at the site may indicate a potential for reworked materials across the site. Closed



Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
8	5.2	Area of environmental Concern	How confident is SLR that they have targeted and sampled at the potential disposal pit at the site? The dip would have historically been re-excavated to keep the sufficient depth for full contact of the sheep body. This soil would have been mounded usually close to the dip location.	Delineation sample supports location of former dip and the area requiring remediation. No evidence suggests that arsenic contaminated material has been spread across the site	Please see comment 7 above. Closed
9	5.3	Contaminants of Potential Concern	How were the contaminants of potential concern identified? Why was the full range of contaminants of potential concern identified in "Guidelines for the assessment and clean-up of cattle tick dip sites for residential purposes" not tested for? (Table 1.1)	CoPC are as per Table 3 of the PSI, which is taken from Appendix A (Sheep and cattle dips) of <i>Managing Land Contamination Planning Guidelines SEPP 55 - Remediation of Land</i>	Closed
10	5.4	Receptors and Pathways	This report is missing a complete conceptual site model (CSM) as per NSW EPA (2020) including receptor, pathways and if they are potentially complete or not.	Noted, Updated CSM consistent with NSW EPA (2020) to be included in Validation Report	Closed
11	5.4.1	Proposed Land Use Scenario	Where are the proposed residential houses and sheds located on the site and where is the dip in relation to the construction? (Please see comment 3)	Please refer to Figure 1.	Closed
12	6	Investigation Guidelines	Auditor does not agree that HIL-A is the more conservative approach in this situation. The derivation of the HIL A is not conservative for an agricultural setting, nor is it intended to be use for such a setting (NEPM B7 section 1.3.1) The site is considered to be agricultural land, therefore it is reasonable to greater than 10% of home grown produce is likely to be consumed by the residents.	Whilst the overall area is agricultural land, the specific sheep dip arsenic contaminated site will not be used for agricultural purposes. Furthermore a Long Term Environmental Management Plan will be implemented post remediation, which will limit using this area from growing produce. HIL A is therefore considered appropriate	Closed, however for purposes of clarification, the Auditor's comment was in relation that HIL A is not protective enough for a low-density farm setting where the proportion of consumed home grown produce



Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
				given the nearby low density residential dwellings.	will be higher than the 10% assumed in the development of HIL A.
13	7	Scope of works	Where are the data quality objectives (DQOs) listed? These should be established and reported in accordance with NSW EPA 2020 and NEPM requirements.	Noted, included in RAP Section 10	Closed
14	7.2	Intrusive Works	Date and timing of intrusive works missing.	Noted - Works undertaken 30.10.2018 and 06.12.2018	Closed
15	7.22	Intrusive Works	The rationale for not sampling all test pits for the chemicals of potential concern (COPC) is not justified.	Noted	Closed
16	7.2.1-2	Initial and Second Round of Intrusive Works	Auditor notes the lateral distance between each test pit is missing from the document. In accordance "Guidelines for the assessment and clean-up of cattle tick dip sites for residential purposes" most contamination occurs within 2m of the sheep dip.	Noted. This appears consistent with the arsenic contours on Figures 3 and 4	Closed
17	7.2	Intrusive Works	Was a surface sample taken before excavation? How were samples taken from the excavator bucket? Please provide more detail on sampling and decontamination (which equipment) protocols.	SLR SOP's samples from near surface and the excavator bucket collected via hand tools and with the use of disposable gloves. Decontamination procedure included in Section 10.8.4 in the RAP	Please ensure this detail is contained in the validation report. Closed



Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
18	8.1	Location Records	Were Geo-coordinates taken for sample points? How far apart is each sample pit?	No record of GPS locations included. Test pits approximately 3m apart	Closed
19	8.2	Sample identification, storage, and transport procedures	Where are the signed chain of custody forms from the field technician? This is missing from the appendix. Currently only the chain of custody electronically generated from the lab is in the appendix.	COCs provided in Memorandum 1	Closed
20	8.3.1	Decontamination procedures	Please define non-disposable sampling equipment. What equipment was used?	Non-diposable equipment includes hand tools such trowel or hand auger	Closed
21	8.4.2	Laboratory Data Quality Indicators	Where is the assessment of compliance with the laboratory data quality indicators presented? Please discuss the DQIs listed in Table 2. What samples do the RPD limits stated apply?	Discussed in Section 9.4	Closed
22	Table 2	Adopted DQIs for the Investigation	What are the DQI for rinsate and laboratory duplicate samples?	DQIs are included in Section 10.8 in the RAP. DQI for arsenic in rinsate <LOR and laboratory duplicate for arsenic RPD 30%	Closed
23	9.3.1	Initial round of Intrusive Works	Guideline values adopted need to be discussed and presented earlier in the report (see comment 2).	Guideline values presented in the Tables in Appendix C	Closed
24	9.3.1 & 2	Initial and Second Round of Intrusive Works	Missing discussion of what field quality control was collected.	Noted	Closed



Number	Section	Subject	Auditors comment (20/08/2021)	Response	Auditors comment (16/09/2021)
25	Figures	Figure 1-5	Missing key, scale, northings, and the distance between test pits.	Noted. These items will be included in Validation Report figures	Closed
26	Appendix C	Laboratory Analytical Summary Tables	Table 3 – Where are Table 1 and 2 in Appendix C?	Tables 1 and 2 are included in text (as listed in table of contents)	Closed
27	Appendix C	Laboratory Analytical Summary Tables	In the 2nd round of intrusive works, why are there various rounds reported in the Tables 4-7 when all samples were collected on the same day?	Addition rounds where for delineation of Arsenic. Samples collected all at once and placed on hold during 1st round of analysis.	Closed



Site Audit Memo 03 (SAM03): Interim
NSW EPA Auditor Advice – Remedial
Action Plan (SLR, 2021a)



Sage Environmental Services Pty Ltd
Level 16, 175 Pitt Street
Sydney, NSW, 2000

16/09/2021

ProTen Pty Ltd
c/o Eryn Bath EME Advisory
17 Carlotta St
Greenwich NSW 2065
eryn@emeadvisory.com

To Eryn Bath,

Interim NSW EPA Auditor advice, review of Revised Remedial Action Plan- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW (Doc Ref: 610.30237.00000-R01-v2.1-20210422.docx). (SSD-7704)

1. Introduction

This NSW EPA Auditor interim advice is in reference to the Revised Remedial Action Plan- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW 22/04/2021 (Doc Ref: 610.30237.00000-R01-v2.1-20210422.docx).

2. Background

The Rushes Creek Poultry Production Farm is considered a state significant development (SSD) and was given a consolidated consent from the NSW DPIE on 14/04/2020 (SSD-7704). Condition B50 of this consolidated consent states that an unexpected finds procedure be created and reviewed by an NSW EPA site Auditor. This letter forms our interim advice on the Remedial Action Plan prepared by SLR Consulting Pty Ltd on the 22/04/2021.

SAGE Environmental Services Pty Ltd (SAGE) have been engaged by ProTen Pty Ltd as the accredited Site Auditor for the Rushes Creek Poultry Production Farm. Amanda Lee is the NSW EPA accredited Site Auditor.

3. Document Reviewed

For the preparation of this letter, the Site Auditor has reviewed the following document:

- Revised Remedial Action Plan- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW (Doc Ref: 610.30237.00000-R01-v2.1-20210422.docx).

Please see the attached Site Auditor Changelog detailing the Auditor's comments on this document.

4. Closing

The Auditor Considers that the points raised in the changelog are now closed.

Please contact the undersigned should you require any additional information.

Yours faithfully,



Amanda Lee

NSW EPA Accredited Contaminated Site Auditor (1504)

Director

Sage Environmental Services

P: +61 (0)417 755 407

E: amanda.lee@sageenvironmentalservices.com.au



**Table 1 Auditor Comments on Revised Remedial Action Plan- Proposed Poultry Production Farm Ruses Creek Road, Ruses Creek, NSW
(Doc Ref: 610.30237.00000-R01-v2.1-20210422.docx)**

Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
1	Basis of report	3rd party reliance	The Site Auditor needs to be able to rely on the information presented within the report.	Noted	Please ensure in future the site Auditor is listed as an intended recipient: "This report is for the exclusive use of the Client <i>and appointed site auditor.</i> " Closed
2	2	Background	How does the footprint of former sheep dip site relate to the overall development site? Can a plan please be provided to the Auditor.	Refer to Figure 1 in Memorandum 1	Closed
3	2.1.1	Preliminary Site Investigation	The auditor recommends a copy of the PSI (SLR 2018) be provided to the auditor.	PSI conducted in 2018. Provided 06.09.21	Closed
4	2.1.2	Detailed Site Investigation	Please provide a CSM and further evidence which outlines how the arsenic concentrations in soils present an unacceptable risk? Noting that the HIL presented in the NEPM are investigation levels, and exceeding them does not automatically constitute a health risk.	Agreed HILs are investigation levels. Given the proximity to a low density residential land use, with single concentrations of arsenic in shallow soils greater than 250%. It is considered unlikely that review of bioavailability data in the context of a low density residential land use would change the potential for risk to human health	Closed
5	2.1.2	Detailed Site Investigation	Auditor does not agree that HIL-A is the more conservative approach in this situation. The derivation of the HIL A is not conservative for an agricultural setting, nor is it intended to be use for such a setting (NEPM B7 section 1.3.1) The site is considered to be agricultural land, there fore it is reasonable to greater than	Whilst the overall area is agricultural land, the specific sheep dip arsenic contaminated site will not be used for agricultural purposes. Furthermore a Long Term Environmental Management Plan will be implemented post remediation, which will limit using this area from growing produce. HIL A is therefore considered	Closed, however for purposes of clarification, the Auditor's comment was in relation that HIL A is not protective enough for a low-density farm setting where the proportion of consumed home grown produce will be higher than



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
			10% of home grown produce is likely to be consumed by the residents.	appropriate given the nearby low density residential dwellings.	the 10% assumed in HIL A development.
6	2.1.2	Detailed Site Investigation	Given the lack of accurate understanding of exact positioning of the sheep dip and the infilling of sheep dip, it is highly probable that arsenic contaminated material has been spread across the site. Consideration of reworking of land should not be dismissed for remedial planning.	The location of the sheep dip is shown on Figure 2 and supported by Photograph 8 in Appendix A. A number of test pits have been excavated across the area, with the logs included in Appendix E not indicating that the area has been reworked to spread arsenic impacted material across the site.	The Auditor notes the position of the sheep dip related infrastructure is approximate. The sheep dip may have historically had a mound adjacent which would contain the impacted slurry removed at the base of the dip periodically. The absence of a mound at the site may indicate a potential for reworked materials across the site. Closed
7	2.1.2	Detailed Site Investigation	As per comment 4, this report is missing a complete conceptual site model (CSM) as per NSW EPA (2020) including identification of receptors, pathways and if they are potentially complete or not. A CSM would be informative to show complete exposure pathways and how proposed remediation may result incomplete exposure pathways.	Noted. An updated CSM including complete (or incomplete post remediation) pathways will be presented in the RAP	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
8	2.1.2	Detailed Site Investigation	Where is the TCLP data presented? This data is not presented in the DSI. What is the anticipated depth of ground water?	TCLP data included in Memorandum 1. Anticipated depth to groundwater 15m	The auditor requests that in future all leachate tests done on additional works are conducted by ASLP not TCLP. TCLP is not appropriate to measure contaminated soils left <i>in situ</i> due to low pH solutions adopted. Closed
9	2.1.3	Remedial Action Plan	This section would benefit from a statement like "This RAP superseded the previous version."	Noted	Closed
10	3	Objectives	What are the human health risks, and how are they related to the proposed development?	Ingestion of soil due to the low density residential land use	The auditor also notes the inhalation of dust and dermal contact with soil are also potentially complete exposure pathways at the site. Please add these to the CSM presented in the RAP. Closed
11	3	Objectives	Please refer the reader to the section of the RAP that details the proposed land use and how it will make the site safe for use.	The proposed use of the site is detailed in the Project Approval documentation, with a low density residential land use in the vicinity of the arsenic remediation site.	The auditor requests all land use information to be contained in one document. Closed
12	3	Objectives	Statutory guidelines – This RAP must be in compliance with the guidelines, NSW EPA Contaminated Land Guidelines: Consultants	Noted	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
			Reporting on Contaminated Land (2020). It is currently stated that it “generally” complies.		
13	4	Scope Of Works	Appraisal of remediation options- key Considerations are missing such as the EPA waste hierarchy. Is the technology proven? Who are the stakeholders? What is the cost of the long-term management plan?	Noted	Closed
14	5	Consultation	How does the footprint of former sheep dip site relate to the overall development site?	Refer to Figure 1 in Memorandum 1	Closed
15	5	Consultation	Consultation with the Auditor is missing from this section.	Consultation with Auditor is ongoing	In all future documents please refer to the Auditor as a stakeholder. Closed
16	6	Site Identification	Has the audit area been surveyed? This needs to be accurate for the remediation and capping area.	No. Survey of the arsenic remediation site is included in Section 8.1.6	Closed
17	6.2	Site Lithology	The auditor notes that the majority of exceedance on the site is in the clay be between 0.1 to 0.7m. Please confirm that the additional sampling that will be undertaken for delineation purposes will include samples at depth. How are the additional delineation samples proposed to be collected?	Agreed. Additional delineation sampling is proposed at surface (0-0.1m using a trowel), then 0.1m to 0.2m (excavator bucket), then 0.7m (excavator bucket). Proposed sample locations are shown on RAP Figure 6 and Memo 1 Figure 1	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
18	Table 6.1	Ground Water Bores	As per comment 8, please outline where the TCLP data is presented? Why was TCLP chosen over ASLP?	TCLP data included in Memorandum 1. TCLP is considered appropriate to assess potential for arsenic leaching, noting that a low permeability cap is to be installed which will minimise leachate generation	Please see comment 8. Closed
19	6.4	Topography	What is the impact of the flat topography on the proposed CAP?	Minimal impact given the small size (height and lateral extent) of the cap	Closed
20	7.1	Remedial Goal	Potential risk identification and potential pathways are not appropriately defined in the RAP. Therefore it is unclear how the proposed remedial strategy will ensure these pathways are no longer complete.	The primary risk pathway is accessible soils in a low density residential setting. Implementation of a cap will remove this pathway	Please link in the validation report the 3 complete exposure pathways with reference to the CSM. Closed
21	7.1	Remedial Goal	As noted above in point 5, the Auditor does not agree that HIL-A is the more conservative approach in this situation. The derivation of the HIL A is not conservative for an agricultural setting, nor is it intended to be use for such a setting (NEPM B7 section 1.3.1) The site is considered to be agricultural land; therefore it is reasonable to greater than 10% of home grown produce is likely to be consumed by the residents. It is considered therefore that it may not be as conservative as what is indicted in the RAP,	Whilst the overall area is agricultural land, the specific sheep dip arsenic contaminated site will not be used for agricultural purposes. Furthermore a Long Term Environmental Management Plan will be implemented post remediation, which will limit using this area from growing produce. HIL A is therefore considered appropriate given the nearby low density residential dwellings.	Please see Auditor comments in comment 5 above. Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
22	7.2	Extent Of Remediation Required	The lateral extent of arsenic contamination should be noted in the figures. Please include geographical locations for the historical test pits To ensure they align with the proposed CAP extent.	The extent (lateral and vertical) of arsenic contamination is shown on Figures 3 to 5 in Appendix A. The test pit locations are shown on Figure 6 along with the extent of the cap (estimated boundary of remediation works	The auditor notes the historical investigation locations were not georeferenced. Closed
23	7.3	Risk To Underlying Groundwater	The auditor notes that drilling and construction logs provided in the DSI (Appendix B), however confirmation of proximity to the site is difficult to validate without any site-specific geo-reference.	Noted	Please provide geo-referencing from surveying in the validation report. Closed
24	7.3	Risk To Underlying Groundwater	As per comments 8 and 18, Please provide the leachate data.	Leachate data included in Memorandum 1	Please refer to Auditor comment 8. Closed
25	7.4	Remedial Options	Please also consider key remedial consideration such as: Is the technology proven? How will stakeholders respond? What is the cost of the long-term management plan?	All remediation technologies listed are proven, with stakeholder feedback included in Section 5. The cost of developing the LTEMP and periodic inspection / maintenance of the cap is small compared to dig and dump	Closed
26	7.4.2	On-Site Management – Cap And Contain	Please confirm which mechanisms to prevent development and disturbance are being proposed to utilised?	As noted listing the LTEMP on the Council Section 10.7 certificate will prevent development, while an exclusion fence with signage will limit access to disturb the cap	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
27	8.1.1	Approvals And Notifications	Please refer to email sent 25/8 with respect to the category of the site in accordance with the SEPP55?	the remediation works do not trigger the definitions of Category 1 remediation works as per Clause 9 of SEPP 55, with the explanation of intended effect capturing proposed policy changes. This is supported by the correspondence from DPIE and EPA summarised in Table 1 (Government Agency Consultation) of the Rushes Creek Poultry Production Farm SSD7704 S4.55(1A) Modification Report (May 2021)	Please provide this documentation to the Auditor.
28	8.1.3	Underground And Overhead Services	Are there any aboveground of overhead services at this site?	None were recorded on the DBYD and service location undertaken as part of the DSI	Closed
29	8.1.5	Delineation Of Capping	Please confirm what sampling methodology will be employed for the proposed delineation sampling? Will SLR be conducting works in a similar matter to previous works? Please define scope more clearly.	Surface samples (0-0.1) will be collected using a trowel, before test pit is excavated with additional samples collected at 0.1m to 0.2m (excavator bucket), then 0.7m (excavator bucket). Proposed sample locations are shown on RAP Figure 6 and Memo 1 Figure 1 (TP locations TP101, TP102, TP103, TP104, TP105). Sample locations will be measured using a measuring wheel from the sheep dip as a point of reference. Laboratory analysis for Arsenic on all samples.	Were the historical test pits measured using the measuring wheel from the sheep dip? Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
				Data would be reported in an Interim Site Validation Report, which would then be updated as the Site Validation Report at the completion of remediation	
30	8.1.6	Site Surveying	How will the exact location and extent of the CAP be determined when the exact locations of the test pits weren't recorded geo-spatially in the DSI?	<p>The former sheep dip remains on site (as shown on Figures in the RAP and Photograph 8 in Appendix B of the RAP). This forms the point of reference for the cap extent.</p> <p>SLR considers the extent of the cap delineated based on the previous test pits and samples. To support this, five Cap Extent Validation sampling locations will be undertaken as per Figure 1 in Memo 1. This will be undertaken as part of the arsenic delineation sampling post shed demolition and but prior to installation of the cap</p> <p>Surface samples (0-0.1) will be collected using a trowel, before test pit is excavated with additional samples collected at 0.1m to 0.2m (excavator bucket), then 0.7m (excavator bucket).</p> <p>Proposed sample locations are shown on Memo 1 Figure 1 (TP locations TP201,</p>	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
				TP202, TP203, TP204, TP205). Sample locations will be measured using a measuring wheel from the sheep dip as a point of reference. Laboratory analysis for Arsenic on all samples. Data would be reported in an Interim Site Validation Report, which would then be updated as the Site Validation Report at the completion of remediation	
31	8.2.2	Table 8.1	How likely is it that site won materials will meet the requirements?	Initial earthworks as part of the broader site construction has identified some low permeability material onsite. This material is being subject to permeability testing to confirm suitability for use as capping material	Closed
32	8.2.2	Table 8.2	Please include indicative volumes in addition to thickness for the CAP.	Earthen Cover - 250m3 Low Permeability - 250m3 Sub-base - 375m3 Topsoil - 150m3	Closed
33	8.2.3	Vegetation Establishment	Who is responsible for identifying the appropriate grasses?	The contractor consistent with the overarching CEMP	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
34	8.3	Registration/ Identification Of Area	Please confirm that the site will be registered/identified at the provided locations to ensure mechanisms are in place to prevent future disturbance of the area.	Area the area is to be fenced. It is proposed that the nature of the fencing be reduced to wire fencing consistent with the broader area	Closed
35	8.4	Imported Soil Material	The site auditor requests that the source site for the VENM/ENM must be approved by the auditor before moving it to the site please provide: - site history, sample results from lab prior to transport and -proposed sampling of the material at an agreed rate per volume.	Noted. Following discussions with the construction contractor, it is unlikely that imported material will be required.	Closed
36	9.1.1	Health Screening Levels – Arsenic	Please list the guideline value for arsenic (100mg/kg) as noted in the NEPM (2013).	Noted - agreed on Arsenic criteria of 100mg/kg	Closed
37	9.1.1	Health Screening Levels – Arsenic	Please validate the extent of the outside of the CAP to ensure that the soils remaining exposed meet the RAC of 100mg/kg. Please outline the proposed sampling regime for the outside of the CAP extent	Refer to Item 30.	Closed
38	9.2	Construction Quality Assurance	Is the compaction verified to meet the requirements? Please include.	Compaction testing will be undertaken consistent	Please confirm that this will be verified and reported. Closed
39	9.3	Validation Reporting	Please confirm if the validation report will also include additional delineation sampling proposed in the RAP?	SLR suggests this information is presented in an Interim Site Validation Report, which	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
				would then be updated and finalised post remediation	
40	9.3	Validation Reporting	<p>Please ensure that the reporting of the additional delineation sampling is in accordance with Consultants Reporting On Contaminated Land Guidelines (2020).</p> <p>Please ensure the validation report and additional delineation sampling reporting contains:</p> <ul style="list-style-type: none"> - CSM, showing incomplete and complete pathways - Data quality objectives and Data Quality Indicators - Signed chain of custody documentation - Assessment of data validation per laboratory batch - Summary of site history including aerial photography <p>In addition, please ensure that the validation report includes: Validation results of CAP extent (soil results) Compaction verification of the CAP</p>	Noted. The site history is presented in the PSI	Please include a summary of appropriate site history in the validation report. Closed
41	9.3	Validation Reporting	The site history needs to include title search and aerial photos	Refer to PSI for title search and historical aerial photographs	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
42	9.3	Validation Reporting	Please include validation sampling demonstrating that the CAP contains all material greater than the established RAC	Refer to Item 30.	Closed
43	10	Data Quality Objectives	Please establish Data Quality Indicators	DQIs are consistent with Table 2 in the DSI	Please outline the DQIs in the validation reports and an assessment of compliance. Closed
44	10.4	Step 4	Lateral extent is not known at this time.	SLR considers that the lateral extent is defined, subject to confirmation by the delineation and cap validation test pit sampling	Closed
45	10.5	Step 5	Please include validation sampling which demonstrates that the RAC has been met.	Further validation sampling is not proposed.	Closed
46	10.6	Step 6	Please confirm how historical location of pits to the North and South will be captured for the extent of the CAP in the absence of GPS records.	The sheep dip provides a point of reference for these extents. This will be supported by the delineation test pits and cap validation test pits	The Auditor notes that the figure does not contain any distance measurements.
47	10.7.3	Step 7	Please provide SLR signed chain of custody documents in the validation report.	Noted	Closed
48	10.8.4	Step 8	What frequency will rinsate samples be collected in order to demonstrate decontamination procedures?	1 rinsate sample per day	Closed
49	11.9	Importation Of Fill	Please see auditor comment 35 regarding VENM.	Refer to response to Item 35	Closed



