



# Long-Term Environmental Management Plan

## Rushes Creek Poultry Production Farm

### ProTen Pty Ltd

North Sydney, NSW 2060

Prepared by:

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2.0	31 January 2024	Hugo Dinan	Sarah Kill	Sarah Kill	Update to address the conditions of Modification 4 to SSD-7704.
2.0	03 September 2024	Hugo Dinan	Sarah Kill	Sarah Kill	Update to address the conditions of Modification 5 to SSD-7704.

## Basis of Report

This report has been prepared by SLR Consulting Australia (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. 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.



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## 1.0 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 Ruses Creek Road, Ruses Creek, NSW (the Site). The Site is part of Lot 62 in DP 1276824 and forms a small portion (approximately 700m<sup>2</sup>) of the larger Ruses 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. SSD 7704 has been modified on five occasions. The most recent modification SSD 7704 Mod 5 was granted on 22/03/2024.

The approved Development comprises four individual poultry production units (PPUs), which are identified as Farms 1 to 4, where broiler birds will be grown for the purpose of producing poultry meat (for human consumption). Each farm will contain between 10 and 18 tunnel-ventilated fully-enclosed climate-controlled poultry sheds, which will each have the capacity to house 56,500 birds, along with associated support and servicing infrastructure. The Development will comprise a total of 54 poultry sheds and house a combined site population of 3,051,000 birds.

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 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** 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 LTEMP.
- 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.

### 1.5 Basis for the Review of this LTEMP

Development projects are declared state-significant where a development project is determined to be significant to the state of NSW for economic, environmental, or social reasons. The Rushes Creek Poultry Farm in the TRC LGA was determined to be a State-Significant Development (SSD) under the EP&A Act and was issued consent by the NSW Government Department of Planning and Environment (DPE) (as delegate for the Minister for Planning and Public Spaces, “the Minister”) on 16 April 2020, as SSD-7704.



Since the issue of SSD-7704, several historical modifications to the original development consent have been approved by the Minister under Section 4.55 (1A) of the EP&A Act. These modifications have been detailed in **Table 2**.

**Table 2 Historical SSD Modifications**

Modification	Date Issued	Decision Maker	Type	Detail
Modification 1	15 June 2021	Department	s4.55(1A)	Amendment of the remediation strategy and Aboriginal heritage requirements
Modification 2	2 September 2021	Department	s4.55(1A)	Correction to condition B53(a) regarding the timing of the establishment of vegetation screens
Modification 3	1 July 2022	Department	s4.55(1A)	Concurrent construction and operation of Stage 1 (Farm 2) and temporary use of diesel generators for primary operational power supply
Modification 4	22 September 2024	Department	s4.55(1A)	<ul style="list-style-type: none"> <li>• Permit the use of diesel generators as the primary operational power supply at Farm 2 for an additional period of six months.</li> <li>• Formalise the operational power supply arrangements for the development.</li> <li>• Permit the installation of solar arrays on the roof of 11 poultry sheds and at the Namoi River water pump.</li> <li>• Regularise Farm 2 poultry shed flooring.</li> <li>• Constructed using an alternate construction design and permit the alternate poultry shed flooring at Farms 1, 3 and 4.</li> <li>• Reduce the number of farm managers dwellings from eight to seven and construct these dwellings as 'slab on ground'</li> </ul>

Since the historical modifications above, an additional modification (Modification 5) to SSD-7704 has been approved by the Department of Planning and Environment (DPE). Modification 5 to SSD-7704 was to extend the use of generators as the primary operational power supply from 18 months to 21 months.



The original LTEMP was prepared following Modification 3 of SSD-7704 and was prepared pursuant of original and modified conditions of SSD-7704.

This LTEMP has been reviewed and updated in accordance with Condition C8 (d) of SSD 7704. Modification 5 has not resulted in changes to requirements for contaminated land management at the Site. As such, the principles of the LTEMP remain unchanged.

## 2.0 BACKGROUND

### 2.1 Site Identification

The Site identification details are provided in **Table 3**.

**Table 3 Site Identification**

Site Information	Details	
Site Address	• Rushes Creek Road, Rushes Creek, NSW (the Site)	
Parcel Reference	• Part Lot 62 DP1276824 (the Site)	
Site Area	<ul style="list-style-type: none"> <li>• 0.01 hectares (Ha) (the Site)</li> <li>• 1016 Ha total Property area</li> </ul>	
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 Areas

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 of 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 130m<sup>3</sup> 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 Remediation 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 700m<sup>2</sup>). The extent of the capping and capping layers is 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 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**.



### 3.0 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 are included in **Table 4**.

**Table 4 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

### 4.0 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.



## 5.0 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, since reviewed and approved in 2022).
- 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](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.



## 6.0 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.



## 7.0 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 (<10m<sup>2</sup>) 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  $1 \times 10^{-8}$  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.



## **8.0 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

The community liaison management strategy has been presented in **Table 5**.

**Table 5 Community Liaison Management Strategy**

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

Community liaison implementation items have been presented in **Table 6**.

**Table 6 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.
- 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. Emergency Contacts have been provided in **Table 7**.

**Table 7 Emergency Contacts**

<b>Proten</b>	Graeme Attwell	0447 048 321
<b>NSW EPA</b>	-	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.



