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: -v0.1
December 2021

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street
North Sydney NSW 2060 Australia

T: +61 2 9427 8100
E: sydney@slrconsulting.com www.slrconsulting.com

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. 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
610.30237.00000-R04-v0.1	9 December 2021	Jason Roesler	Hugh Selby (CEnvP-SC)	Hugh Selby (CEnvP-SC)

CONTENTS

CONTENTS

CONTENTS

DOCUMENT REFERENCES

TABLES

APPENDICES

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 forms a small portion (approximately 700m^2) 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 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.

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. **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	• Rushes Creek Road, Rushes Creek, NSW (the Site)	
Parcel Reference	• Part Lot 62 DP1276824 (the Site)	
Site Area	• 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.

It was identified that the landfill at Kemps Creek on the western fringes of Sydney is the only landfill licensed in NSW to take this type of contaminated soil. Given the time elapsed between preparation of the RAP and the proposed construction, review of Contractor pricing for the transport and disposal of the arsenic contaminated soil at Kemps Creek was deemed not feasible.

As such, 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^2). The extent of the capping is shown on **Figure 3** in **Appendix A**.

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 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.

Where groundwater is not extracted and used, risks to human health are considered low and the implementation of the specific management actions proposed in this LTEMP will adequately manage these risks.

Exposure to arsenic from groundwater can occur if contaminated groundwater is brought to the surface using pumps on bores. Exposure to arsenic will occur through:

- Ingestion of the water

- Using contaminated water in food preparation and
- Irrigation of food crops

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.

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 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 (<10m^2) 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 x10-^{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 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.
- 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	• Maintain a positive relationship with the community and neighbouring property owners
Description	• The community shall be informed of any activities that may impact neighbouring properties
Strategies	• Provide information to the community on issues affecting them • Respond promptly to any request for information or complaints from the public
Performance Indicators	• Complaints kept to a minimum
Monitoring / Reporting Requirements	• Maintain complaints register
Training Requirements	• 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.

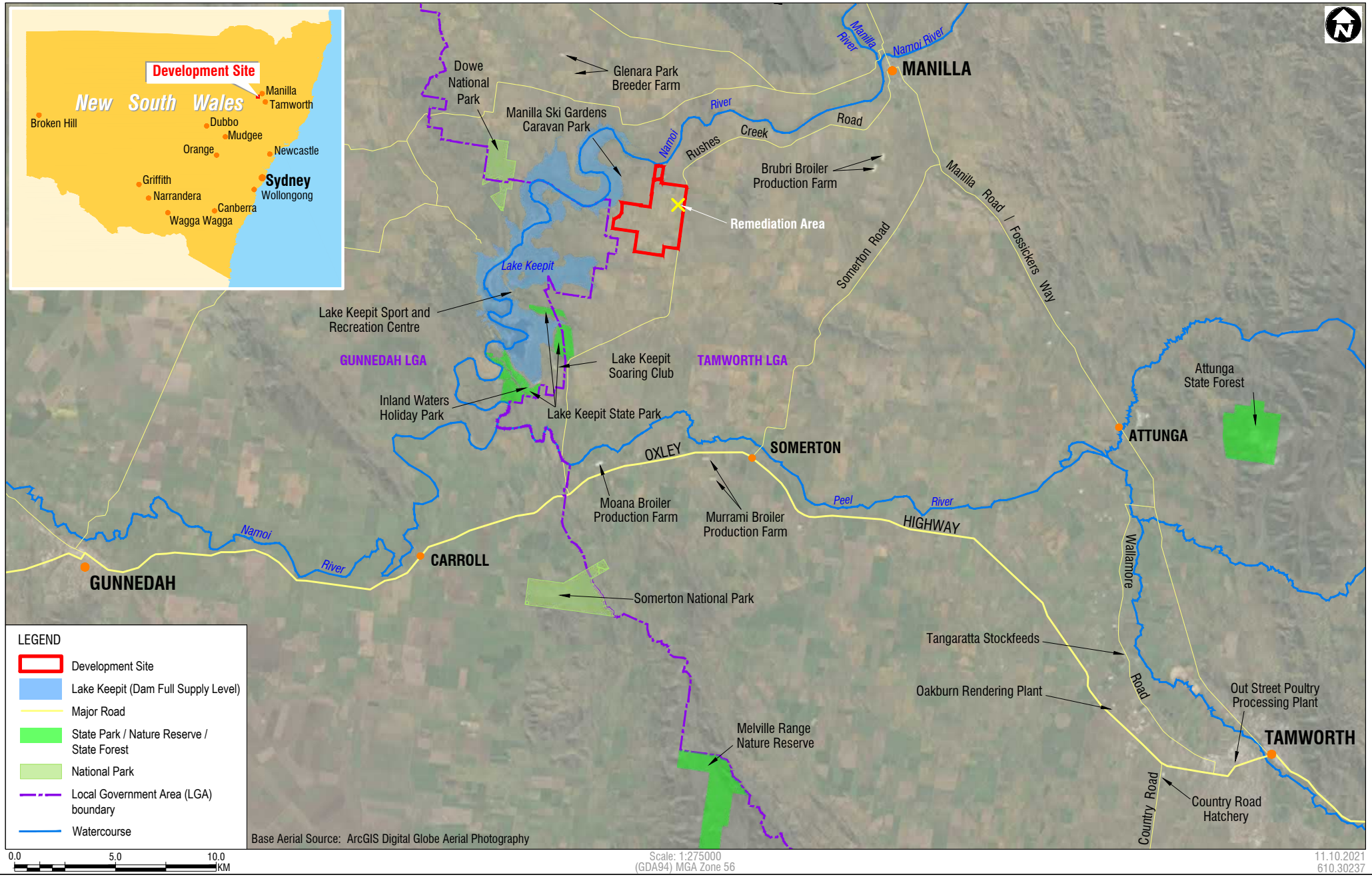
It should be noted that many investigations are based upon an assessment of potentially contaminating processes which may have occurred historically on the site. This assessment is based upon historical records associated with the site. Such records may be inaccurate, absent or contradictory. In addition,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