Number	Section	Subject	Auditors comment (25/08/21)	Consultant Response	Auditors comment (16/09/21)
50	11.10.2	Personal Decontamination	Minimum PPE should including nitrile gloves, particularly during validation sampling.	Noted	Closed
51	11.12	Community Relations	The auditor notes the requirements of a letter drop at least two days prior to the commencement of remediation works.	Noted	Closed
52	13	Limitations	Auditor needs to rely on the contents of this RAP in order to sign off on the remediation and issue a Site Audit Statement.	Noted	Please ensure in future the site Auditor is included for reliance on the report: <i>"Other parties should not rely upon this report."</i> Closed
53	Appendix A	Figure 6	As noted in the conversation on 24/08/2021 delineation is required to the east and west, please show the extent of the proposed CAP in relation to the existing sampling locations.	Refer to Figure 1 in Memorandum 1	Closed



Site Audit Memo 07 (SAM07): Interim
NSW EPA Auditor Advice – Site
Remediation and Validation Report (SLR,
2022)



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17/02/2022

ProTen Pty Ltd
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eryn@emeadvisory.com

To Eryn Bath,

Review of Site Remediation and Validation Report - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (16/02/2022) (Doc Ref No: 610.30237.00000-R02-v2.0-20220216.docx)

1. Introduction

This NSW EPA Auditor interim advice is in reference to the Site Remediation and Validation Report - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (16/02/2022) (Doc Ref No: 610.30237.00000-R02-v2.0-20220216.docx)

2. Background

The Rushes Creek Poultry Production Farm is considered a state significant development (SSD) and was given a consolidated consent from the NSW DPIE on 14/04/2020 (SSD-7704). This letter forms our interim advice on the Site Remediation and Validation Report prepared by SLR Consulting Pty Ltd on the 16/02/2022.

SAGE Environmental Services Pty Ltd (SAGE) have been engaged by ProTen Pty Ltd as the accredited Site Auditor for the Rushes Creek Poultry Production Farm. Amanda Lee is the NSW EPA accredited Site Auditor.

3. Document Reviewed

For the preparation of this letter, the Site Auditor has reviewed the following document:

- Site Remediation and Validation Report - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (16/02/2022) (Doc Ref No: 610.30237.00000-R02-v2.0-20220216.docx)

The Auditor has now closed out all comments on the Site Remediation and Validation Report.

4. Closing

Please contact the undersigned should you require any additional information.

Yours faithfully,



Amanda Lee

NSW EPA Accredited Contaminated Site Auditor (1504)

Director

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Table 1 Auditor Comments on Site Remediation and Validation Report Ruses Creek Poultry Production Farm prepared by SLR on 22/12/2021

Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants' response (24/12/2021)	Auditor Comment (14/01/2022)
1	2.1	Objectives	Please include within the objective of validating the remediation- inclusion of meeting the remediation goals of the revised RAP (April 2021).	Updated Objectives to reference RAP	Closed
2	3	Site Identification	The RAP states "The remedial area covers approximately 700 m ² , occupying a small portion of Lot 165 of Deposited Plan (DP) 752169. Where as the Validation report states "a small portion of Lot 62 of DP 1276824" Please clarify which of these is correct	Confirming that the Lot and DP is now Lot 62 of DP 1276824, as listed in the Val report	Closed
3	Section 4.1	Site History	For completeness and as requested by the Site Auditor please state what information sources were consulted in order to present the summary of the site history.	Included information sources for site history in Section 4.1, as documented in the PSI (2018)	Closed
4	Table 5-2	Summary of Surrounding Environment	Summary of surrounding land uses states that the surrounding land to the South and East is Agricultural. Currently there is a house inhabited by the property owner located to the South-East of the capped area. Proposed farm managers houses will be located to the south of the capped area (Figure 2).	Updated to reflect the presence of and proposed low density residential dwellings in the surrounding area	Closed



Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants' response (24/12/2021)	Auditor Comment (14/01/2022)
5	Section 7	Conceptual Site Model	Please include consideration of the current and future onsite residents within the CSM.	SLR considers current and future residents to be an incomplete or insignificant pathway, given that the impacted materials have been capped, the area fenced and distance to the current and future residents. To demonstrate that this has been considered we have update the CSM to show potentially complete or minor pathway via inhalation of dust for offsite residents, as whilst the residents are on the property they are fenced outside of the site (the capping area).	Closed
6	Table 9 - 1	Summary of Remedial Activities	The Auditor notes that Table 9-1 states that the Revised RAP was endorsed by the Auditor. The Auditor notes that while the auditors' comments on the change log were closed, many comments were made about future improvements that needed to be included for future reports relating to this site. The Auditor notes that the RAP was not intended to be revised and the Auditor was appointed after it was complete. Please remove the "endorsed" statement.	Removed the statement endorsed by the Auditor, and replaced with "Site Auditor comments closed"	Closed
7	Section 9.1	Remediation Goal	The Auditor notes that whilst SLR have defined the primary goal to reduce risk to human health and environmental receptors, the remedial assessment criteria is protective of human health only.	Noted, however given the site setting and as arsenic is the primary contaminant of interest, the HIL A for arsenic (100mg/kg) also reflects the Ecological Investigation Level for aged arsenic contamination in urban residential and public open space land use setting (100mg/kg)	Closed



Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants' response (24/12/2021)	Auditor Comment (14/01/2022)
8	Table 9 -2	Remediation Assessment Criteria	The report would benefit from some background as to why the remedial goals have significantly increased since the preparation of the RAP. Also how environmental receptors will be protected.	Paragraph added below Table 9-2 regarding environmental receptors	The additional contaminants and guideline values have not been addressed. These are in addition to those presented in the RAP. Requires discussion. Closed as of 16/02/2022
9	9.2	Arsenic delineation sampling	The Auditor requests that further methodical detail be provided on how the timber from the shed was treated and compacted	Refer to Section 9.6.5	Closed
10	9.4	Permeability Testing	The Auditor requests that the exact location of the sourced material onsite be indicated on a figure. Please also include a chain of custody form for this material from the site to the laboratory.	Refer to Figure 2. The capping material was sourced from the cut at the southern end of farm 2. Chain of Custody documentation has been requested from the contractor	Please provide the chain of custody documentation. Closed 15/02/2022
11	Table 10-2	Data Quality Indicators	In the table Precisions/Data Acceptance Criteria the first bullet point states that "30% RPD, with RPDs>30% reviewed in relation to sample heterogeneity and the LOR (<5*LOR)" Please explain what LOR (<5*LOR) means.	LOR changed to concentration. Meaning if the RPD is greater than 30%, but the contaminant concentration is less than five times the LOR, then the RPD will be deemed acceptable	Closed.
12	Table 10 - 3	Validation Methodology	The report states that works were undertaken in general accordance with the guidelines. The Auditor requests that works that were not undertaken in accordance with the guidelines be outlined.	No works were undertaken not in accordance with guidelines	Please update text to reflect this statement. Not Updated. Closed 15/02/2022
13	Table 10 - 3	Summary of validation sampling program	Please include the Auditor site inspection on the 21/09/2021 in the dates of Field Activity.	Included in Table 10-3	Not updated, Site visit was on the 21 st September not 21 st November. Closed 15/2/2022



Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants' response (24/12/2021)	Auditor Comment (14/01/2022)
14	Table 12 - 1	Summary of QA/QC	The final row of table 12-1 states that the review of the survey information is to be updated. The Auditor notes that this is the final validation report and all survey information should be inclusive.	Survey information is now final. To be updated removed from Table 12-1	Closed
15	13	Conclusion	Please include a statement advising that the remedial criteria of the RAP was met.	Statement included in Section 13	Closed
16	General	Compaction report	The Auditor requested that compaction reports be provided to ensure that the RAP objectives were met. Please supply compaction report.	Compaction reports requested from the Contractor	Please provide the compaction reports. Closed 15/02/2022
17	Figure 2	Remediation Area	Please indicate the location where the material for the cap was sourced on the site.	Figure 2 updated to show that the capping material was sourced from the cut at the southern end of farm 2.	Closed
18	Figure 2	Remediation Area	As per comment 5 houses and residential use of land is marked on the site. Please include this in the Summary of Surrounding Environment table in table 5-2.	Table 5-2 has been updated to reference low density residential dwellings within the Property and in close proximity to the site.	Closed
19	Figure 4	Unexpected find	Please mark the Site Audit Area for completeness on this figure	Figure 4 updated to show the Site Audit Area Boundary	Closed
20	Figure 5	Stockpile Location	Please ensure that Figure 4 indicates it is temporary staging of unexpected finds stockpile and that an as built drawing of the CAP is provided for completeness.	Title blocks in Figures 4 and 5 updated to reflect temporary stockpile staging	Closed
21	Appendix D	Table 4	Why aren't the adopted remedial goals used on this table? It is not clear why NSW 2014 guidelines have been presented?	NSW EPA 2014 were applied in the event that the unexpected find material was to be disposed of offsite. It is noted that the NSW EPA 2014	For completeness given the material remains in-situ, please reference the remedial goals.



Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants' response (24/12/2021)	Auditor Comment (14/01/2022)
				'No leaching' criteria is the same as the NEPM HIL A criteria specified in Table 9-2 for Contaminants of Interest detected (As, Cr, Ni, Pb), of which there were no exceedances.	
22	Appendix H	As built diagram	Please provide final as built diagram.	All surveys in Appendix H are final	Closed



Site Audit Memo 08 (SAM08): Interim
NSW EPA Auditor Advice – Long-Term
Environmental Management Plan (SLR,
2021h)



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Sydney, NSW, 2000

14/01/2022

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c/o Eryn Bath EME Advisory
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Greenwich NSW 2065
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To Eryn Bath,

Review of Long-Term Environmental Management Plan - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (23/12/2021) (Doc Ref No: 610.30237.00000-R04-v1.0-20211223.docx)

1. Introduction

This NSW EPA Auditor interim advice is in reference to the Long-Term Environmental Management Plan - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (23/12/2021) (Doc Ref No: 610.30237.00000-R04-v1.0-20211223.docx).

2. Background

The Rushes Creek Poultry Production Farm is considered a state significant development (SSD) and was given a consolidated consent from the NSW DPIE on 14/04/2020 (SSD-7704). This letter forms our interim advice on the Long-Term Environmental Management Plan prepared by SLR Consulting Pty Ltd on the 23/12//2021.

SAGE Environmental Services Pty Ltd (SAGE) have been engaged by ProTen Pty Ltd as the accredited Site Auditor for the Rushes Creek Poultry Production Farm. Amanda Lee is the NSW EPA accredited Site Auditor.

3. Document Reviewed

For the preparation of this letter, the Site Auditor has reviewed the following document:

- Long-Term Environmental Management Plan - Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 (23/12/2021) (Doc Ref No: 610.30237.00000-R04-v1.0-20211223.docx).

Please see the attached Site Auditor Changelog detailing the historical change log and Auditor's comments on this document.

4. Ensuring the LTMP is “legally enforceable”

The Auditor requests that they are included in correspondence in which Proten have approached the Tamworth Regional Council and asked for reference to the LTMP to be recorded on the section 149 (2 &5) certificate or under Section 88B of the Conveyancing Act.

5. Closing

The Auditor Considers that the points raised in the changelog are closed out.

Please contact the undersigned should you require any additional information.

Yours faithfully,



Amanda Lee

NSW EPA Accredited Contaminated Site Auditor (1504)

Director

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Table 1 Auditor Comments on Long Term Environmental Management Plan Report Rushes Creek Poultry Production Farm prepared by SLR on 23/12/2021

Comment Number	Section Reference	Subject	Auditor Comment (20/12/2021)	Consultants response (24/12/2021)	Auditor Comment (14/01/2022)
1	Basis of report	3 rd party reliance	Please ensure in future the site Auditor is listed as an intended recipient: "This report is for the exclusive use of the Client <i>and appointed site auditor.</i> "	Text amended to include Appointed Site Auditor	Closed
2	Section 1	Site reference	Please list accurate Lot and DP information in the Introduction	Included Lot and DP is now Lot 62 of DP 1276824	Closed
3	Table 1-1	LTEMP Responsible Authority and Parties	What is the rationale for review every 3 years? By whom?	Given the site conditions (nature of contamination, extremely limited use of the site), Annual Reviews are too frequent so a review of the LTEMP every 3 years by the Site Owner is reasonable	Closed
4	Section 1.1.1	Enforceability of the EMP	The Auditor requests that the LTEMP be recorded on the section 149 (2 &5) certificate or under Section 88B of the Conveyancing Act in addition to be being recorded on "the Namoi Unlimited (2019) Policy Managing Contaminated Land or Potentially Contaminated Land"	Included reference to recording the LTEMP on the S10.7 Certificates or Section 88B of the Conveyancing Act	Closed
5	Section 1.2	Purpose	Why is the cap exists would any authority withdraw a requirement? I think the LTEMP needs to state the reasons that it would be withdrawn are if the CAP was decommissioned and removed from the site or to another area of the site subject to council requirements.	Text updated to include an note to reasons why the LTEMP would be withdrawn	Closed
6	Section 2.2.4	RAP	The LTEMP needs to link the RAP with the unexpected finds so that its clear that the remedial objectives	Reference made to the Unexpected Finds Protocol in the RAP, and how addressing an unexpected find in the preferred remediation approach	Closed



			cover off both even though the RAP didn't explicitly deal with asbestos.	(capping) would still meet the remediation objectives	
7	Section 2.2.4	RAP	Historical detail of other remedial options are not required here. What is required is the final as built drawings which are missing from the LTEMP and Validation report.	Survey Plans of the cap are provided in Appendix C. While Figure 4 provides an as built cross-section of the capping layers.	Closed
8	Section 2.3	Site Contamination Status	Would be good to reference the marker layer here.	Included reference to a marker layer	Closed
9	Section 4.2.1	Groundwater impacted by Arsenic	The information provided here suggests that groundwater is heavily impacted by Arsenic. Given the clay layer and geology, a reasonable argument was put forward in the delineation works completed by SLR as to why groundwater wasn't being considered in addition to overly conservative leachate testing. It needs to be put into context more appropriately.	Text updated to reflect that arsenic impacted groundwater is not considered to be a risk	Closed
10	Section 7.3	Inspection and Maintenance	Final as built drawings need to be included in the LTEMP.	Survey Plans of the cap are provided in Appendix C. While Figure 4 provides an as built cross-section of the capping layers.	Closed
11	Section 7.3	Inspection and Maintenance	There is no reference to the site being secure and fenced with signage. What are the requirements to maintain those elements?	Reference to fencing and signage included. Site inspection form (Appendix D) updated to include inspection of the site fencing and signage	Closed
12	Figure 4	As built plans	This needs to be updated to reflect accurate survey and as built conditions.	This existing Figure 4 and survey plans provided in Appendix C are considered to provide sufficient detail for the ongoing inspection, maintenance and management of the capping	Closed



Appendix D: SAGE Site Inspection Notes

Site Audit Memo 04 (SAM04): Site Visit Record – 21 September 2021

Site Visit Record

Project: ProTen Rashes Creek Poultry Production Farm Rashes Creek Road

Date: 21/09/2021

Client: EME Advisory / ProTen

Site Address: 1582 Rashes Creek Rd, Rashes Creek 2346 NSW

Arrival Time: 9:30am

Departure Time: 11:30am

SAGE Employee Attendance: Angela Ruthenberg (the NSW EPA Site Auditors Representative) and Anika Fechner-Head.