## 9.0 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 Characterisation, 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 Ruses Creek Road, Ruses Creek dated July 2018 (SLR Ref No: 610.16117.00400-R01-v0.2)
- SLR (2019)** Detailed Site Investigation, Proposed Poultry Production Farm Ruses Creek Road, Ruses Creek dated February 2019 (SLR Ref No: 610.18456-R01-v1.2)



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

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

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



## 10.0 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.

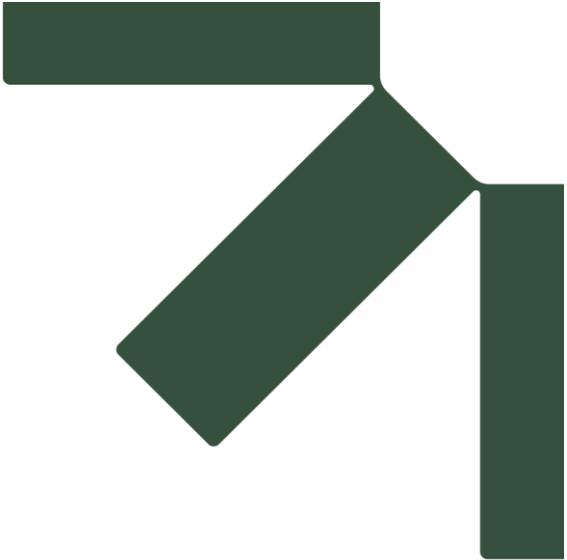
It should be noted that many investigations are based upon an assessment of potentially contaminating processes which may have occurred historically on the Site. This assessment is based upon historical records associated with the Site. Such records may be inaccurate, absent or contradictory. In addition, 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

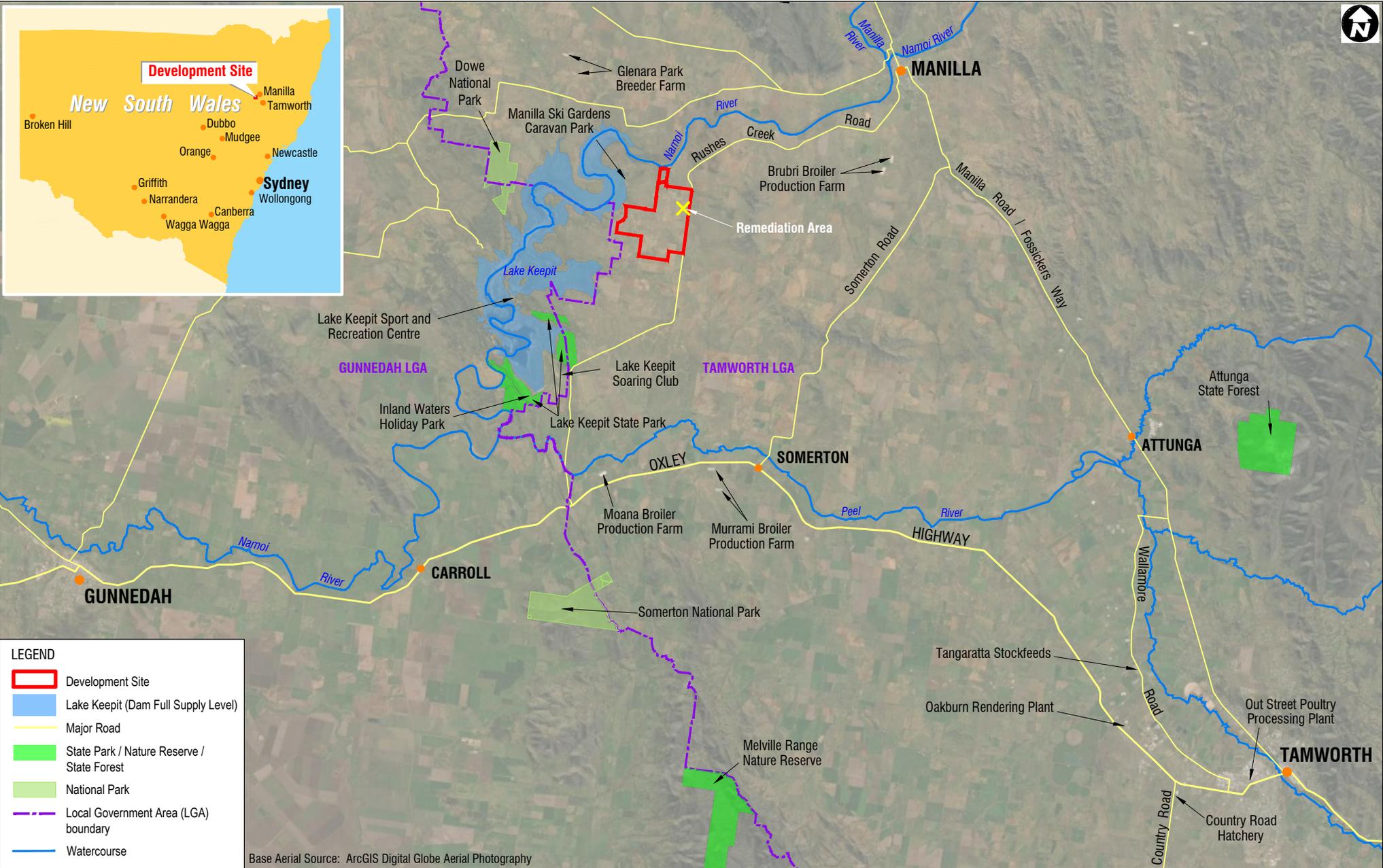
## Long-Term Environmental Management Plan

Rushes Creek Poultry Production Farm

ProTen Pty Ltd

SLR Project No.: 631.031975.00010

5 September 2024



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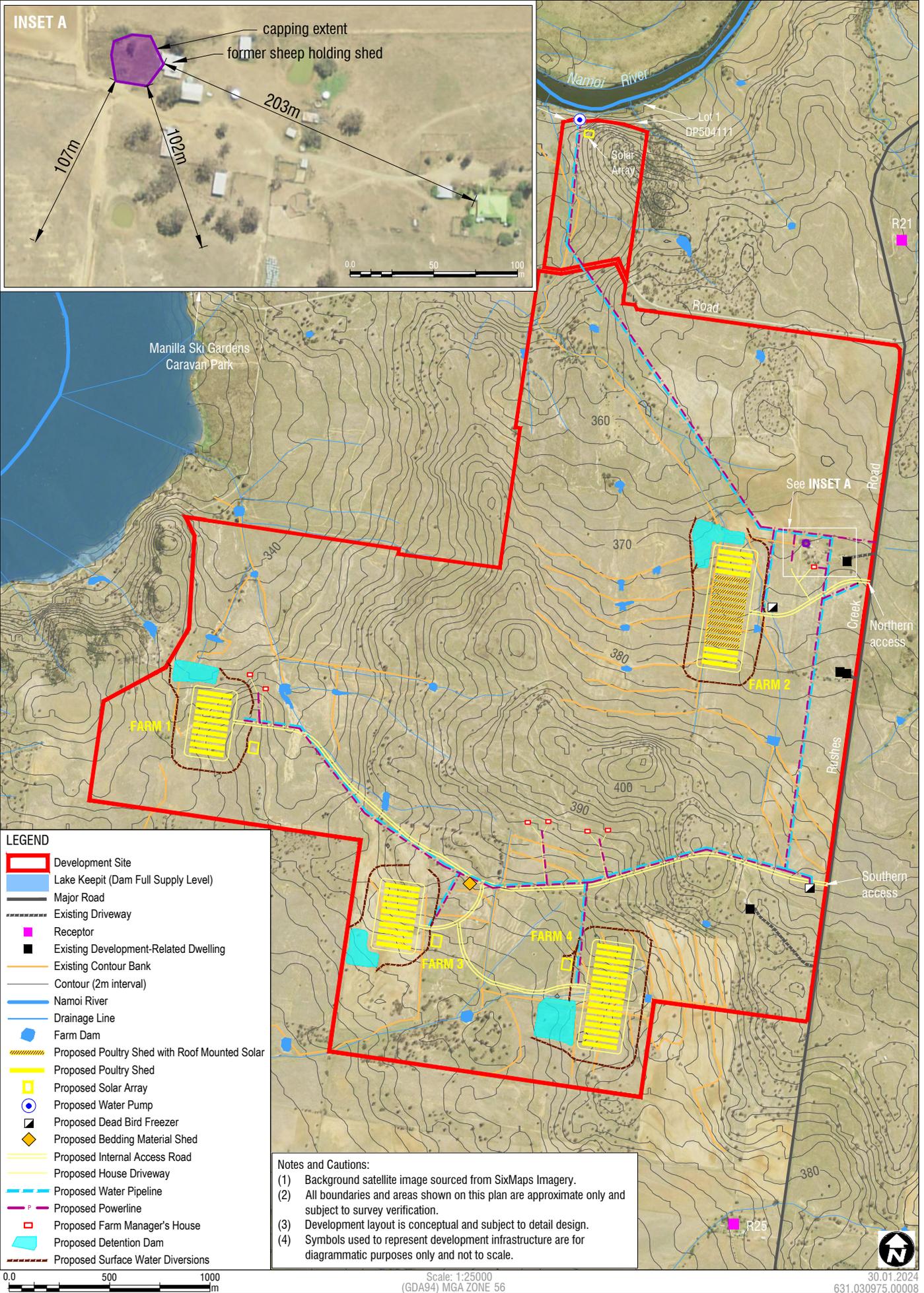
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05.02.2024  
631.030975

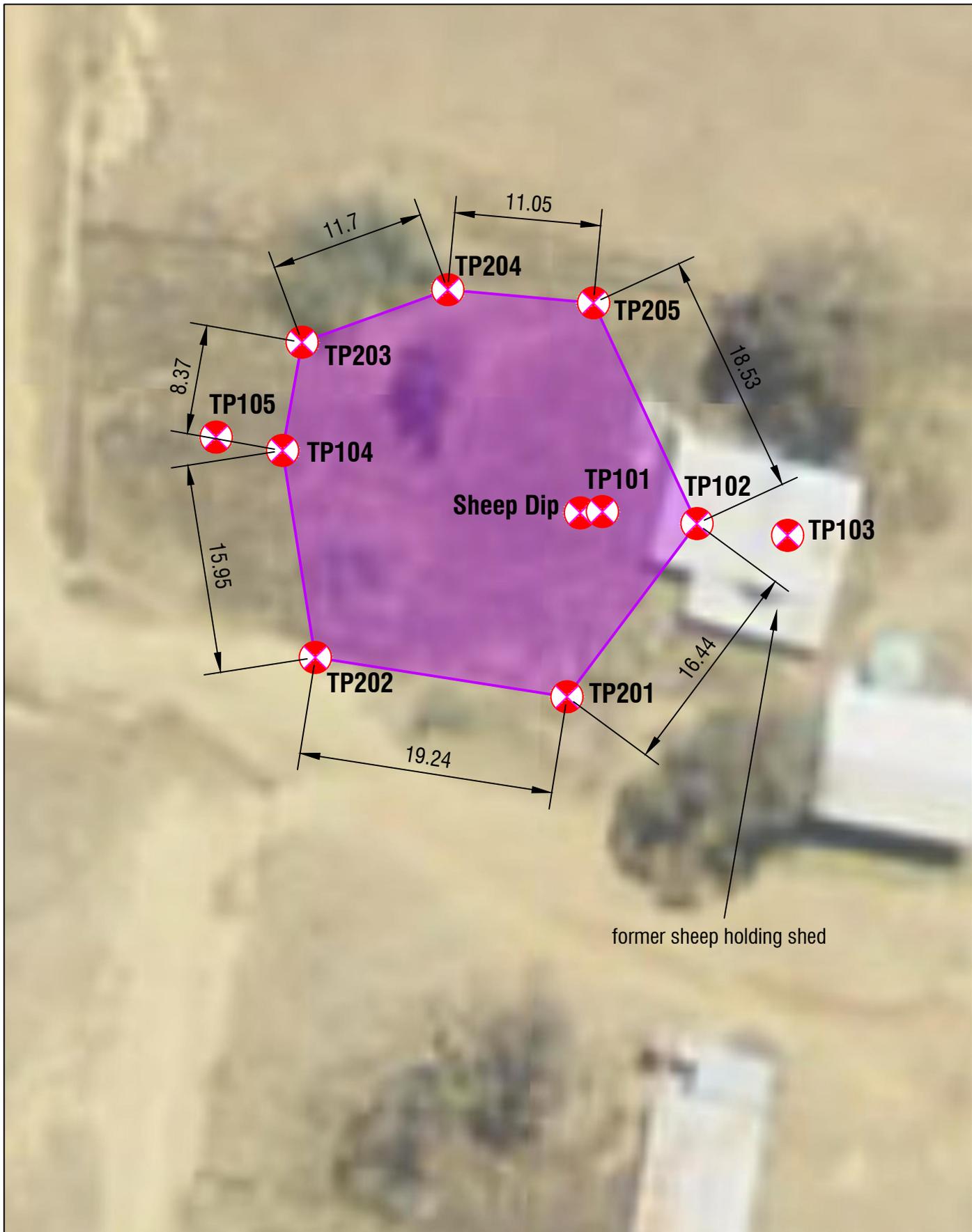


Site Locality

FIGURE 1



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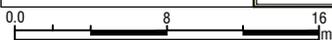


**LEGEND:**

-  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.