Other Employee Attendance Record (Name, Company, Role):

Jason Roesler, SLR, Environmental Consultant

Jamie Reid, TPE, Site Manager

Andrew Donahue, TPE, Excavator Operator

Purpose: Site visit during the field program undertaken by SLR. The site visit was undertaken by Angela Ruthenberg and Anika Fechner-Head, as representatives of Amanda Lee (NSW EPA Site Auditor). The purpose of the site visit was to inspect the progress of planned delineation sampling which were being undertaken on-site with consideration of the following documents which had previously been reviewed by the Site Auditor:

- Detailed Site Investigation (SLR, 2019).
- Revised Remedial Action Plan (RAP) (SLR, 2021).

The NSW EPA Auditor has previously provided comments in relation to the above stated documents:

- Interim NSW EPA Auditor advice, review of Detailed Site Investigation- Proposed Poultry Production Farm, Rashes Creek Road, Rashes Creek 20 August 2021
- Interim NSW EPA Auditor advice, review of revised Remedial Action Plan- Proposed Poultry Production Farm, Rashes Creek Road, Rashes Creek, NSW 25 August 2021

The purpose of the field program, which were planned to be undertaken on the day of the site visit, was understood to include the collection of soil samples from a number of test pits for the purpose of determining the extent of the previously identified arsenic impacts associated with the former sheep dip, and aid in the determination of the required extent of the proposed cap as per the RAP (SLR, 2021).



Observations from site inspection:

- On arrival to the Site, it was observed that the former shed located adjacent to the location of the former sheep dip had been demolished.
- The SLR Representative showed the SAGE Representatives the approximate location of where the former sheep dip was located. This feature was demolished, and the ground was flat with concrete visible in the ground (Figure 1). The sheep dip wasn't evident to the SAGE representative. The SLR representative stated photos had been taken of the stated sheep dip before demolition.
- The former shed was observed to be demolished with the footprint of the building cleared (Figure 2). A timber stockpile remained on site to the west of the former shed footprint (Figure 3). It was unclear to the Auditors representatives where the former sheep dip was located.
- The metal from the former shed was observed to be stockpiled separately to the south of the former shed footprint, it is understood this material will be disposed of off-site (Figure 4).
- The SLR representative indicated that the locations of the test pits completed in previous works was unclear due to no geo-referencing being undertaken at the time. As the location of the previous test pits had been identified in relation to the former shed, the exact location of the former sampling locations is considered to be unknown. In addition, the timber stockpile from the shed was covering a large area to the west of the former shed footprint, likely to be the area where former sampling as part of the DSI (SLR, 2019) was undertaken including the former sheep dip. The SLR representative indicated that there was an awning attached to the former shed, and indicated the former sheep dip was located under this awning adjacent to the shed.
- Sampling of a number of test pits had been undertaken prior to arrival. It is understood two pits on the other side of a fence to the North of the anecdotal sheep dip location and one test pit to the West of the former sheep dip (Figure 5). The locations to North were additional to the proposed locations shown in the RAP.
- Sampling of two pits was observed, one to the South of the dip (TP201) and one to the East (TP101). It was noted that the location to the south TP201 was not outlined in the RAP. Two more test pits were taken to the east of the former sheep dip, these were not observed and are discussed below in the Auditor Recommendations.
- At observed test pits TP201 and TP101, samples were taken at surface level, 200mm deep and 700mm deep (Figure 7). SAGE representatives only observed two test pits being sampled. The pits were back filled immediately after sampling.
- Samples were stored in an esky with ice; the hand trowel used for sample collection was decontaminated between samples and test pits. Nitrile gloves were for sampling (Figure 8).
- In accordance with the RAP (SLR, 2021) is understood surveying of the site is to occur after the cap has been built.



- The tree pictured in the foreground of Figure 9 is within proximity of the observed sheep dip. The SLR representative indicated the cap would surround the tree, the TPE representative confirmed the tree would be removed for the cap.
- It is understood capping material will be sourced from other on-Site locations at the property. It is understood three locations have been considered for potential areas where capping material can be gained, and samples have been collected for geotechnical considerations. It is understood GPS coordinates of the proposed locations have been collected and will be provided in the geotechnical report. SAGE was shown the approximate locations of one of the stated capping material source locations. It is understood geotechnical and chemical analysis has not been received to date for the capping material. The Auditor requests to be provided with this information once received.
- Anecdotal evidence provided by TPE, indicates the location of the source of the capping material was previously used for agricultural purposes only, and no buildings, structures or infrastructure have historically occurred in proximity to the capping source location (Figure 10).

Auditor Recommendations and Requests:

- SLR indicated that photos had been taken of the sheep dip prior to demolition. The SLR representative indicated the sheep dip was under an awning adjacent to the former shed. The Site Auditors representative requested SLR to provide photos of the sheep dip in their report.
- To enable future identification of the sampling locations, the Auditors representative requested for GPS coordinates to be recorded for each sampling location. The collection of the GPS coordinates was facilitated by TPE, and the Auditors representative observed the readings being captured by the SLR Representative (Figure11).
- Moving the locations – as a result of the Auditors representatives’ recommendations two test pit locations delineating from TP101 to the East of where the SLR representative indicated the sheep dip was formerly placed were moved to improve delineation outcomes. New sample locations were directly next to the indicatable sheep dip location to the east, one in the middle of the footprint of the former shed structure and one at the eastern edge of the previous shed line (Figure 12).
- Discussion of tree – when the auditors representative enquired about a tree which is in close proximity of the observed sheep dip, the SLR representative indicated the cap would surround the tree, the TPE representative confirmed the tree would be removed for the cap. The auditor’s representative confirmed the tree cannot remain within the proposed cap.
- SLR indicated to the Auditors representative that there were two additional test pits undertaken to the north of the former sheep dip and the Auditor observed TP201 which is outlined in a Memo 01 from SLR to the Auditor dated 6 September 2021. The request by the Auditor was for these delineation samples to be collected after the placement of the cap. As indicated in Figure 1 Capping extent. It is not clear to the Auditor if these samples have been collected prior to the cap placement.





Figure 1 Stated Location of former concrete Sheep Dip





Figure 2 Soil on the footprint of the former shed after it had been demolished looking north east.



Figure 3 Timber from demolition of shed, to be used as capping material looking west. TPE facilitating the collection of GPS coordinates with the GPS Rover.





Figure 4 Metal from demolition of shed looking south.





Figure 5 Test pit on other side of fence to the north of the site





Figure 6 Pink paint marking the location of the TP201 to south of the source area.





Figure 7 Sampling of test pit TP101



Figure 8 Samples in esky with ice.





Figure 9 Tree in foreground stated to require removal due to location within the proposed cap area looking east.





Figure 10 General area of where capping material is being sourced from on site





Figure 11 GPS locations of test pits being recorded unknown test pit nomenclature.

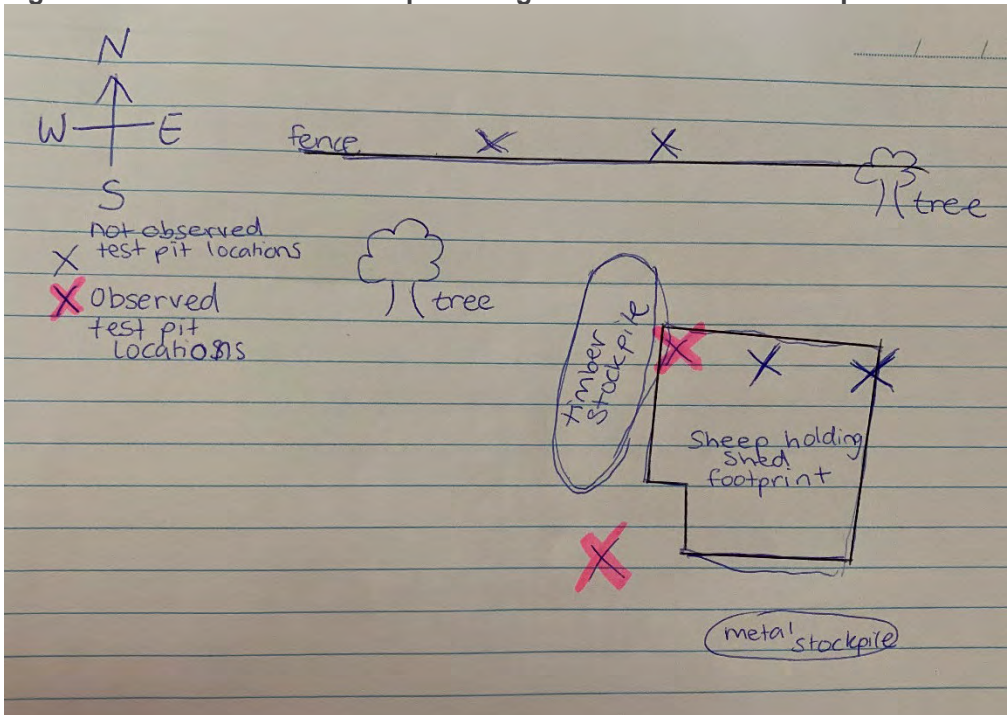


Figure 12 map of observed test pit locations



References:

- SLR, 2021a. Memorandum 01 Audit comments Rushes Creek DSI and RAP, comment 30. Document 610.30237.00000-M01-v0.1 the work20210906.docx, 06 September 2021.
- SLR, 2021b. Revised Remedial Action Plan (RAP) Proposed Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW. Document 610.30237.00000-R01-v2.1-20210422.docx, April 2021.
- SLR, 2019. Detailed Site Investigation- Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW. Doc Ref: 610.18456-R01.v1.2.docx, 2019.
- SAGE Environmental Services, Interim NSW EPA Auditor advice, review of Detailed Site Investigation- Proposed Polutry Production Farm, Rushes Creek Road, Rushes Creek 20 August 2021
- SAGE Environmental Services, Interim NSW EPA Auditor advice, review of revised Remedial Action Plan- Proposed Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 25 August 2021



Site Audit Memo 06 (SAM06): Site Visit Record – 2 November 2021



Site Visit Proten 2/11/21

Amanda Lee SAGE Environmental Services, Site Auditor

Time on Site: 11am

Personnel on site: Jason R (SLR), Graham and Matthew (Proten), Jamie TPE (Civil contractor)

Weather: sunny, 24 degrees, light wind.

Inducted into the Proten Site Induction and then SLR ran through an electronic tool box talk however I wasn't signed onto the SWMS as there was no reception.

Photo 1 below is from the CAP looking towards the west towards the former shed building footprint. TP103 the most western extent was not included in the CAP footprint.

I discussed the requirement for the survey to include the fenced area as well as the CAP. SLR raised the need for a fence and I noted this had previously been discussed and SLR had indicated that a fence was required.

SLR noted that TP202 was included in the CAP extent. I was unable to verify as there was no survey information presented at the time of the inspection.

The Site Auditor questioned how the building material had been compacted in the CAP. SLR stated that the largest size was 10mm.

The Auditor walked the extent of the CAP and did not observe any presence of asbestos containing material. The CAP showed evidence of compaction.

The Auditor noted that there was evidence of excavation behind the CAP extent in an area where test pits were not historically taken. Verbal advice was it was from a tree removal and the Auditor has requested this in writing.

The Auditor discussed the re-seeding and irrigation program to be provided in the EMP or otherwise.

The Auditor was informed by SLR that that the position of TP203 was beneath the CAP extent.

The Auditor left the site at 11.51 am.



Plate 1 looking west from the CAP on the former shed extent.



Plate 2 looking across the CAP towards the east from the west



Plate 3 at the indicative position of TP203 looking north east whilst standing on the CAP



Plate 4 standing on the CAP extent looking at the unknown excavation noted verbally to be from tree removal.

Appendix E: Email Correspondence

From: [Hugh Selby](#)
To: [Amanda Lee](#)
Cc: [Eryn Bath](#); [Anika Fechner-head](#); [Angela Ruthenberg](#)
Subject: RE: Rushes Creek - Unexpected Find - Asbestos
Date: Thursday, 30 September 2021 10:33:09 PM
Attachments: [image003.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)
[image017.png](#)
[image018.png](#)
[image026.png](#)
[image028.png](#)
[image029.png](#)
[image030.png](#)
[image832955.png](#)
[image904574.png](#)
[image605104.png](#)
[image347362.png](#)
[image781788.png](#)
[image233911.png](#)
[image127287.png](#)
[image096593.png](#)

Hi Amanda,

Yes Memorandum 02 fulfils the requirement for an Addendum to the RAP.

An additional fragment of PACM has been submitted for analysis. The PACM was not widespread as part of construction and demolition waste, rather the material was soil with domestic non-putrescible rubbish (glass bottles, some plastic) and the occasional PACM fragment (see attached photo).

We are seeking further details on the proposed compaction of the timber.

Regards
Hugh



Hugh Selby

Principal - Land Quality & Remediation

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From: Amanda Lee <amanda.lee@sageenvironmentalservices.com.au>
Sent: Wednesday, 29 September 2021 10:21 AM
To: Hugh Selby <hselby@slrconsulting.com>
Cc: Eryn Bath <eryn@emeadvisory.com>; Anika Fechner-head <Anika.Fechner-head@sageenvironmentalservices.com.au>; Angela Ruthenberg <Angela.Ruthenberg@sageenvironmentalservices.com.au>

Subject: RE: Rushes Creek - Unexpected Find - Asbestos

Hi Hugh

I have taken a brief look at Memorandum 02. Can you please confirm if this document fulfills the requirement for an addendum to the RAP as per Section 2.3 of the Unexpected Finds Protocol (SLR 11 August 2021).

I request that additional confirmation, greater than one sample of the material is submitted to the laboratory for PACM confirmation.

This is due to the risk that there is likely to be a variety of materials from an historical building and therefore the risk is high that if only one piece is selected it may not be representative of the material composition.

In addition, I am also concerned and would like to be provided with more information on how the timber waste from the shed demolition will be broken up to reduce the potential for CAP subsidence. What level of compaction will this material be subject to? Can it please be documented.

Regards

Amanda

Amanda Lee
Director
SAGE Environmental Services
Level 16, 175 Pitt Street, Sydney 2000
Mail: PO Box 4057, Balgowlah Heights
Sydney, NSW 2093

www.sageenvironmentalservices.com.au

M 0417755407



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From: Hugh Selby <hyselby@slrconsulting.com>
Sent: Monday, 27 September 2021 11:09 PM
To: Amanda Lee <amanda.lee@sageenvironmentalservices.com.au>
Cc: Eryn Bath <eryn@emeadvisory.com>; Anika Fechner-head <Anika.Fechner-head@sageenvironmentalservices.com.au>; Angela Ruthenberg <Angela.Ruthenberg@sageenvironmentalservices.com.au>
Subject: RE: Rushes Creek - Unexpected Find - Asbestos

Hi Amanda,

Thank you for your email and time earlier today. The attached Memorandum provides further context on the unexpected find and the proposed approach to managing the material which will be undertaken tomorrow,

Regards
Hugh



Hugh Selby

Principal - Land Quality & Remediation

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 hselby@slrconsulting.com

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From: Amanda Lee <amanda.lee@sageenvironmentalservices.com.au>

Sent: Monday, 27 September 2021 12:27 PM

To: Hugh Selby <hselby@slrconsulting.com>

Cc: Eryn Bath <eryn@emeadvisory.com>; Anika Fechner-head <Anika.Fechner-head@sageenvironmentalservices.com.au>; Angela Ruthenberg <Angela.Ruthenberg@sageenvironmentalservices.com.au>

Subject: RE: Rushes Creek - Unexpected Find - Asbestos

Hi Hugh

Thanks for alerting me to the unexpected finds protocol.

In terms of the area of the site where the asbestos was located, this area is not currently subject to Audit.

However as you have outlined, the area in which you are proposing to place the asbestos will be.

I will require some documentation which outlines that the placement of the "new find" is applicable and appropriate for placement in the CAP.

I don't anticipate this would be a long document, but would outline the nature, extent and volume of material and how it will be stored on site and then where it will be placed in the CAP.

How you plan to validate any staging areas once moved within the Audit area.

Thanks

Amanda

Amanda Lee
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Mail: PO Box 4057, Balgowlah Heights
Sydney, NSW 2093

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From: Hugh Selby <hselby@slrconsulting.com>
Sent: Monday, 27 September 2021 11:57 AM
To: Amanda Lee <amanda.lee@sageenvironmentalservices.com.au>
Cc: Eryn Bath <eryn@emeadvisory.com>; Anika Fechner-head <Anika.Fechner-head@sageenvironmentalservices.com.au>
Subject: Rushes Creek - Unexpected Find - Asbestos

Good morning Amanda,

At Rushes Creek late last week the contractor encountered what appears to be a small area (possibly 10m by 10m) of Potential Asbestos Containing Material (PACM) at the location marked on the attached plan (at Farm 2). The Unexpected Finds Protocol has been implemented. ProTen is keen to retain the material onsite but the current location is where a detention basin is proposed. The arsenic remediation area is approximately 300m away but readily accessible.