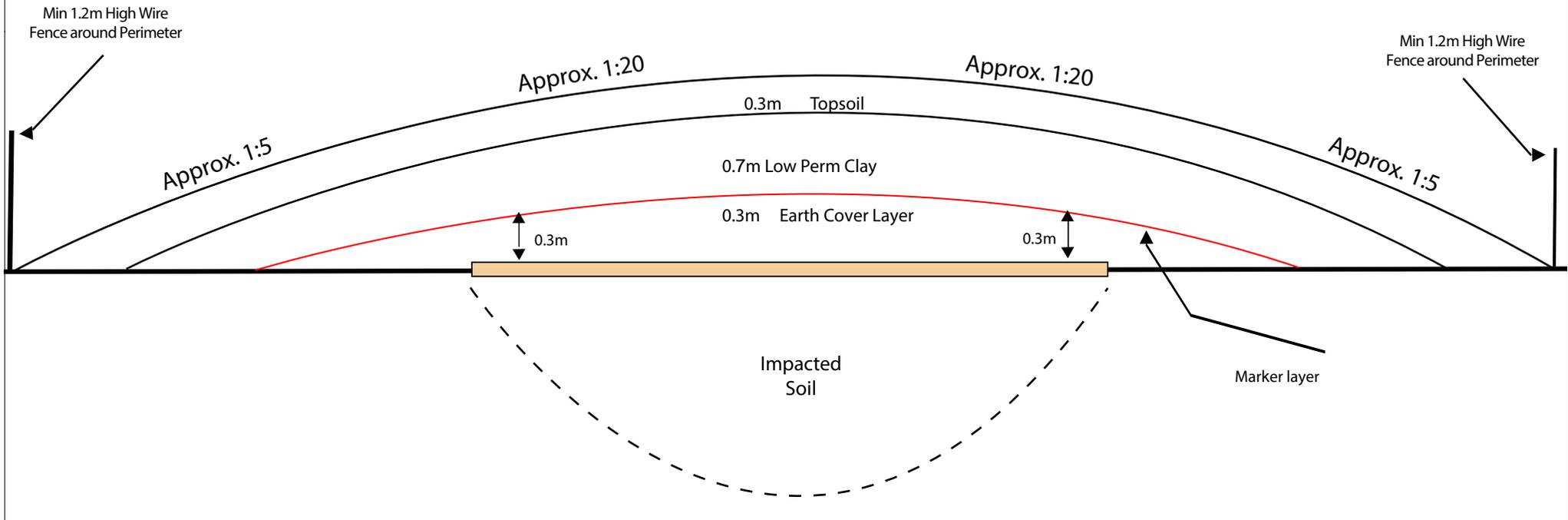
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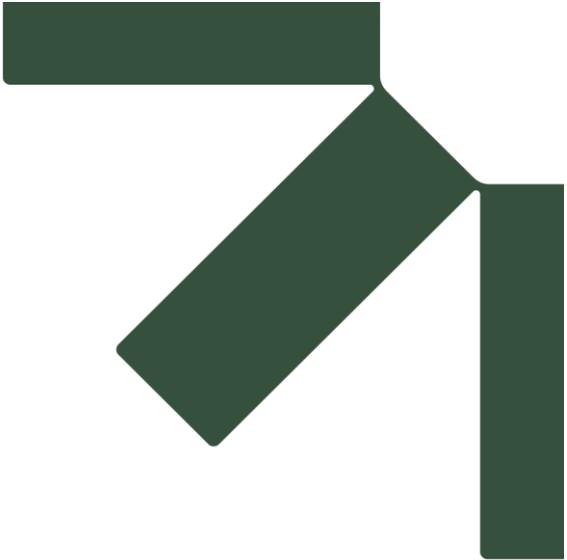


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Capping System for Barrier to Arsenic and Asbestos Impacted Soil

Approx. 30m





# Appendix B Site Photographs

## Long-Term Environmental Management Plan

Rushes Creek Poultry Production Farm

ProTen Pty Ltd

SLR Project No.: 631.031975.00010

5 September 2024



**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:	REMEDIATION AND SITE VALIDATION REPORT
Date:	03 <sup>RD</sup> NOVEMBER 2021
Drawing:	<b>PHOTOGRAPHIC LOG</b>
	<b>Appendix B</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:	REMEDATION AND SITE VALIDATION REPORT	
Date:	03 <sup>RD</sup> NOVEMBER 2021	
Drawing:	<b>PHOTOGRAPHIC LOG</b>	<b>Appendix B</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:	REMEDICATION AND SITE VALIDATION REPORT	
Date:	03 <sup>RD</sup> NOVEMBER 2021	
Drawing:	<b>PHOTOGRAPHIC LOG</b>	<b>Appendix B</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:	REMEDIATION AND SITE VALIDATION REPORT
Date:	03 <sup>RD</sup> NOVEMBER 2021
Drawing:	<b>PHOTOGRAPHIC LOG</b>
	<b>Appendix B</b>