So we are proposing:

1. SLR attends site tomorrow
2. Delineation of the extent of the PACM material - 4 test pits (N, S, E, W) extending to 0.5m into natural.
 - a. No sample collection. Inspection only.
3. Excavating and transporting the material approximately 300m onsite to the arsenic remediation area
4. Temporarily stockpiling the material in the arsenic remediation area. This will include covering the material with HDPE or similar.
5. The PACM material will then be capped as part of the arsenic capping using the existing capping layers, scheduled for late October. Subject to the delineation sampling undertaken last week and the results of the capping soil permeability tests.
6. Validation
 - a. Following excavation of the PACM, an inspection of the area for surface PACM and collection of soil validation samples:
 - i. 1 sample from the floor (1 per 100m²)
 - ii. 1 from each wall (1 per 10m).
 - iii. Analysis asbestos w/w.
 - b. This information would be included in the Validation Report prepared for the arsenic remediation works.

6. Long-Term EMP - inclusion of capping asbestos in the Long-Term Environmental Management Plan .

Please advise if you require any amendments to the above approach, as ProTen is keen to start this tomorrow,

Thanks

Hugh



Hugh Selby

Principal - Land Quality & Remediation

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From: [Gillogly, Mitchell](#)
To: "Eryn Bath"
Cc: [Briggs, Ross](#); [Woods, Brendan](#); [Amanda Lee](#); [Lobsey, Sam](#)
Subject: RE: ProTen Rushes Creek LTEMP
Date: Tuesday, 25 January 2022 11:58:56 AM
Attachments: [image003.png](#)
[image004.png](#)

Hi Eryn,

This will be arranged.

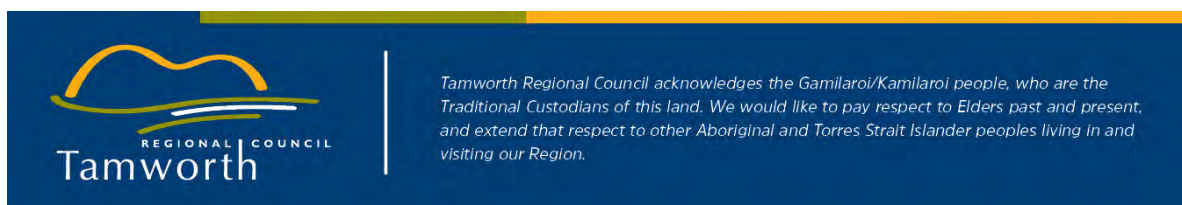
Regards,

Mitch Gillogly
Team Leader – Development Assessment
Liveable Communities

P 02 6767 5462 | **E** m.gillogly@tamworth.nsw.gov.au

437 Peel Street
PO Box 555 Tamworth NSW 2340
www.tamworth.nsw.gov.au

From 1 July 2021 a number of applications previously made through TRC's Online Development Hub will be required to be made through the NSW Planning Portal. For information on what applications are moving please visit www.tamworth.nsw.gov.au/nswplanningportal



From: Eryn Bath <Eryn@emeadvisory.com>
Sent: Tuesday, 25 January 2022 10:10 AM
To: Council External Email <trc@tamworth.nsw.gov.au>
Cc: [Briggs, Ross](mailto:r.briggs@tamworth.nsw.gov.au) <r.briggs@tamworth.nsw.gov.au>; [Woods, Brendan](mailto:b.woods@tamworth.nsw.gov.au) <b.woods@tamworth.nsw.gov.au>; [Gillogly, Mitchell](mailto:m.gillogly@tamworth.nsw.gov.au) <m.gillogly@tamworth.nsw.gov.au>; amanda.lee@sageenvironmentalservices.com.au
Subject: RE: ProTen Rushes Creek LTEMP

Good morning,

Just following up on my below email.... I have not received any response and the auditor (Amanda Lee from Sage, copied) requires confirmation that the LTEMP will be included on the planning certificates going forward before she can sign-off on the project.

Thanks and regards
Eryn

From: Eryn Bath

Sent: Monday, 17 January 2022 2:43 PM

To: trc@tamworth.nsw.gov.au

Cc: r.briggs@tamworth.nsw.gov.au; b.woods@tamworth.nsw.gov.au; m.gillogly@tamworth.nsw.gov.au; amanda.lee@sageenvironmentalservices.com.au

Subject: ProTen Rashes Creek LTEMP

Attention: Brendan Woods

Hi Brendan,

Reference is made to our brief phone conversation this afternoon regarding ProTen's Rashes Creek poultry farm development approved under SSD 7704 (attached).

The independent site auditor engaged to oversee the remediation of pre-existing site contamination has approved the Long Term Environmental Management Plan (LTEMP) for the contamination remediation area. A copy of the final LTEMP and the auditor's close-out letter is attached.

As noted by the auditor, consent condition B52C(b) requires that the LTEMP be listed on the relevant planning certificates for the land issued under s10.7 of the EP&A Act. Is this something you can please arrange?

Thanks in advance
Eryn

Eryn Bath
Principal Consultant, EME Advisory

T: 0427 024739

E: eryn@emeadvisory.com

W: www.emeadvisory.com



Appendix F: Figures by others

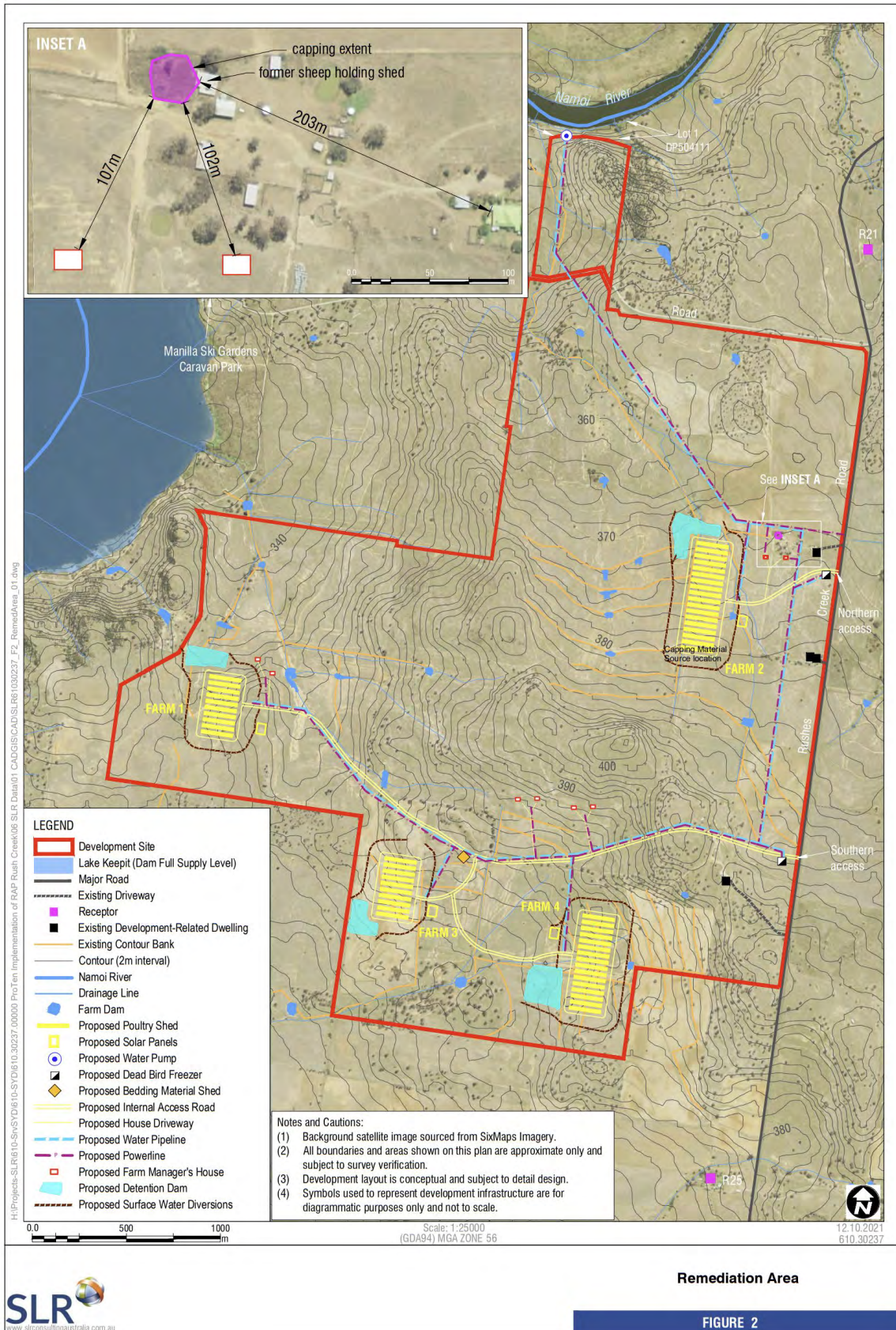


Figure 2 Map from SLR (2022) showing the Rushes Creek Poultry Farm development, with the area subject to Audit identified in inset A (SLR, 2022: Figure 2).



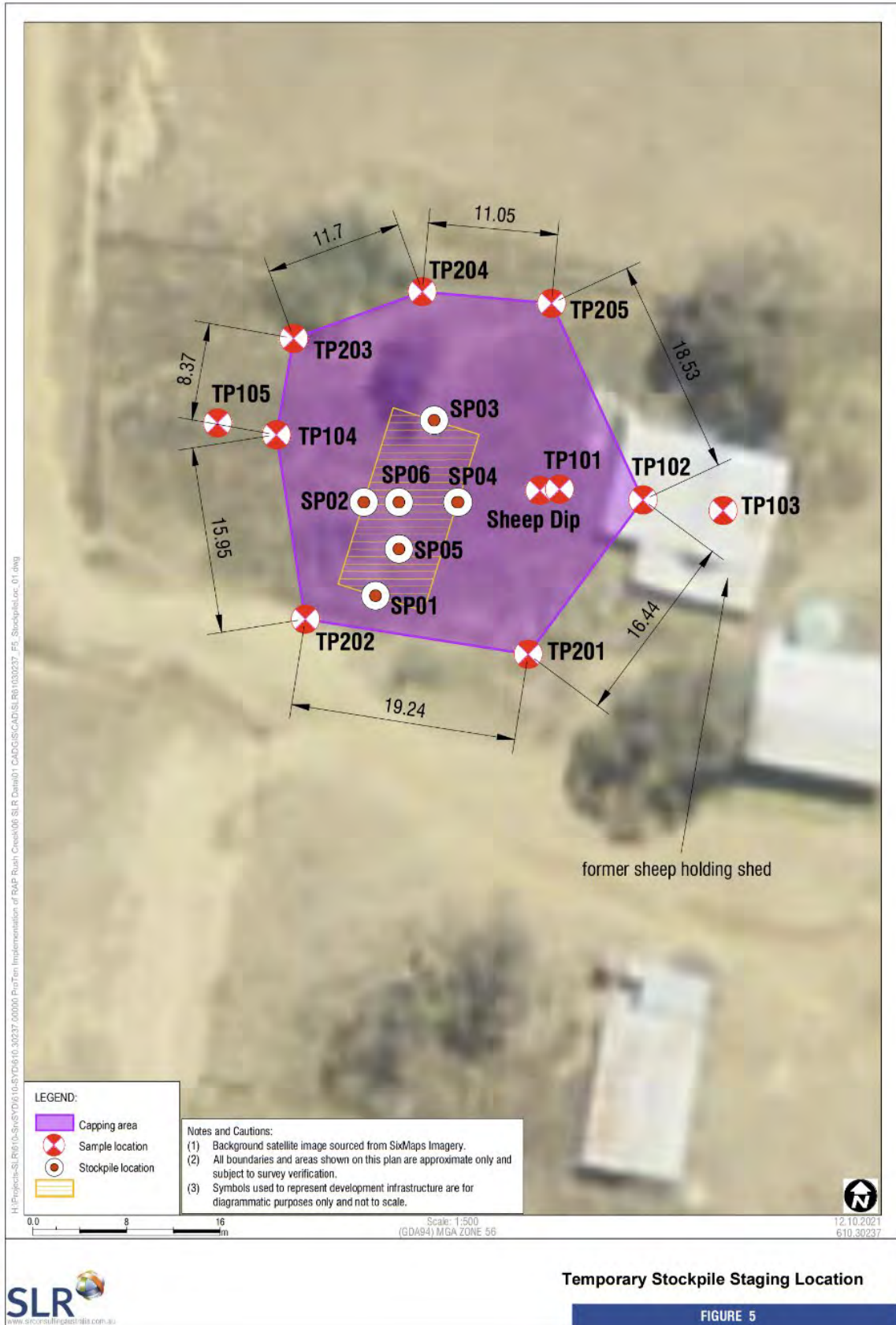


Figure 5 Map from SLR (2022) showing the test pitting locations and stockpile staging locations with reference to the capped extent (SLR, 2022: Figure 5)



Appendix G: Post-Remediation Photographs



Photograph 37 – Capping area showing fencing and revegetation

Date: 07/12/2021



Photograph 38 - Capping area showing fencing with asbestos signage and revegetation

Date: 07/12/2021

Photographs extracted from Appendix B of SLR, 2022. Images show the capped area grassed with a fence constructed around its perimeter. A warning to indicate the presence of asbestos is marked on the fence to the area.



Appendix H: Long-term Environmental Management Plan (SLR, 2021h)

LONG TERM ENVIRONMENTAL MANAGEMENT PLAN

**Rushes Creek Poultry Production Farm
Rushes Creek Road, Rushes Creek, NSW**

Prepared for:

ProTen Pty Ltd
North Sydney, NSW, 2060

SLR Ref: 610.30237.00000-R04
Version No: -v1.0
December 2021

SLR 

PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with ProTen Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client and appointed Site Auditor. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
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1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) was engaged by ProTen Tamworth Pty Limited (ProTen) to prepare a Long-Term Environmental Management Plan (LTEMP) following the remediation of soil impacted by arsenic near a former sheep dip at the proposed poultry production farm located at Rushes Creek Road, Rushes Creek, NSW (the Site). The Site is part of Lot 62 in DP 1276824 and forms a small portion (approximately 700m²) of the larger Rushes Creek Poultry Production Farm (the Property), which was granted Development Consent SSD 7704 by the Department of Planning, Industry and Environment (DPIE) (as delegate for the Minister) on 16 April 2020. A Consolidated Consent was then issued on 15 June 2021, following a modification to the approach to remediation of the arsenic impacted soil. The approved approach to remediation was to cap the arsenic impacted soils onsite.

The site locality and site layout have been identified in **Figure 1** and **Figure 2** in **Appendix A** respectively. Photographs of the site before and after remediation have been presented in **Appendix B**.

1.1 Responsible Parties

Table 1-1 LTEMP Responsible Authority and Parties

Item	Details
Party responsible for implementing the LTEMP	ProTen Pty Ltd
Responsible Authority	Tamworth Regional Council
Time Period for LTEMP	From 09 December 2021. Subject to review by the Site Owner every 3 years
Enforceability of the LTEMP	See Section 1.1.1
Responsibility of enforcement	See Section 1.1.2
Where / how the LTEMP will be recorded	See Section 1.1.3

1.1.1 Enforceability of the LTEMP

The Namoi Unlimited (2019) *Policy Managing Contaminated Land or Potentially Contaminated Land* applies to all land within the Tamworth Regional Council (TRC) Local Government Area (LGA). This Policy relates to TRC's responsibility in contaminated land matters as the regulatory authority for land use planning. This Policy is in place to ensure compliance with the requirements of the Contaminated Land Management Act (1997), the Environmental Planning and Assessment Act 1979 (EP & A Act), State Environmental Planning Policy (SEPP) 55 – Remediation of Land (SEPP55) and the associated Managing Land Contamination: Planning Guidelines (SEPP55 Guidelines); The National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), ASC NEPM, and all relevant Council policies, procedures, and processes.

This Policy commits TRC to maintaining a Contaminated or Potentially Contaminated Land Database (CPCL Database) for land within the local government area. The CPCL Database will identify properties known to the Council, which have a history of contamination, or that have been associated with uses that may have resulted in contamination. The CPCL Database will record details of any site remediation or abatement that has been undertaken, validation records, and audits of remediation work as required by the SEPP55 Guidelines. Information regarding individual properties will be recorded in the CPCL Database. Any enquiries to TRC associated with a property should be checked against information contained within the CPCL Database and associated GIS layers.

The LTEMP must also be recorded on the Section 10.7 Planning Certificates (2 and 5) for the site, made under Section 10.7 of the *Environmental Planning and Assessment Act 1979* or as an Instrument under Section 88b of the *Conveyancing Act 1919* for the site.

1.1.2 Responsibility of enforcement

The ProTen Site Manager undertaking works within Rushes Creek Poultry Production Farm, NSW.

1.1.3 How the LTEMP will be recorded

A copy of the LTEMP is kept in TRC's electronic records system under TRC's CPCL database as per the Namoi Unlimited (2019) *Policy Managing Contaminated Land or Potentially Contaminated Land*.

The LTEMP is also kept in ProTen's Database of documents for the Property, and will be flagged as part of the ProTen Site Induction.

1.2 Purpose

The purpose of this LTEMP is to provide procedures for the owners of the site (ProTen) to meet their statutory obligations relating to the management of potential environmental, health and safety impacts from exposure to arsenic and asbestos impacted soil at the site. The LTEMP is a document that sets the framework within which activities are to be undertaken at the site, including the responsibilities and reporting. All ProTen personnel and subcontractors are responsible for ensuring that their activities are conducted in accordance with all legislative requirements and the requirements of this LTEMP at all times.

This LTEMP is applicable to the management of arsenic and asbestos at this site until the Responsible Authority withdraws this requirement, which would only occur if the cap was decommissioned and removed from the site or moved to another area of the site subject to council requirements. **Table 1-1** lists the Responsible Authority and Parties, time for the plan, enforceability of the plan and where it will be recorded.

1.3 Objectives

The objective of this LTEMP is to maintain the integrity of the capping layers and prevent unplanned breaches of the surface coverings as part of the ongoing primary production land use of the site. The LTEMP aims to:

- Summarise both the surface and sub surface conditions at the site
- Assign responsibilities for the implementation of this EMP
- Protect the health of site workers/occupants by ensuring continued maintenance of the capping layers to prevent exposure to the underlying contaminants

- Protect the health of site workers/occupants in the event that the capping layers are disturbed.

Stakeholder compliance with and implementation of this document will be required, and regular audits should be undertaken to ensure all requirements identified are implemented. The LTEMP will also require regular review to ensure that current site conditions and activities are accurately reflected and any changes in such are catered for in the plan, which may be revised as more information becomes available.

Note: This LTEMP does not cover general site redevelopment activities and deals only with the risks and mitigation measures associated with arsenic and asbestos contaminated soils at the site as shown on **Figure 2** in **Appendix A**.

1.4 Scope

The LTEMP includes information and guidance about:

- advising site occupants (including contractors engaged in maintenance and/or construction work) of the environmental issues and potential hazards, and their accountability for compliance with the LTEMP
- responsibilities of owners, construction / maintenance personnel and subcontractors
- requirements for ongoing monitoring

This LTEMP is not a Health and Safety Management Plan. For health and safety requirements refer to the Occupation, Health and Safety regulations which requires each employer to assess risks and provide for safe work systems in each case.

2 BACKGROUND

2.1 Site Identification

The Site identification details are provided in **Table 2-1**.

Table 2-1 Site Identification

Site Information	Details	
Site Address	<ul style="list-style-type: none"> • Rushes Creek Road, Rushes Creek, NSW (the Site) 	
Parcel Reference	<ul style="list-style-type: none"> • Part Lot 62 DP1276824 (the Site) 	
Site Area	<ul style="list-style-type: none"> • 0.01 hectares (Ha) (the Site) • 1016 Ha total Property area 	
Current Land Use	RU1: Primary Production	
Proposed Future Land Use	Ongoing use as an RU1: Primary Production Poultry production farm	
Local Government	Tamworth Regional Council (TRC)	
Approximate Site – GPS Coordinates (Geocentric Datum of Australia 1994)	Latitude: 30°48'49.91"S Longitude: 150°35'52.46"	Zone: 56 J Easting: 270205.783 E Northing: 6588558.235 S

2.1.1 Topography

Generally, the site is relatively flat with an elevation of approximately 373mHD. Surface water drainage is generally in a westerly direction towards Namoi River located approximately 3.7km to the west and 2.3km to the north.

2.1.2 Risk to Underlying Groundwater

Based on the proposed construction plans SLR considers that there is no risk to groundwater beneath the site. No groundwater sampling is proposed under this LTEMP

2.1.3 Environmentally Sensitive area

There are no sensitive environmental receptors within 500m of the site.

2.1.4 Acid Sulfate Soils

The Australia Soil Resource Information System (ASRIS) indicated that there was no known occurrence of acid sulfate soils at or within the immediate vicinity of the site.

2.2 Previous Investigations

This LTEMP has been prepared following from previous investigations undertaken by SLR consulting Pty Ltd (SLR) on the site to assess the distribution and concentration of arsenic across the site. The results of the previous investigations are summarised below.

2.2.1 Preliminary Site Investigation

The PSI undertaken by SLR titled 'Stage 1 Preliminary Site Investigation Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek' dated July 2018 (SLR 2018) involved a desktop review (including land titles and aerial photographs) and site inspection of the Property. The PSI concluded that:

- An area of environmental concern (AEC) was identified for the Property (the former sheep dip on the Site)
- that the Development Site could be made suitable for the proposed redevelopment, subject to the undertaking of a targeted soil investigation addressing the AEC
- Based on the nature of the COPC identified for the AEC, there are well established means of remediation and/or management that could be implemented to allow the Development to proceed, regardless of the findings of a targeted soil investigation.

2.2.2 Detailed Site Investigation

The DSI undertaken by SLR titled 'Detailed Site Investigation Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek NSW' dated February 2019 (SLR 2019) involved a desktop review of previous reports, site inspection and intrusive works at the site, undertaken over two separate mobilisations consisting a total of 21 test pits. The DSI concluded that:

- Analytical results indicate that arsenic concentrations in soil ranged from below the HIL-A guideline value (100 mg/kg) to exceedances as high as 2,600 mg/kg, and is likely to be associated with the former sheep dip, is elevated above the relevant soil health investigation level (HIL) for standard residential with garden/accessible soil (HIL-A) guideline value in the National Environmental Protection Council's National Environmental Protection (Assessment of Site Contamination) Measure, as amended in 2013 (NEPM 2013)
- Soil sampling undertaken as part of the DSI has delineated the arsenic contamination to the north and south of the sheep dip, with low concentrations still exceeding the HIL-A guideline extending beyond the limit of the assessment to the east (assessment limited by the site shed) and to the west (with concentrations not expected to extend more than 10 metres west given the reducing concentrations from the source)
- Based on the guidance provided in NEPM 2013, SLR considers that the arsenic in soils contamination at the site presents an unacceptable risk to present and future site users, particularly during the proposed site redevelopment. Therefore, the arsenic identified in soils at the site is considered to warrant remedial action.

A groundwater assessment was not undertaken as part of the DSI due to the limited leaching potential of the identified arsenic (confirmed with toxicity characteristic leaching procedure analysis), the observed reduction in arsenic concentrations in soil with depth, and the anticipated depth of groundwater

2.2.3 Asbestos Unexpected Find

An Incident Report (SLR 2021b) was prepared titled, '*Incident Report, Asbestos Unexpected Find, Proposed Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW*', (610.30237.00000-R03) following an Unexpected Find of Potential Asbestos Containing Material (PACM) on 23 / 24 September 2021.

SLR attended the Site at Rushes Creek Road, Rushes Creek, NSW on 28 September 2021 to assess the material. SLR delineated the extent of the impacted soil via excavation of four test pits on the edges of the unexpected find and supervised the excavation of potentially asbestos impacted soil. Approximately 130m³ of material was excavated and transported to the arsenic remediation area approximately 300m east of the unexpected find. The material was stockpiled within the designated capping perimeter of the arsenic remediation and covered with HDPE. As part of the implementation of the arsenic remediation, this material was utilised as part of the long-term cap placed over the arsenic impacted soils as per the approved RAP (SLR, 2021a) for the arsenic impacted soils.

2.2.4 Remedial Action Plan

A RAP titled '*Remedial Action Plan Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW*' (SLR 2019) was prepared and approved as part of the development consent for the poultry farm. The remedial strategy detailed in the 2019 RAP was to excavate the arsenic contaminated soil and dispose of this material off-site at a facility licensed to receive the waste.

An alternative remediation approach was proposed in the revised RAP (SLR 2021a). Based on the discussions with the client, consultation with the EPA, the risks posed to potential receptors including humans at the site and groundwater, and in consideration of the proposed development, the preferred alternative remedial strategy is on-site containment of arsenic contaminated soil. This involves placement of capping (4 layers, with a total thickness of approximately 1.3m) across the arsenic impacted soils (approximately 700m²). The extent of the capping and capping layers are shown on **Figures 3 and 4** in **Appendix A**. Survey of the final capping is provided in **Appendix C**.

The RAP (2021a) also included an Unexpected Finds Protocol (Section 8.6 of the RAP) in the event unexpected contamination was identified during construction. The procedure to be implemented in the event of an unexpected find, allowed for capping which would still meet the remediation objectives specified in the RAP (SLR, 2021a).

2.2.5 Site Remediation and Validation

The Remediation and Validation of works (SLR, 2021c) undertaken by SLR are documented in '*Site Remediation and Validation Report, Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346*'(610.30237.00000-R02).

The remediation works were undertaken between 20 September 2021 and 29 October 2021 by TPE Civil (the principal contractor). The works included the following general steps:

1. Excavation of test pits to confirm the delineation of the arsenic impacted soils and capping extent.
2. Establishment of environmental controls around the remedial area.
3. Removal of vegetation to the extent practical without disturbing the impacted soil
4. Excavation of Virgin Excavated Natural Material (VENM) in the form of low permeability clay sourced from within the Property for use in the capping layers
5. The utilisation of stockpiled material (timber from the former sheep shed and ACM impacted soils) placed within the remediation area as the earth cover layer
6. Placement and compaction of the VENM to form a cap over the arsenic impacted soils (as well as the timber and PACM impacted soils) in accordance the RAP (SLR, 2021a)
7. Grassing of the capping and installation of a fence around the cap.
8. Survey of the capping and fencing.
9. Inspections of the capping works by an Environmental Consultant and the Site Auditor.

SLR concluded that the site is suitable from a contamination perspective for use as a Poultry Production Farm, subject to the maintenance and monitoring of the capping as per the Long Term Environmental Management Plan (LTEMP) for the site.

2.3 Site Contamination Status

Following the remediation and validation works as documented in SLR (2021c), the site contamination status can be summarised as follows:

- Arsenic impacted surface and subsurface soils (concentrations exceeding the Remediation Assessment Criteria [RAC], up to 2,600mg/kg) from a historical sheep dip and asbestos containing material (ACM) impacted soils obtained from an unexpected find, are capped with a marker layer and minimum of 1.3m of low permeability clay. The site is fenced and Danger "Asbestos" signage is present.

Figure 3 of Appendix A shows the location and capping extent. **Figure 4 of Appendix A** shows the layers used in the capping material .

2.3.1 Potential Sources of Contamination

The contamination managed through this LTEMP comprises:

- Arsenic impacted soils to a depth of approximately 1.3 mbgl
- Bonded asbestos and asbestos impacted soils obtained from the Unexpected find as discussed in Section 2.2.3.

3 REMEDIATION CRITERIA

The Remediation Action Criteria (RAC) applied was the Health based Investigation/Screening Levels (HIL/HSL) provided in 'Schedule B1 – *Guideline on Investigation Levels for Soil and Groundwater*' of the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013 (NEPM, 1999). NEPM 1999 provides a framework for the use of investigation and screening levels based on human health and ecological risks. The HILs/HSLs detailed in the NEPM (1999) are scientifically based, generic assessment criteria designed to be used in the initial screening of data for assessment of potential risks to human health from chronic exposure to contaminants.

Given the proximity of the site to low density residential housing, the criteria applied is:

- The soil health investigation levels (HILs) detailed in the NEPM (2013) - HIL-A includes standard residential with garden/accessible soil. The criteria is included in **Table 3-1**.

Table 3-1 Remediation Assessment Criteria

Contaminant of Potential Concern	Criteria (mg/kg)
Arsenic	100
Cadmium	20
Chromium (III+VI)	100
Copper	6,000
Lead	300
Mercury	40
Nickel	400
Zinc	7,400
PAHs (Sum of total)	300
Benzo(a)pyrene TEQ (LOR)	3
Asbestos from ACM in Soil	0.01 %w/w
Asbestos from FA & AF in Soil	0.001 %w/w

4 Conceptual Site Model

4.1 Existing Capping

The extent of the earthen capping layer is shown on **Figure 3 of Appendix A**, with surveys of the extent of arsenic impacted material, capping and fencing provided in **Appendix C**. The contaminated material as summarised in **Section 2.3**, is capped under a marker layer then 1m of site won low permeability clay Virgin Excavated Natural Material (VENM), with 0.3m of topsoil. The capping has been grassed and is fenced off with warning signs.

A schematical representation of the capping layer construction is shown as **Figure 4 of Appendix A**.

4.2 Exposure Scenarios and Exposed Populations

4.2.1 Arsenic

Arsenic is a natural component of the earth's crust and is widely distributed throughout the environment in the air, water and land. It is highly toxic in its inorganic form. Exposure to arsenic in soil can occur through direct contact and ingestion, noting that following the remediation implemented at the site, this exposure pathway has been removed due to the placement of the capping.

The immediate symptoms of acute arsenic poisoning include vomiting, abdominal pain and diarrhoea. These are followed by numbness and tingling of the extremities, muscle cramping and death, in extreme cases.

The risk to groundwater from arsenic impacted soils is low. This is because the concentrations of arsenic in soil decrease with depth; the leachable concentrations of arsenic in soil are low based on leachability testing included in the DSI (SLR, 2019); the soils are low permeability and are also capped with low permeability clay; and the depth to groundwater is greater than 14 metres below ground level. Furthermore, where groundwater is not extracted and used, risks to human health and the environment from groundwater are considered low and the implementation of the specific management actions proposed in this LTEMP will adequately manage these risks.

4.2.2 Asbestos

Asbestos impacted soils, when disturbed (excavated, drilled, transported, handled etc.), have the potential to generate and mobilise asbestos fibres into the air, creating a potential for inhalation of asbestos fibres by site workers and site users and potentially even the general public outside the site boundaries. Inhalation is the primary mode of exposure to asbestos. However, dermal contact with free asbestos fibres has also been understood to be a mode of exposure in asbestos mine workers. Dermal contact with free asbestos fibres is an unlikely exposure scenario at the site.

There are no known environmental risks posed by asbestos (i.e. risks to flora and fauna in either terrestrial or aquatic environments). However, the human health impacts due to exposure to asbestos are well documented in Safe Work Australia *Asbestos-related Disease Indicators* (August 2010) and in the NSW Department of Health Asbestos and health risks website (Accessed 12 December 2019 from <https://www.health.nsw.gov.au/environment/factsheets/Pages/asbestos-and-health-risks.aspx>).

Asbestos fibres can pose a risk to human health if airborne through inhalation. According to NSW Department of Health, asbestos exposure becomes a health concern when high concentrations of asbestos fibres are inhaled over a long time period. People who become ill from inhaling asbestos are often those who are exposed on a day-to-day basis in a job where they worked directly with the material. As a person's exposure to fibres increases, because of being exposed to higher concentrations of fibres and/or by being exposed for a longer time, then that person's risk of disease also increases.

5 STATUTORY REQUIREMENTS

5.1 Environmental Planning Instruments and Guidelines

The principal Environmental Planning Instrument (EPI) for the site is the Tamworth Regional Local Environmental Plan 2010 - (LEP map - Sheet LZN_0002), under the LEP 2010, the site is zoned as RU1: Primary Production.

The following EPI's and guidelines are relevant to the management of arsenic and asbestos at the site,

- Contaminated Land Management Act 1997 (CLM Act) (NSW)
- enHealth (2005), Management of asbestos in the non-occupational environment, Department of Health and Ageing, Australian Government 2005
- Namoi Unlimited (2019) Policy Managing Contaminated Land or Potentially Contaminated Land
- National Environment Protection Council, National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013
- New South Wales (NSW) Environment Protection Authority (EPA), Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition) 2017
- NSW EPA, Waste Classification Guidelines 2014 (NSW EPA 2014)
- NSW EPA, Contaminated Land Guidelines: Consultants Reporting on Contaminated Land (NSW EPA, 2020).
- NSW EPA (2020), Sampling design part 1 – application Contaminated Land Guidelines (Draft for consultation)
- Safe Work Australia (2011), How to Safely Remove Asbestos Code of Practice December of 2011
- State Regional Environmental Planning Policy No. 55 - Remediation of Land
- WA DoH (2009), Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, May 2009
- WA DOH (2009) Management of Small-Scale Low-Risk Soil Asbestos Contamination
- WA DoH (2010), Public Health and Contamination of Soil by Asbestos Cement Material
- WA DoH (2011), Guidance Note on Identification, Assessment and Management of Asbestos Contamination in Regional Public Areas, May 2011
- WA DOH (2021), asbestos – contamination of soil https://healthywa.wa.gov.au/Articles/A_E/Asbestos-contamination-of-soil
- Work Health and Safety Act 2011 (WHS ACT 2011) (NSW)
- WorkCover NSW (2014) Managing asbestos in or on soil, March 2014

6 MANAGEMENT RESPONSIBILITIES

This section details the roles and responsibilities for the management of the arsenic and asbestos impacted soils.

6.1 Site Owner

The Site Owner (ProTen) has the management responsibilities to:

- ensure all workers at the site are advised of the contents of this LTEMP during the Site Induction and pre-works toolbox talks prior to working on site.
- make users of the site aware of the contamination.
- provide a full copy of this plan to future owners in the event the site or portion of the site is sold, or ownership is transferred
- retain documents pertaining to this LTEMP in an appropriate database
- periodically review this LTEMP every 3 years
- nominate a first point of contact for either the community or regulatory authorities who may have queries about the contamination

6.2 Site Manager

The Site Manager responsible for overseeing the LTEMP is to ensure any project team and / or individual undertaking works on site understands their responsibilities to:

- ensure the management measures are implemented on a day-to-day basis
- provide access to a full copy of this plan to all employees working within the area covered by the LTEMP
- ensure adequate training of all employees and contractors during site induction
- ensure that appropriate PPE is worn during any maintenance, intrusive or asbestos/arsenic removal works
- initiate non-conformance and corrective action reports and manage corrective measures as required
- inform any external contractors, maintenance workers, utility workers, subcontractors or other parties that may access the soils of the management conditions described herein

The Site Manager may be the owner of the site, or may include a tenant or other leaseholder, regular visitor to a portion of land or other party that may be likely to use land.

6.3 Construction / Maintenance Workers

Construction and/or Maintenance Workers have the responsibilities to:

- be aware of the management measures and requirements set out in this LTEMP
- adhere to the requirements set out in this LTEMP when working on the site, unless directed by the Site Manager
- inform the Site Manager of their works and unexpected finds.

7 MANAGEMENT ACTIVITIES

7.1 Induction and Training

All personnel and contractors who intend to undertake works at the site shall be inducted in the use of this LTEMP. The site induction is to include the following items:

- General overview of the works to be undertaken at the site
- Overview of contamination issues identified at the site

If the capping is to be disturbed, then asbestos awareness training must also be undertaken.

Contractors engaged to undertake intrusive works at the site must develop worker health and safety documentation (i.e. Safe Works Method Statement [SWMS] or Job Safety Analysis [JSA]) demonstrating conformance to this LTEMP and understanding of the potential for unexpected contaminant finds at the site.

7.1.1 Asbestos Awareness Training

In accordance with clause 445 of the WHS Regulation ProTen has a duty to train workers who will be involved asbestos removal works that do not require a licence (<10m²) in the identification, safe handling and suitable control measures for asbestos and ACM.

The training is to clarify ProTen Staff / Contractor obligations under the WHS Regulation and shall include the following topics:

- purpose of the training
- health risks associated with asbestos exposure
- types i.e. bonded or friable, and likely presence of asbestos on the site
- the roles and responsibilities of both ProTen and ProTen Staff / Contractors under this LTEMP
- how to access historical reports associated with the site
- the processes and safe work procedures to be followed to prevent exposure
- the correct use of PPE including respiratory protective equipment (RPE)
- the control measures and safe work methods to followed during collection of asbestos fragments to eliminate or minimise the risks associated with asbestos to limit the exposure to workers and other persons
- exposure standard and control levels for asbestos
- purpose of any exposure monitoring or health monitoring that may occur.