**Photograph 25** – High visibility marker layer over Earth Cover Layer, facing north from adjacent TP201

**Date:** 26/10/2021



**Photograph 27** – High visibility 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** – High visibility 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:	REMEDATION AND SITE VALIDATION REPORT	
Date:	03 <sup>RD</sup> NOVEMBER 2021	
Drawing:	<b>PHOTOGRAPHIC LOG</b>	<b>Appendix B</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** – Topsoil layer, facing south

Date: 26/10/2021



**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** – Topsoil layer, facing east

Date: 26/10/2021

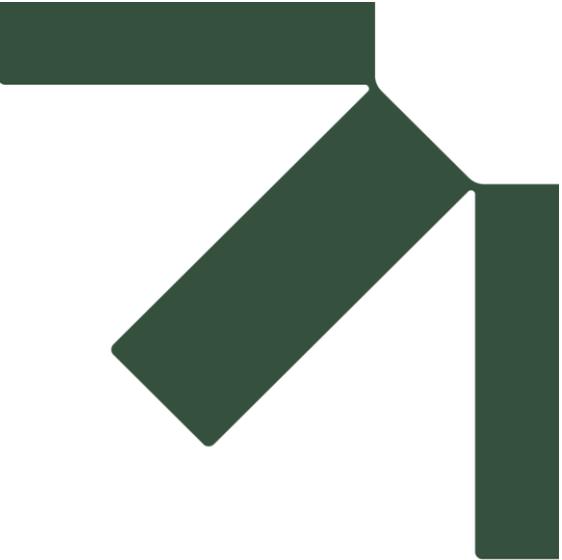
Notes:



Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346  
 Project: REMEDIATION AND SITE VALIDATION REPORT  
 Date: 03<sup>RD</sup> NOVEMBER 2021

Drawing: **PHOTOGRAPHIC LOG**

**Appendix B**



# Appendix C Survey Plans

## Long-Term Environmental Management Plan

Rushes Creek Poultry Production Farm

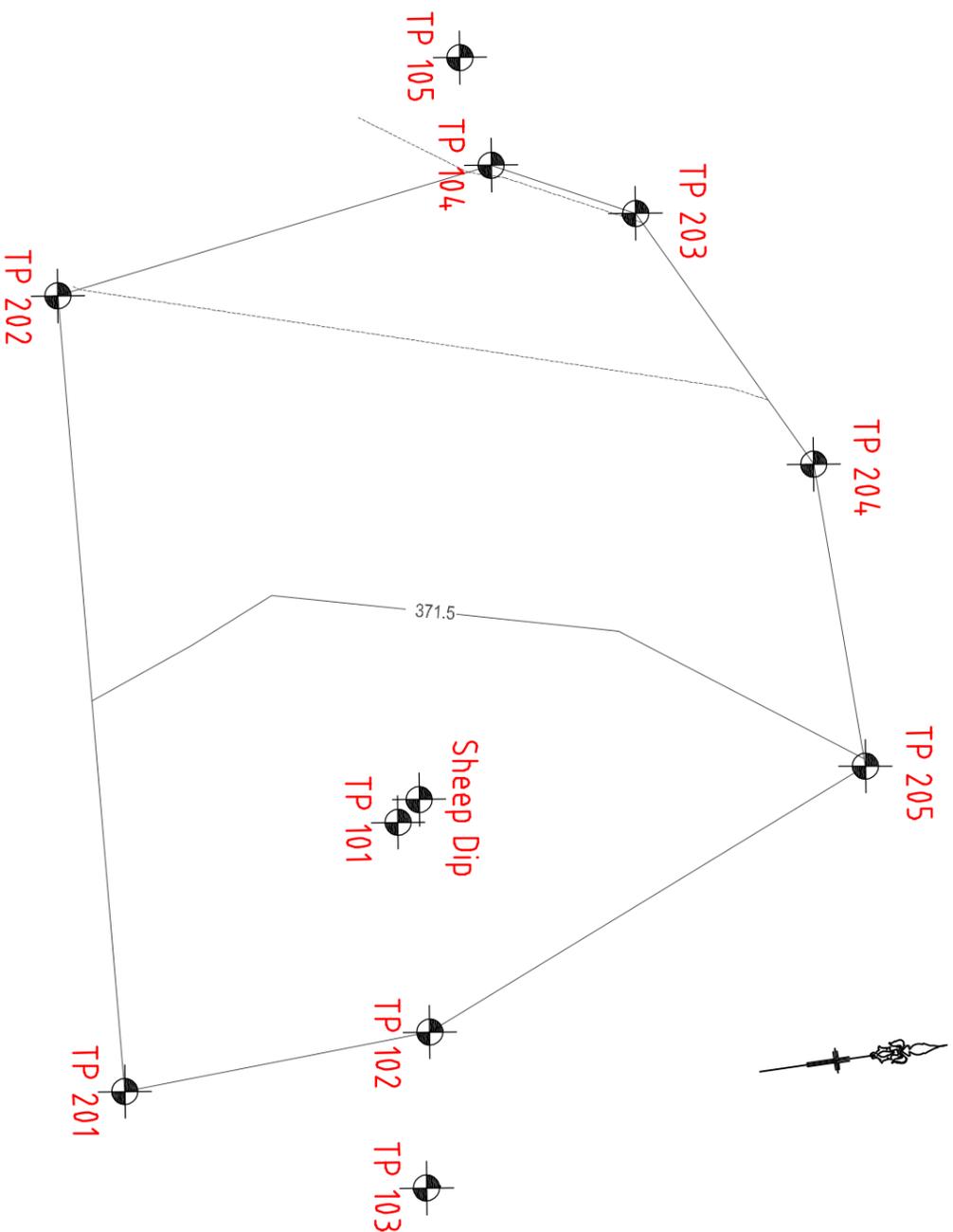
ProTen Pty Ltd

SLR Project No.: 631.031975.00010

5 September 2024

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 22.10.2021
6. Test Pit reference numbers and approximate locations have been taken from SLR sketch (App A\_F3\_CappingExtent\_01.pdf) received on 22.10.2021
7. The survey locations where on top of the disturbed (visual) areas

**NOTE**



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

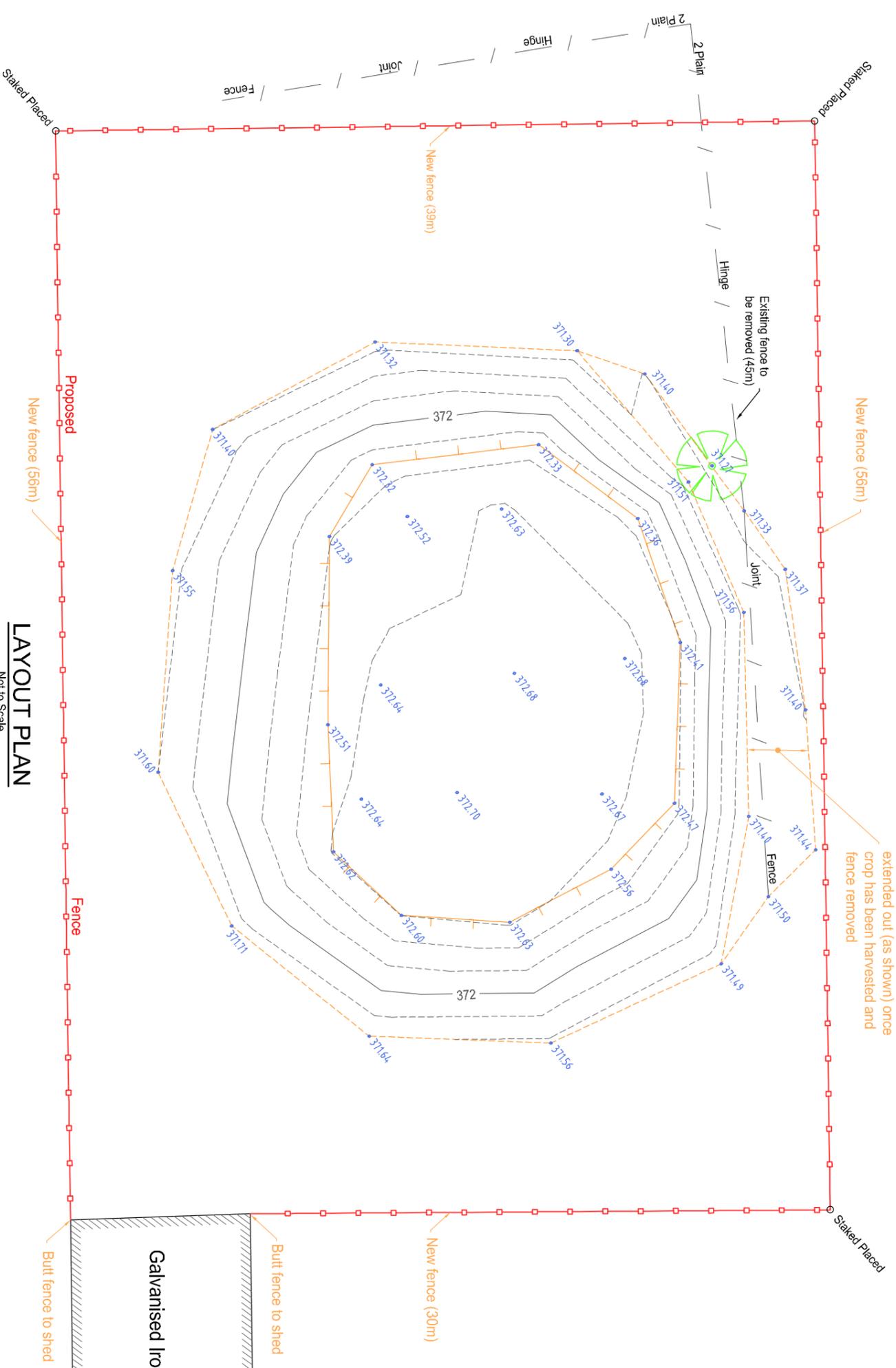
		<b>BATH STEWART ASSOCIATES</b> DEVELOPMENT CONSULTANTS SURVEYORS - ENGINEERS - PLANNERS - PROJECT MANAGERS 239 Maribus Street TAMWORTH NSW 2340 Telephone (02) 6766 5966 A.C.N. 002 745 020		<b>PROTEN</b> 1588 RUSHES CREEK RD RUSHES CREEK LOT 171 DP 752169		Ref. No: <b>21079</b> 01 of 01 <b>A</b>	
LEGEND - EXISTING - DARKER CENTRE LINE CURB AND GUTTER SURFACE DRAINAGE EDGE OF BITUMEN SEAL KERBSIDE WATERMANN (& SIZE) WATERMANN (& SIZE) UNDERGROUND ELECTRICAL		LEGEND - LIGHT PROPOSED - DARKER TREE SEWER MANHOLE INSPECTION PIT DOWNPIPE & ROOFWATER OUTLET POWER POLE STREETLIGHT WATER (HYDRANT VALVE/ACT)		APPROVED DATE M. Beath 17.11.21		Rev. DESCRIPTION DATE A Sheean Dip coordinates	
www.dialbeforeyoudig.com.au 		Original: 21079 Rev. A Code: 21079 Rev. A Overlaid: 21079V20 Survey: L. Smith Drawn: M. Beath Designed: N/A Checked: J. Herdegen		Original: AS Drawing Scale Bar 2.5 0.0 2.5 5.0 4:3 Scale 1:250 (H) Datum Description: PM 117736 RL 349.753 GDA 2020 Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek		Scale 1:250 Contours at 0.1m Intervals <b>SHEEP DIP PLAN</b>	



**NOTE**

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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