ProTen must keep records of all training while the worker is carrying out the work and for five years after the day the worker stops working for ProTen. These records must also be available for inspection by the regulator.

7.2 Management Measures

In the unlikely event that the capping is to be disturbed, this section provides the management procedures for the following excavation activities:

- small-scale disturbance/trenching such as the installation or repair of subsurface utilities.
- excavation for culverts/channels
- retaining walls

Generally, the management measures for the capping area affected/disturbed by various activities, include:

- A suitably trained individual (i.e. an individual who has completed asbestos awareness training) who has reviewed this LTEMP should be present to monitor any disturbance to the marker layers and/or capped material and to ensure that the procedures contained within this LTEMP are followed.
- Disturbance of the underlying capped material is required to be undertaken under Class B asbestos conditions. The cap will require re-instatement, as per **Section 4.1** i.e. replacement of marker layer should this be removed, and re-instatement of a minimum 1.3 m of VENM for the cap (refer to **Figure 4** in **Appendix A**).
- If imported material is required it must be accompanied by a VENM certificate and demonstration that it meets the low permeability requirement of 1×10^{-8} or lower
- Rectification works should be undertaken as soon as practicable. Refer to **Section 4.1** of this LTEMP for capping layer specifications in the event the cap requires re-instatement.
- If the cap is inadvertently breached during intrusive works, resulting in the exposure of asbestos impacted or arsenic contaminated soils the following should be implemented:
 - all works should cease immediately.
 - An appropriately qualified environmental consultant should be consulted for advice as soon as practicable.
 - The environmental consultant will provide advice on measures to manage the risks posed by the exposed contaminated soils and a strategy to re-instate the breached capping layer.
 - The rectification of the cap will be required to ensure that the cap meets the required capping layer specifications as outlined in **Section 4.1**.
- Sediment and erosion control must be carefully implemented to ensure no contamination of surrounding clean material.

All contaminated spoil must be separated from clean material and stockpiled on impermeable plastic and covered with geo-fabric at the end of the shift. Any off-site disposal must be tracked, and material must be classified in accordance with the NSW EPA (2014) *Waste Classification Guidelines*.

- If the capping layer has been altered, the contractor is responsible for surveying and submitting a new survey to ProTen Pty Ltd.

7.3 Inspection and Maintenance

The capping layers (refer to **Figure 4** in **Appendix A**) and extent (refer to the **Survey Plans** in **Appendix C**) are required to be maintained for the lifetime of this LTEMP to ensure that the low to negligible risk of exposure is maintained. It is the responsibility of the Site Owner to ensure that inspections of the capping are undertaken as follows:

- At least once every 12 months.
- Include a walkover across the surface of the site area and inspection of the fencing and signage, to ensure that the fencing and signage is in place and secure.
- Include a written and photographic record as per **Appendix D** of the following:
 - General condition of unsealed surfaces

- Does grass cover >75% of the cap
- Presence of any shrubs or trees, excluding shallow rooted (<10mm) grasses - the nature, extent and location need to be recorded and removal works are required to be implemented
- Presence of any subsidence, cracks, openings, degradation, erosion or similar in the surface coverings – the nature, extent and location need to be recorded and rectification works are required to be implemented
- Presence of any obvious repair/maintenance works to the surface coverings– the nature, extent and location needs to be recorded
- Presence of any excavation works into the sub-surface and the control measures being undertaken
- Any other observations on the condition and/or integrity of the surface coverings.

Where rectification works are required to be implemented or where repair/maintenance works are being undertaken, the Site Owner must ensure that these works are undertaken in accordance with the measures set out in this LTEMP. On completion of such works, the Site Owner must conduct an inspection to ensure that the capping has been adequately re-instated/restored. The record of the required inspections is required to be kept and maintained by the Site Owner.

7.3.1 Irrigation

To assist in maintaining the integrity of the cap, it is preferable to maintain the native grass cover. This may involve light watering and re-seeding of the grass, where the grass is present on <75% of the cap.

Maintaining the soil moisture in the cap will also improve the capping integrity. However, given the extra thickness of the low permeability clay layer, no soil moisture content limits have been applied.

7.3.2 Mowing

When maintenance of the vegetation, within the perimeter of the site, is required this must be conducted in such a manner as not to damage or modify the capping material.

8 COMMUNITY LIAISON, MONITORING and REVIEW of LTEMP

8.1 LTEMP Revision

It is the responsibility of the Site Owner to ensure this LTEMP is maintained as required and reviewed in the event, that one of the following occurs at the site:

- The site's land-use scenario changes
- An unexpected find is identified at the site, indicating a change in the contamination status of the site
- The design specifications of the cap are altered and/or major earthworks are proposed at the site.

It is the responsibility of the Site Owner to engage a suitably qualified environmental consultant to amend the LTEMP for the site as required. The Site Owner must maintain and provide a current version of this LTEMP.

8.2 Record of Implementation

Records of the implementation of this LTEMP must be kept and maintained by the Site Owner, including but not limited to:

- A register of site inspections
- A register of persons inducted to this LTEMP (including the inductee and inductor names, employer, date of induction, nature of the works undertaken, the contractor (if applicable) and signatures of the inductee and inductor
- A register of environmental incidents, non-conformances, complaints and corrective actions taken.

8.3 Auditing

A suitably qualified ProTen environmental officer shall conduct audits on the implementation of the LTEMP. An audit will be conducted annually. Audits shall involve a review of all environmental documents and records to ensure compliance with the requirements of the LTEMP. The audits shall also identify whether Non-Conformance and Corrective Action Reports have been accurately and effectively implemented. If any deficiency is detected ProTen shall initiate a Non-Conformance Report and initiate the appropriate corrective action. Key environmental and procedural issues to be covered by the audit shall include, but may not be limited to:

- The environmental management procedures
- Emergency response
- General site issues
- Adherence to reporting procedures
- Complaint management
- Consents, licences, and leases, with respect to environmental management measures
- Asbestos Awareness training.

8.4 Community Liaison

Table 8-1 Community Liaison Management Strategy

Item	Narrative
Key Environmental Objectives	<ul style="list-style-type: none"> • Maintain a positive relationship with the community and neighbouring property owners
Description	<ul style="list-style-type: none"> • The community shall be informed of any activities that may impact neighbouring properties
Strategies	<ul style="list-style-type: none"> • Provide information to the community on issues affecting them • Respond promptly to any request for information or complaints from the public
Performance Indicators	<ul style="list-style-type: none"> • Complaints kept to a minimum
Monitoring / Reporting Requirements	<ul style="list-style-type: none"> • Maintain complaints register
Training Requirements	<ul style="list-style-type: none"> • N/A

Key Legislation

- N/A

Table 8-2 Community Liaison Implementation Items

Description	Responsibility	Deliverables/ Monitoring	Timing
Site management contact details shall be clearly signposted at the entrance to the site		Clearly visible sign	At all times
Complaints shall be responded to in a prompt manner		Complaints register maintained	At all times

8.4.1 Complaint Reporting

Members of the public shall be able to register a complaint in relation to activities conducted on site, by calling ProTen. The phone number is to be clearly shown at the site entrance.

All complaints regarding pollution and environmental issues relating to the site shall be referred to ProTen immediately. Details of the complaint are to be documented by ProTen on a Complaints and Environmental Incidents Register. ProTen shall respond to any complaints within 24 hours and provide (at least) an interim solution to the potential environmental issue. If it is impractical to generate a solution within 24 hours, then a second response, including a reasonable solution, is to be developed and communicated to the complainant as soon as possible. This follow-up contact should also be recorded in the register.

If a complaint identifies a non-conformance, a Non-Conformance and Corrective Action Report is to be initiated.

8.5 Non-Conformance and Corrective Action Reports

Non-Conformances noted in the Site Inspection Reports or reported to the ProTen Site Manager are to be recorded in a Non-Conformance and Corrective Action Report by ProTen. Details of the non-conformance, including any immediate corrective actions undertaken, are to be recorded by ProTen.

It is the responsibility of ProTen to immediately initiate corrective actions, if required. The Non-Conformance and Corrective Action Report must include details of the corrective action proposed and an appropriate close out date. The report should be signed, dated, and filed.

8.6 Incident Management Reports

Any incidents on site that are likely to cause pollution shall be reported immediately to ProTen. The Site Manager will meet with the notifying party as soon as practicable following an incident to commence investigations and make recommendations. Any spills or accidents, and the corrective actions undertaken, shall be documented in a Non-Conformance and Corrective Action Report.

8.7 Quality Management

The ProTen shall maintain records of all documentation arising from implementation of the LTEMP and implementing environmental management procedures. Records will include:

- Approvals, licences and permits
- Monitoring results
- Site inspection reports
- Audit results
- Non-Conformance and Corrective Action Reports
- Training register
- Complaints and incident records
- Environmental correspondence, and
- Miscellaneous items.

All records shall be maintained in a legible state and stored by ProTen, for at least 4 years. Records shall be made available to authorised officers of the NSW Environment Protection Authority (EPA) and other agencies if required.

8.8 Environmental emergency response

In the event of any incident, the priority shall be the safety of all personnel and the community in the immediate vicinity. Following this, further environmental impact shall be prevented/ minimised by stabilising the situation and following the appropriate incident management procedures. Relevant staff shall then be contacted, and emergency procedures enacted.

Emergency procedures and contact telephone numbers shall be displayed in a prominent position within each part of the site.

Table 8-3 Emergency Contacts

ProTen	Julian Johnson	0406 484 474
NSW EPA	-	131 555

ProTen or its employees must notify the EPA of incidents causing or threatening material harm to the environment as soon as practicable after the person becomes aware of the incident. Notification must be made by telephoning the EPA Pollution Line service on 131 555.

A written report detailing the notification to the EPA should be provided within 7 days of the date on which the incident occurred.

9 REFERENCES

AS 4482.1-2005 (2005) Guide to Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile Compounds.

AS 4482.2-1999 (1999) Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances.

ASTM (2014) Standard Guide for Developing Conceptual Site Models for Contaminated Sites. ASTM E1689-95. American Society for Testing and Materials ASTM International.

CRC CARE (2017) Risk-based management and remediation guidance for benzo(a)pyrene. CRC CARE Technical Report no. 39. CRC for Contamination Assessment and Remediation of the Environment. Newcastle. Australia.

CSIRO Land & Water (2011) *Atlas of Australian Acid Sulfate Soils*. Commonwealth Scientific and Industrial Research Organisation Australia. Available at <https://doi.org/10.4225/08/512E79A0BC589>. Last viewed on 29 March 2018.

NEPC (1999) National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013. National Environment Protection Council. Available at <https://www.legislation.gov.au/Details/F2013C00288>. Last viewed on 26 July 2018. Referred to as ASC NEPM.

National Environment Protection Council (NEPC) (1999), 'Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'. (NEPM 2013a)

National Environment Protection Council (NEPC) (1999), 'Schedule B(2) Guideline on Site Characterization, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'. (NEPM 2013b)

National Environment Protection Council (NEPC) (1999), 'Schedule B(5a) Ecological Risk Assessment, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'. (NEPM 2013e)

NSW EPA (2020) Contaminated Land Guidelines: Consultants Reporting on Contaminated Land.

NSW EPA (2014) Waste Classification Guidelines.

Standards Australia (2005) *Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and semi-volatile compounds*. AS 4482.1-2005. Standards Australia, Homebush NSW.

SLR (2018) Preliminary Site Investigation, Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek dated July 2018 (SLR Ref No: 610.16117.00400-R01-v0.2)

SLR (2019) Detailed Site Investigation, Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek dated February 2019 (SLR Ref No: 610.18456-R01-v1.2)

SLR (2021a) Remedial Action Plan, Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek dated April 2021 (SLR Ref No: 610.30237.00000-R01-v2.1)

SLR (2021b) Incident Report: Asbestos Unexpected Find, Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek dated October 2021 (SLR Ref No: 610.30237.00000-R03-v1.0)

SLR (2021c) Site Remediation and Validation Report, Rushes Creek Poultry Production Farm, Rushes Creek Road, Rushes Creek, NSW 2346 dated November 2021(610.30237.00000-R02-v1.0).

10 LIMITATIONS

This report is for the exclusive use of the client and Site Auditor. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR Consulting.

This report has been prepared based on the scope of services. SLR Consulting cannot be held responsible to the Client and/or others for any matters outside the agreed scope of services. Other parties should not rely upon this report and should make their own enquiries and obtain independent advice in relation to such matters.

This report has been prepared by SLR Consulting with reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected (data, surveys, analyses, designs, plans and other information), which has been accepted in good faith as being accurate and valid.

It should be noted that many investigations are based upon an assessment of potentially contaminating processes which may have occurred historically on the site. This assessment is based upon historical records associated with the site. Such records may be inaccurate, absent or contradictory. In addition, documents may exist which are not readily available for public viewing.

Except where it has been stated in this report, SLR Consulting has not verified the accuracy or completeness of the data relied upon. Statements, opinions, facts, information, conclusions and/or recommendations made in this report ("conclusions") are based in whole or part on the data obtained, those conclusions are contingent upon the accuracy and completeness of the data. SLR Consulting cannot be held liable should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to SLR Consulting leading to incorrect conclusions.

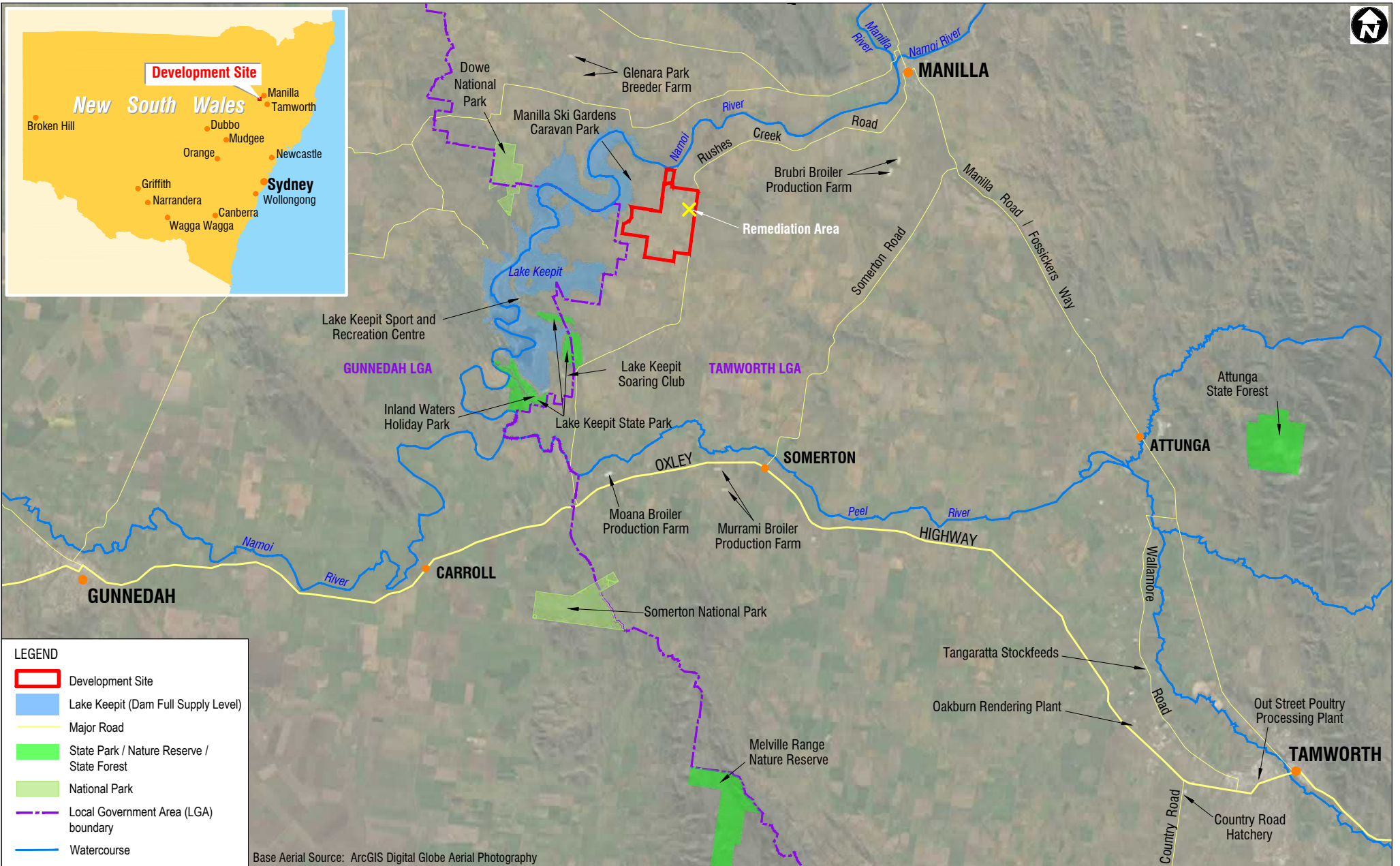
Should the report be reviewed for any reason, the report must be reviewed in its entirety and in conjunction with the associated Scope of Services. It should be understood that where a report has been developed for a specific purpose, for example a due diligence report for a property vendor, it may not be suitable for other purposes such as satisfying the needs of a purchaser or assessing contamination risks for classifying the site. The report should not be applied for any purpose other than that originally specified at the time the report was issued.

Report logs, figures, laboratory data, drawings, etc. are generated for this report by SLR consultants (unless otherwise stated) based on their individual interpretation of the site conditions at the time the site visit was undertaken. Although SLR consultants undergo training to achieve a standard of field reporting, individual interpretation still varies slightly. Information should not under any circumstances be redrawn for inclusion in other documents or separated from this report in any way.

APPENDIX A

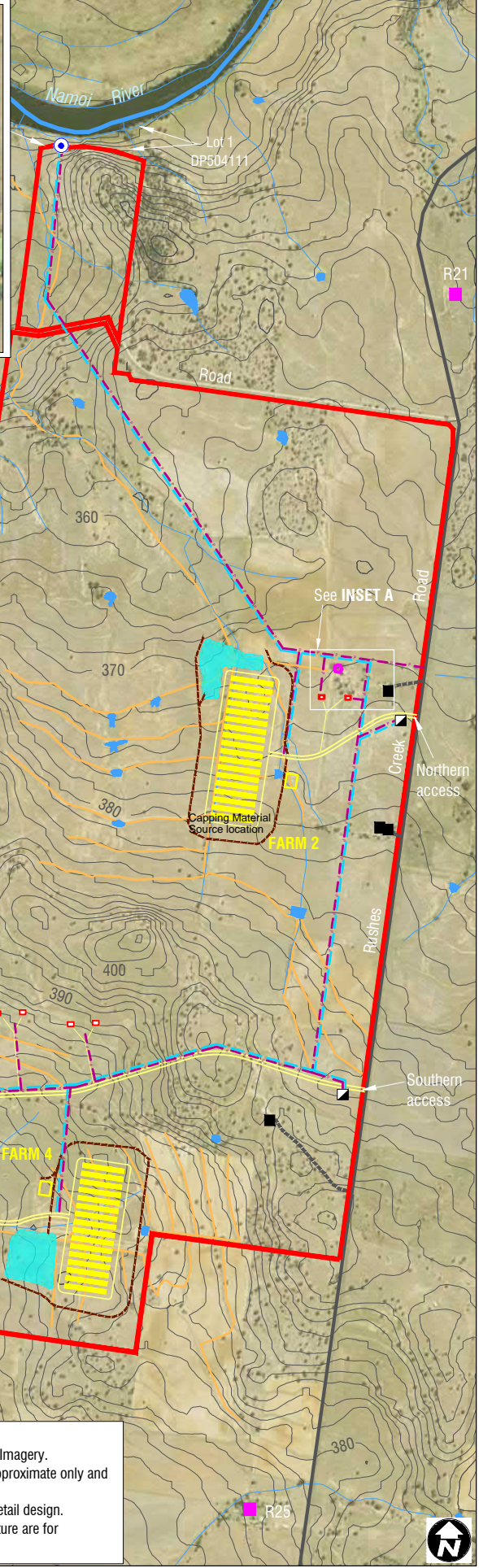
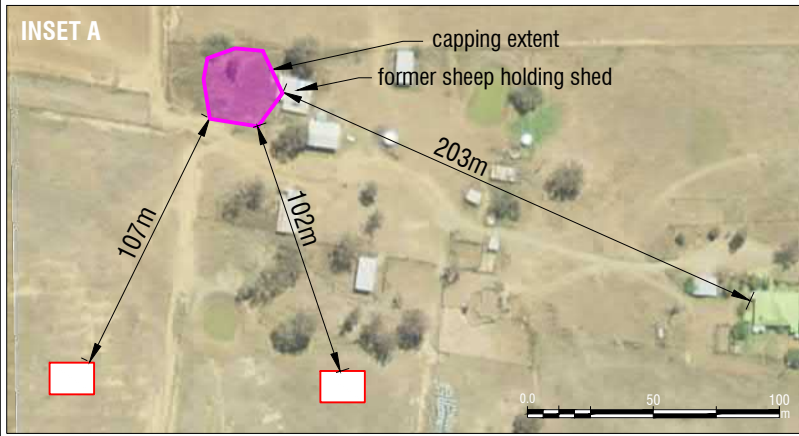
Figures

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Site Locality

FIGURE 1

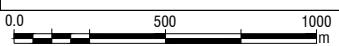


LEGEND

- Development Site
- Lake Keepit (Dam Full Supply Level)
- Major Road
- Existing Driveway
- Receptor
- Existing Development-Related Dwelling
- Existing Contour Bank
- Contour (2m interval)
- Namoi River
- Drainage Line
- Farm Dam
- Proposed Poultry Shed
- Proposed Solar Panels
- Proposed Water Pump
- Proposed Dead Bird Freezer
- Proposed Bedding Material Shed
- Proposed Internal Access Road
- Proposed House Driveway
- Proposed Water Pipeline
- Proposed Powerline
- Proposed Farm Manager's House
- Proposed Detention Dam
- Proposed Surface Water Diversions

Notes and Cautions:

- (1) Background satellite image sourced from SixMaps Imagery.
- (2) All boundaries and areas shown on this plan are approximate only and subject to survey verification.
- (3) Development layout is conceptual and subject to detail design.
- (4) Symbols used to represent development infrastructure are for diagrammatic purposes only and not to scale.

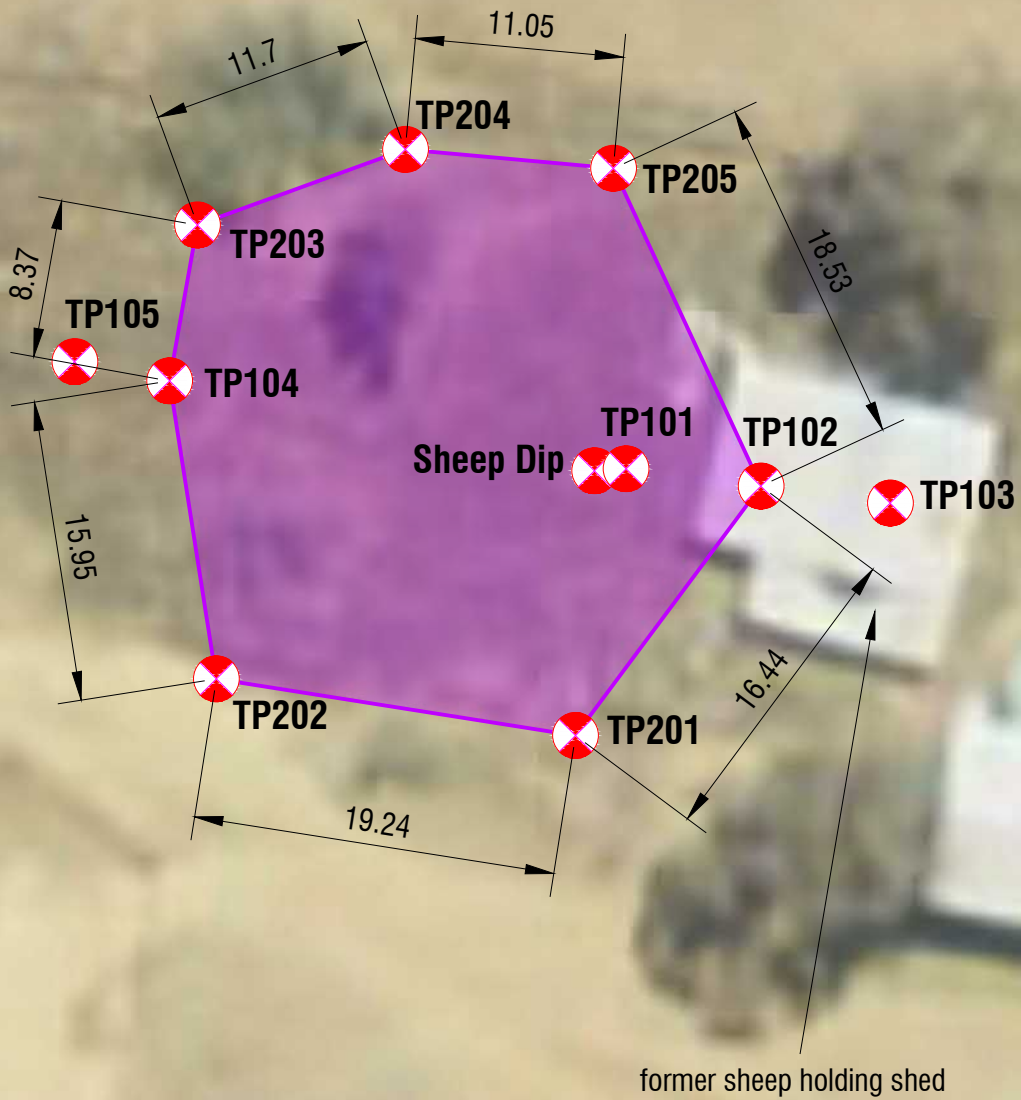


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(GDA94) MGA ZONE 56



12.10.2021
610.30237



H:\Projects-SLR\10-SvS\SYD\610-SYD\610-30237-00000-Pro Ten Implementation of RAP Rush Creek\06 SLR Data\01 CAD\GIS\CAD\SLR\61030237_F3_CappingExtent_01.dwg

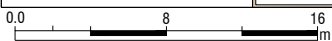


LEGEND:

-  Capping area
-  Sample location

Notes and Cautions:

- (1) Background satellite image sourced from SixMaps Imagery.
- (2) All boundaries and areas shown on this plan are approximate only and subject to survey verification.
- (3) Symbols used to represent development infrastructure are for diagrammatic purposes only and not to scale.

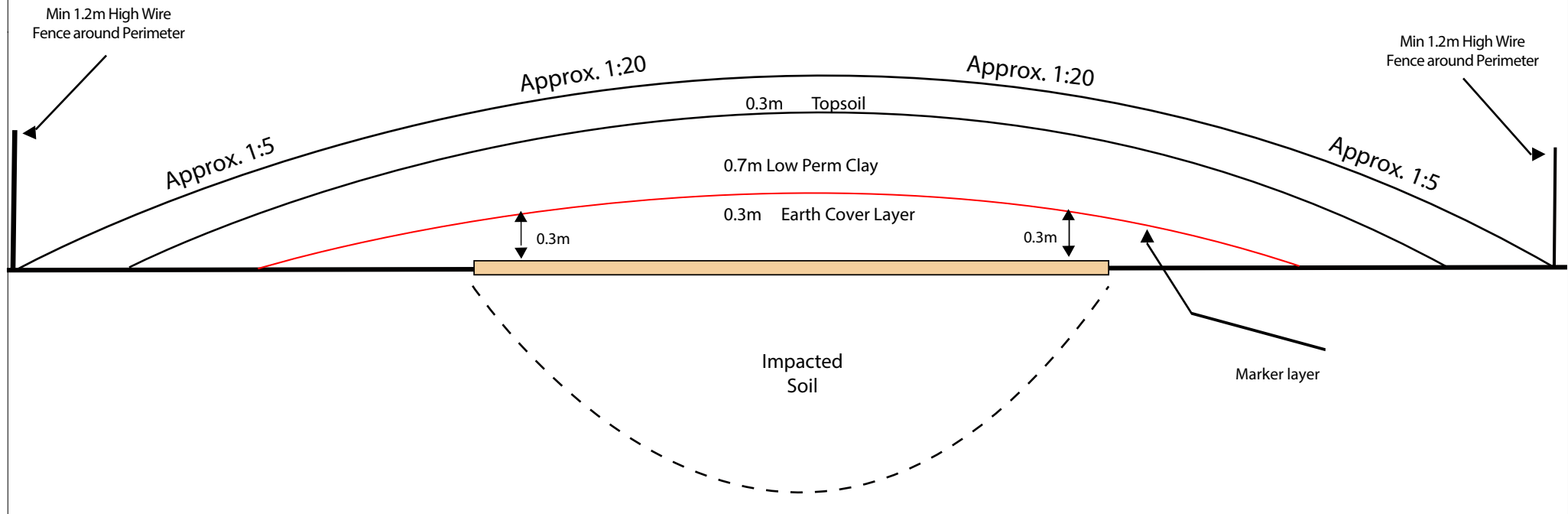


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12.10.2021
610.30237

Capping System for Barrier to Arsenic and Asbestos Impacted Soil

Approx. 30m



202 Submarine School,
Sub Base Platypus,
North Sydney

T: +61 2 9428 8100
sydney@slrconsulting.com
www.slrconsulting.com

Ongoing Environmental Management Plan
Rushes Creek Poultry Production Farm
Rushes Creek Road, Rushes Creek, NSW
Ref: 610.30237.00000

Figure 4
Capping System for Barrier to Arsenic
and Asbestos Impacted Soil

November
2021

APPENDIX B

Site Photographs



Photograph 1 – Remnants of former sheep dip, facing north towards TP205

Date: 21/09/2021



Photograph 3 – Capping area prior to remediation facing south from TP205, showing stockpiled timber from former sheep shed

Date: 21/09/2021



Photograph 5 Capping area prior to remediation facing west from TP103

Date: 21/09/2021



Photograph 2 – Area of former sheep holding shed, facing east from sheep dip

Date: 21/09/2021



Photograph 4 – Timber stockpile from sheep holding shed demolition, facing west from TP102

Date: 21/09/2021



Photograph 6 – The Site facing east from TP105

Date: 21/09/2021

Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346
 Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN
 Date: 09 DECEMBER 2021

Drawing: **PHOTOGRAPHIC LOG** **Appendix B**



Photograph 7 – The Site facing south east from TP204

Date: 21/09/2021



Photograph 9 – The Site from TP202 facing north towards TP203

Date: 21/09/2021



Photograph 11 – Stockpiled material from unexpected finds, facing north

Date: 28/09/2021



Photograph 8 –The Site facing east from TP202

Date: 21/09/2021



Photograph 10 – Stockpiled material from unexpected finds, facing east

Date: 28/09/2021



Photograph 12 – Covered stockpile of unexpected find material, facing north from between TP201 and TP202

Date: 28/09/2021

Notes:



Site:	RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346	
Project:	LONG TERM ENVIRONMENTAL MANAGEMENT PLAN	
Date:	09 DECEMBER 2021	
Drawing:	PHOTOGRAPHIC LOG	Appendix B



Photograph 13 – TP301 facing east, pre-excitation

Date: 28/09/2021



Photograph 15 – Adjacent TP301 facing east, post excavation

Date: 28/09/2021



Photograph 17 – Example of soil profile

Date: 28/09/2021



Photograph 14 – TP303 Facing west, pre-excitation

Date: 28/09/2021



Photograph 16 – Adjacent TP303 facing west, post excavation

Date: 28/09/2021



Photograph 18 – Example of anthropogenic material including ACM

Date: 28/09/2021

Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346
 Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN
 Date: 09 DECEMBER 2021

Drawing: **PHOTOGRAPHIC LOG** **Appendix B**



Photograph 19 – Timber Stockpile from demolition of sheep holding shed, facing north from TP201

Date: 26/10/2021



Photograph 21 – Timber stockpile spread and compacted into surface within the remediation area, from adjacent TP 103

Date: 26/10/2021



Photograph 23 – Unexpected finds stockpile spread within the remediation area to form part of the Earth Cover Layer of capping, from TP201

Date: 26/10/2021



Photograph 20 – Timber stockpile spread and compacted into surface within the remediation area, facing north from TP 201

Date: 26/10/2021



Photograph 22 – Timber stockpile spread and compacted into surface within the remediation area, facing north from adjacent TP202

Date: 26/10/2021



Photograph 24 – Unexpected finds stockpile spread within the remediation area to form part of the Earth Cover Layer of capping, from adjacent TP103

Date: 26/10/2021

Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346
 Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN
 Date: 09 DECEMBER 2021

Drawing: **PHOTOGRAPHIC LOG** **Appendix B**



Photograph 25 – Marker layer over Earth Cover Layer, facing north from adjacent TP201

Date: 26/10/2021



Photograph 27 – Marker layer over Earth Cover Layer, facing east from adjacent TP204

Date: 26/10/2021



Photograph 29 – Low permeability clay layer, facing north adjacent TP202

Date: 26/10/2021



Photograph 26 – Marker layer over Earth Cover Layer, facing west from adjacent TP102

Date: 26/10/2021



Photograph 28 – Source location of Low permeability clay

Date: 26/10/2021



Photograph 30 – Low permeability clay layer, facing west adjacent TP202

Date: 26/10/2021

Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346
 Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN
 Date: 09 DECEMBER 2021

PHOTOGRAPHIC LOG

Appendix B

Notes:



Photograph 31 – Low permeability clay layer, facing east adjacent TP205

Date: 26/10/2021



Photograph 33 – Topsoil layer, facing north

Date: 26/10/2021



Photograph 35 – Capping area showing fencing and revegetation

Date: 07/12/2021



Photograph 32 - Low permeability clay layer, facing east adjacent TP205

Date: 26/10/2021



Photograph 34 – Topsoil layer, facing west

Date: 26/10/2021



Photograph 36 – Capping area showing fencing with asbestos signage and revegetation

Date: 07/12/2021

Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346
 Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN
 Date: 09 DECEMBER 2021

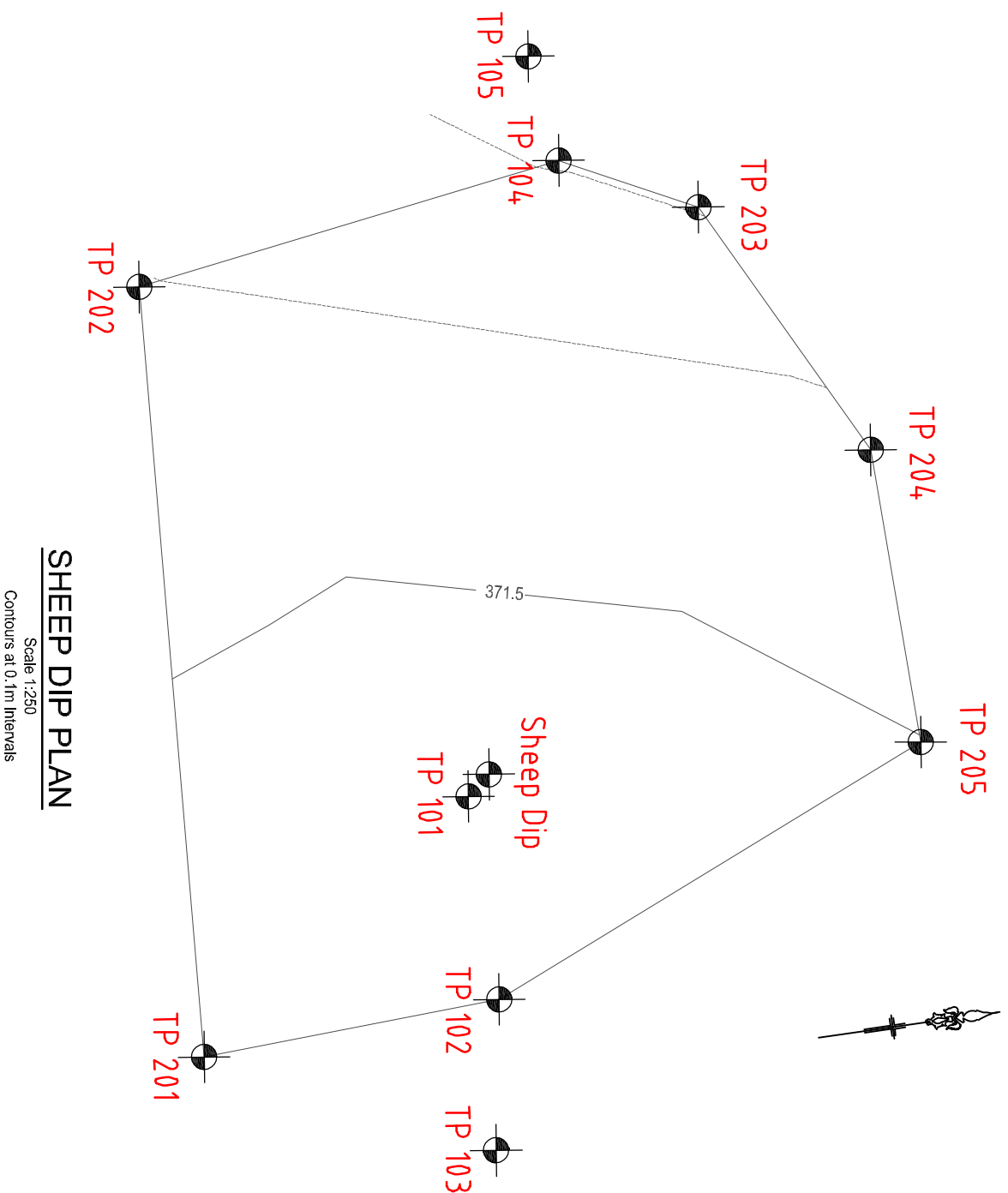
Drawing: **PHOTOGRAPHIC LOG**

Appendix B

APPENDIX C

Survey Plans

- NOTE**
- This sketch is to be read in conjunction with the letter and / or email issued for these works
 - The information provided in this sketch is to assist in the construction process
 - In the event that there are **ERRORS** or **CONFLICTING** information provided you **MUST** contact the Office for immediate clarification
 - All dimensions are in millimeters unless stated otherwise
 - This site survey was carried out using Differential Global Navigational Satellite System technology (GNSS) on 22.10.2021
 - Test Pit reference numbers and approximate locations have been taken from SLR sketch (App A_F3_CappingExtent_01.pdf) received on 22.10.2021
 - The survey locations where on top of the disturbed (visual) areas