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



**LAYOUT PLAN**  
Not to Scale

**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**

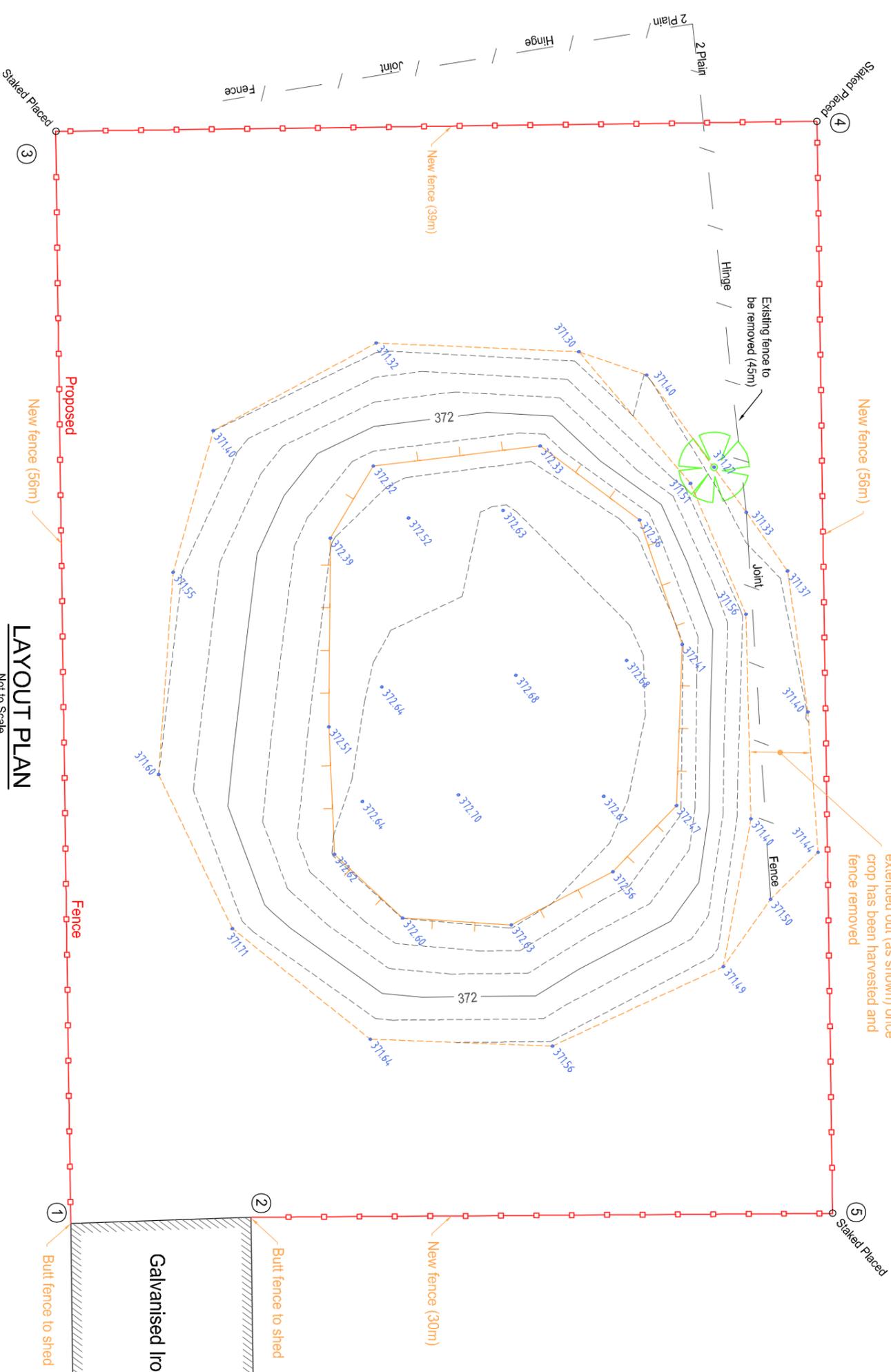
Location & Level of finish surface

123.15

		<a href="http://www.dialbeforeyoudig.com.au">www.dialbeforeyoudig.com.au</a>	
<p><b>LEGEND</b></p> <p>EXISTING - DARKER</p> <p>PROPOSED - LIGHTER</p> <p>Centre Line</p> <p>Centre Point</p> <p>Surface Drainage</p> <p>Edge of Bitumen Seal</p> <p>Manhole</p> <p>Watermain (&amp; size)</p> <p>Stormwater Drainage</p> <p>Underground Electrical</p> <p>Tree</p> <p>Streetlight</p> <p>Water (Hydrant/Valve/Meter)</p> <p>Streetlight</p> <p>Water</p> <p>Pad 6 - Single surface levels</p>	<p>Rev.</p> <p>DESCRIPTION</p> <p>APPROVED</p> <p>DATE</p>	<p>Code</p> <p>21079 Rev K</p> <p>Overlaid: 21422V24</p> <p>Drawn: L.S. &amp; L.B.</p> <p>Checked: M. Beath</p> <p>Original: 21079 Rev J</p> <p>Not to Scale</p> <p>Datum Description: PM 117736 RL 349.753 GDA 2020</p> <p>Location: Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek</p>	<p>Ref. No:</p> <p>21079</p> <p>Sheet No. 01 of 01</p> <p>Scale: K</p>
<p><b>BATH STEWART ASSOCIATES</b></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 &amp; Associates Pty Ltd. It is to be used only for the project and site specified without written approval from Bath, Stewart &amp; Associates Pty Ltd.</p>		<p><b>PROTEN</b></p> <p>1588 RUSHES CREEK RD RUSHES CREEK</p> <p>LOT 171 DP 752169</p> <p>16.11.2021 - SHEEP DIP REMEDIATION AREA &amp; FENCING</p>	



- 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



**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

www.dialbeforeyoudig.com.au

**DIAL 1100**  
BEFORE YOU DIG

LEGEND (EXISTING - DARKER)

Centre Line	---
Centre Point	•
Surface Drainage	---
Edge of Bitumen Seal	---
Manhole	⊗
Watermain (& size)	---
Stormwater Drainage	---
Underground Electrical	---

LEGEND (LIGHT PROPOSED - DARKER)

Tree	⊗
Power Pole	⊙
Streetlight	⊙
Water (Hydrant/Valve/Meter)	⊙
Telespy Pit and Cables	⊙