Location	Northing	Eastng	Level
Sheep Dip	270205.61	6588558.17	371.57
TP 101	270206.25	6588557.27	371.50
TP 102	270214.17	6588557.27	371.52
TP 103	270219.99	6588556.29	371.45
TP 104	270182.50	6588564.34	371.29
TP 105	270178.36	6588563.78	371.27
TP 201	270214.68	6588545.69	371.59
TP 202	270184.93	6588547.63	371.41
TP 203	270185.08	6588569.40	371.30
TP 204	270195.33	6588574.59	371.44
TP 205	270206.77	6588574.82	371.50

Survey completed on 22.10.2021 for the existing site level

SKETCH DATA

Showing the location and level taken around the sheep dip area
 DATE OF WORK: Friday 22nd October 2021
 SURVEY WORK BY: Lachlan Smith & Michael Beath

www.dialbeforeyoudig.com.au

DIAL 1100
BEFORE YOU DIG

BATH STEWART ASSOCIATES
DEVELOPMENT CONSULTANTS
SURVEYORS - ENGINEERS - PLANNERS - PROJECT MANAGERS
239 Marrius Street TAMWORTH NSW 2340
Telephone (02) 6766 5966 A.C.N. 002 745 020

PROTEN
15882 RUSHES CREEK RD RUSHES CREEK
LOT 171 DP 752169

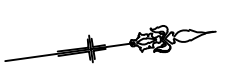
Ref. No: **21079**
01 of 01
A

LEGEND	EXISTING	DARKER	Rev.	DESCRIPTION	APPROVED	DATE
CENTRE LINE	---	---				
GENE PAUL CUTTER		---				
WATERWAY	~~~~~	---				
SURFACE DRAINAGE	---	---				
EDGE OF BITUMEN SEAL	---	---				
SEWER MAIN	---	---				
SEWER MAIN (6 & SIZE)	---	---				
WATERWAY DRAINAGE	---	---				
UNDERGROUND ELECTRICAL	---	---				
LEGEND	EXISTING	DARKER	Rev.	DESCRIPTION	APPROVED	DATE
TREE	⊙	⊙				
SEWER MANHOLE	⊙	⊙				
INSPECTION PIT	⊙	⊙				
DOWNPIPE & ROOFWATER OUTLET	---	---				
POWER POLE	⊙	⊙				
STREETLIGHT	⊙	⊙				
GUIDE POST	⊙	⊙				
WATER (HYDRANT VALVE/METER)	⊙	⊙				
TELEPHONE PIT AND CABLES	⊙	⊙				

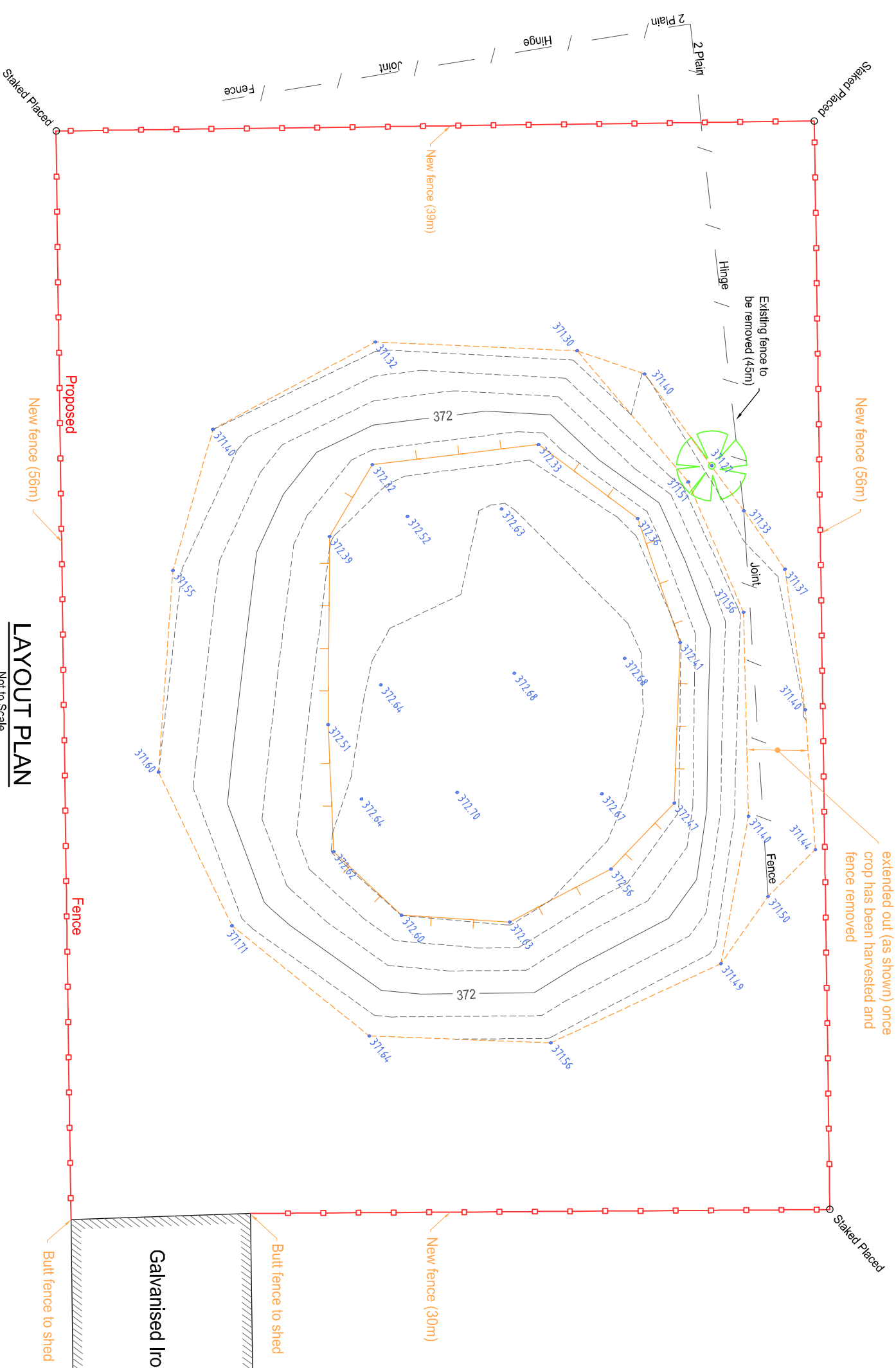
Code: 21079 Rev A
 Drawn: M. Beath
 Checked: J. Herdregen
 Date: 17.11.21

Original: AS Drawing Scale: Bar: 1:250
 Datum Description: PM 117736 RL 348.753 GDA 2020
 Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek

Office: office@bathstewart.com.au



NOTE:
Batter in this area to be extended out (as shown) once crop has been harvested and fence removed



- NOTE**
1. This sketch is to be read in conjunction with the letter and / or email issued for these works
 2. The information provided in this sketch is to assist in the construction process
 3. In the event that there are ERRORS or CONFLICTING information provided you MUST contact the Office for immediate clarification
 4. All dimensions are in millimeters unless stated otherwise
 5. This site survey was carried out using Differential Global Navigational Satellite System technology (GNSS) on 16.11.2021

SKETCH DATA

Showing the location and level taken on the completed remediation works and associated proposed fencing for the Sheep Dip Area

DATE OF WORK: Tuesday 16th November 2021

SURVEY WORK BY: Lachlan Smith & Luke Berman

LEGEND

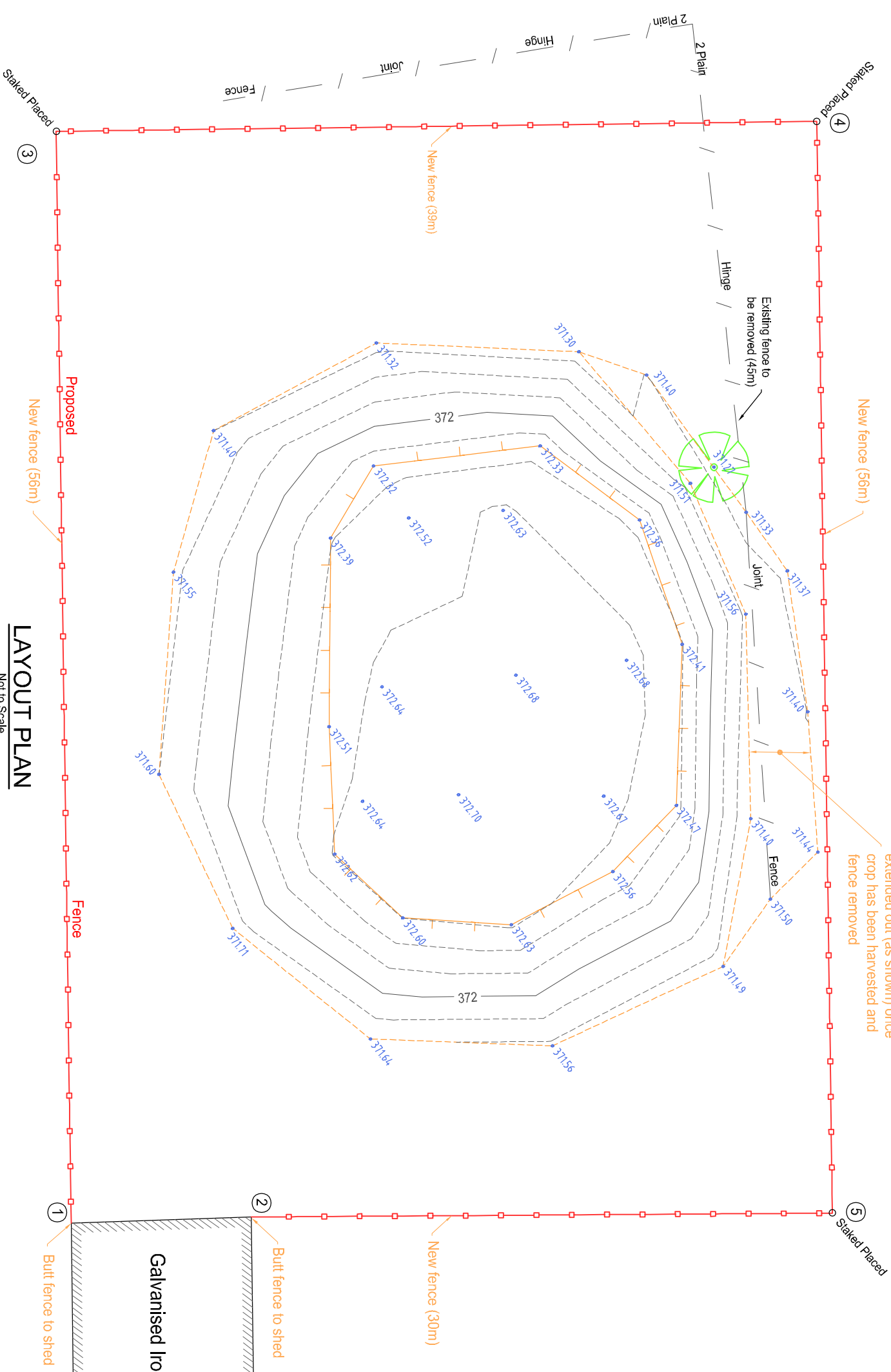
Location & Level of finish surface

123.15

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<p>LEGEND - EXISTING - DARKER</p> <p>CENTRE LINE</p> <p>GENE PAINT CUTTER</p> <p>TO SURFACE DRAINAGE</p> <p>EDGE OF BITUMEN SEAL</p> <p>SEWER MAIN</p> <p>WATERMAIN (& SIZE)</p> <p>STORMWATER DRAINAGE</p> <p>UNDERGROUND ELECTRICAL</p>	<p>LEGEND - LIGHT PROPOSED - DARKER</p> <p>TREE</p> <p>SEWER MAINHOLE, INSPECTION PIT</p> <p>DOWNPIPE & ROOFWATER OUTLET</p> <p>POWER POLE</p> <p>STREETLIGHT</p> <p>WATER (HYDRANT, VALVE, METER)</p> <p>TELESTRAT PT AND CABLES</p>	<p>Rev.</p> <p>DESCRIPTION</p> <p>APPROVED</p> <p>DATE</p>	<p>Rev.</p> <p>DESCRIPTION</p> <p>APPROVED</p> <p>DATE</p>
<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>Code</p> <p>21079 Rev K</p> <p>Overlaid: 21422V24</p> <p>Drawn: L.S. & L.B.</p> <p>Checked: M. Beath</p> <p>Designated: N/A</p> <p>Checked: J.Heddergen</p>	<p>Original: J3 Drawing Scale: Bar</p> <p>Not to Scale</p> <p>Datum Description: Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek</p>
<p>BATH STEWART ASSOCIATES</p> <p>DEVELOPMENT CONSULTANTS</p> <p>SURVEYORS - ENGINEERS - PLANNERS - PROJECT MANAGERS</p> <p>239 Marrius Street TAMWORTH NSW 2340</p> <p>Telephone (02) 6766 5966</p> <p>A.C.N. 002 745 020</p> <p>This document / plan / drawing / sketch is the copyright property of Bath, Stewart & Associates Pty Ltd. It is to be used for the project specified and shall not be used for any other purpose without written approval from Bath, Stewart & Associates Pty Ltd.</p>		<p>PROTEN</p> <p>1582 RUSHES CREEK RD RUSHES CREEK</p> <p>LOT 171 DP 752169</p> <p>16.11.2021 - SHEEP DIP REMEDIATION AREA & FENCING</p>	
<p>Ref. No:</p> <p>21079</p> <p>01 of 01</p> <p>K</p>		<p>16.11.2021</p>	



- NOTE**
- This sketch is to be read in conjunction with the letter and / or email issued for these works
 - The information provided in this sketch is to assist in the construction process
 - In the event that there are ERRORS or CONFLICTING information provided you MUST contact the Office for immediate clarification
 - All dimensions are in millimeters unless stated otherwise
 - This site survey was carried out using Differential Global Navigational Satellite System technology (GNSS) on 16.11.2021



LAYOUT PLAN

Not to Scale

Location	Easting	Northing	Level
1	270219.78	6588534.51	371.69
2	270220.84	6588543.70	371.83
3	270164.29	6588542.06	371.23
4	270169.57	6588580.71	371.07
5	270225.07	6588573.19	371.77

SKETCH DATA

Showing the location and level taken on the completed remediation works and associated proposed fencing for the Sheep Dip Area

DATE OF WORK: Tuesday 16th November 2021

SURVEY WORK BY: Lachlan Smith & Luke Berman

LEGEND

Location & Level of finish surface
123.15

LEGEND (EXISTING - DARKER)	Rev.	DESCRIPTION	APPROVED	DATE
CENTRE LINE				
GENE PAINT CUTTER				
TO SURFACE DRAINAGE				
EDGE OF BITUMEN SEAL				
SEWER MAIN				
WATER MAIN (& SIZE)				
STORMWATER DRAINAGE				
UNDERGROUND ELECTRICAL				
TREE				
SEWER MANHOLE, INSPECTION PIT				
POWER POLE				
STREETLIGHT				
WATER (PUMP/WATER METER)				
TELEPHONE AND CABLES				

LEGEND (PROPOSED - DARKER)	Rev.	DESCRIPTION	APPROVED	DATE
PROPOSED FENCE				
PROPOSED BUTT FENCE				
PROPOSED STAKED PLACED				

BATH STEWART ASSOCIATES
 DEVELOPMENT CONSULTANTS
 SURVEYORS - ENGINEERS - PLANNERS - PROJECT MANAGERS
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 Telephone (02) 6766 5966
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PROTEN
 1582 RUSHES CREEK RD RUSHES CREEK
 LOT 171 DP 752169

Ref. No: **21079**
 01 of 01

08.12.2021 - SHEEP DIP REMEDIATION AREA FENCE CO-ORDINATES



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APPENDIX D

Site Inspection Sheet

Rushes Creek Poultry Production Farm – Arsenic and Asbestos Capping Inspection Sheet

Area Inspected						
Date and Time						
Person undertaking inspection						
Person In Charge of Site						
Description of onsite activities						
Item	Description	Satisfactory		Observation and Action Required	Close Out Date	Initials
		Yes	No			
1	Is there any Capping Erosion / Scour?					
2	Are there any Capping Cracks?					
3	Is there Poned Water?					
4	% Grass Cover					
5	Are trees or shrubs growing on the cap?					
6	Is there evidence of disturbance of the capping?					
7	Is the site fencing and signage in place and secure?					
8	Other					

Note – Photographs to also be recorded of the capping condition

Photograph A	Photograph B
Photograph C	Photograph D

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