Rev.	DESCRIPTION	DATE	APPROVED
R	Rev K updated with co-ordinates added - As Requested	08.12.21	M. Beath
O	Finals 1-45 Partial WAE	02.12.21	J. Hardegen
P	Sheet 4 - Butt Section	01.12.21	J. Hardegen

Code	21079 Rev R
Overlaid:	21422V24
Drawn:	L.S. & L.B.
Checked:	M. Beath
Designed:	N/A
Checked:	J. Hardegen

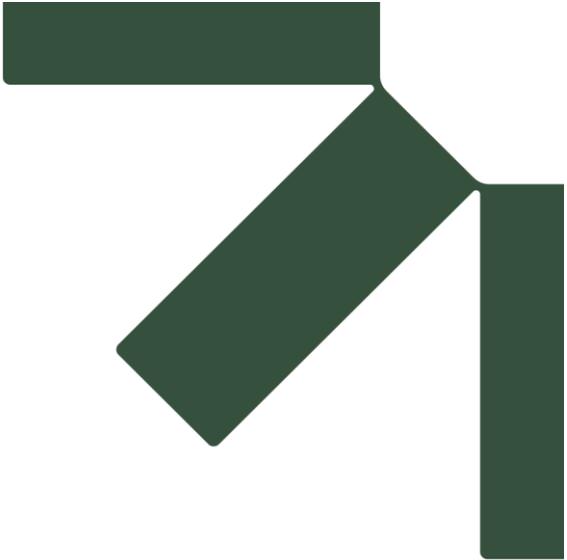
**BATH STEWART ASSOCIATES**  
DEVELOPMENT CONSULTANTS  
SURVEYORS - ENGINEERS - PLANNERS - PROJECT MANAGERS  
239 Marquis Street TAMWORTH NSW 2340  
Telephone (02) 6766 5966  
A.C.N. 002 745 020

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**PROTEN**  
15882 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



# Appendix D Site Inspection Sheet

## Long-Term Environmental Management Plan

Rushes Creek Poultry Production Farm

ProTen Pty Ltd

SLR Project No.: 631.031975.00010

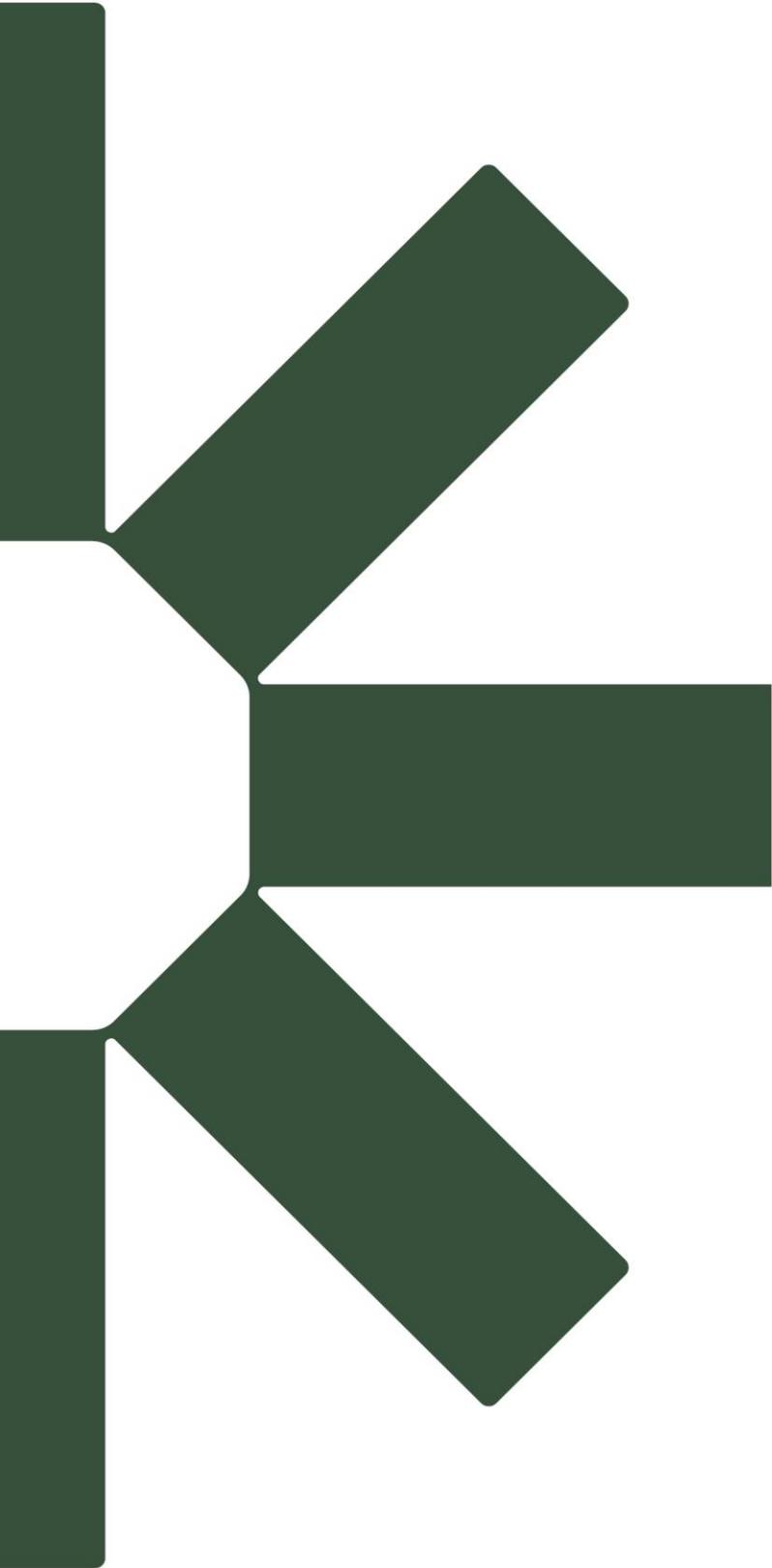
5 September 2024

## 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



Making Sustainability Happen