Scale: 1:275000
(GDA94) MGA Zone 56

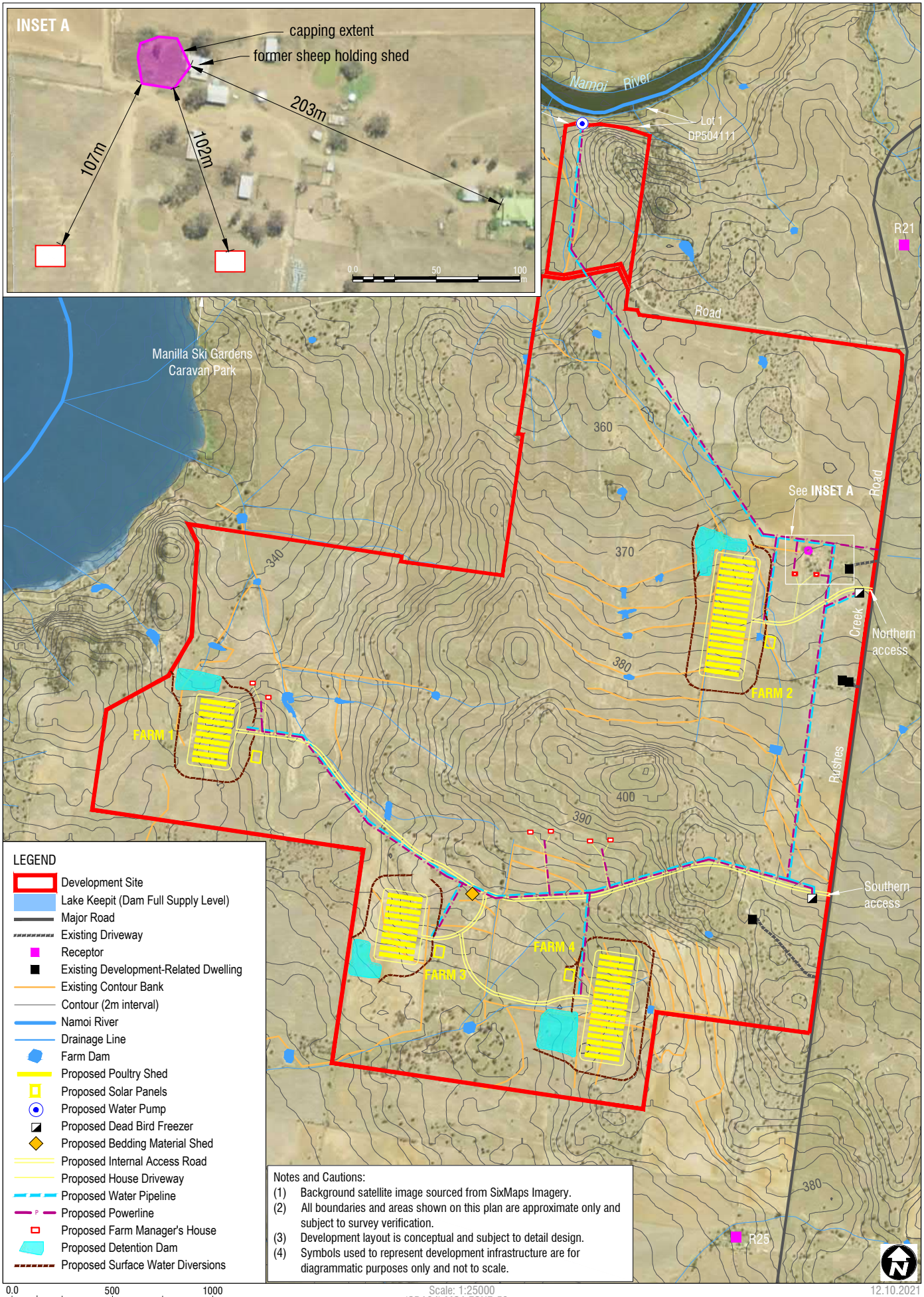
11.10.2021
610.30237

\\au.slr.local\corporate\Projects-SLR\610-SnySYD\610-SYD\610.30237.00000 ProTen Implementation of RAP Rush Creek\06 SLR Data\01 CADGIS\Output\PDF\SLR610302237_F1_SiteLoc_01.dwg

SLR
www.slrconsultingaustralia.com.au

Site Locality

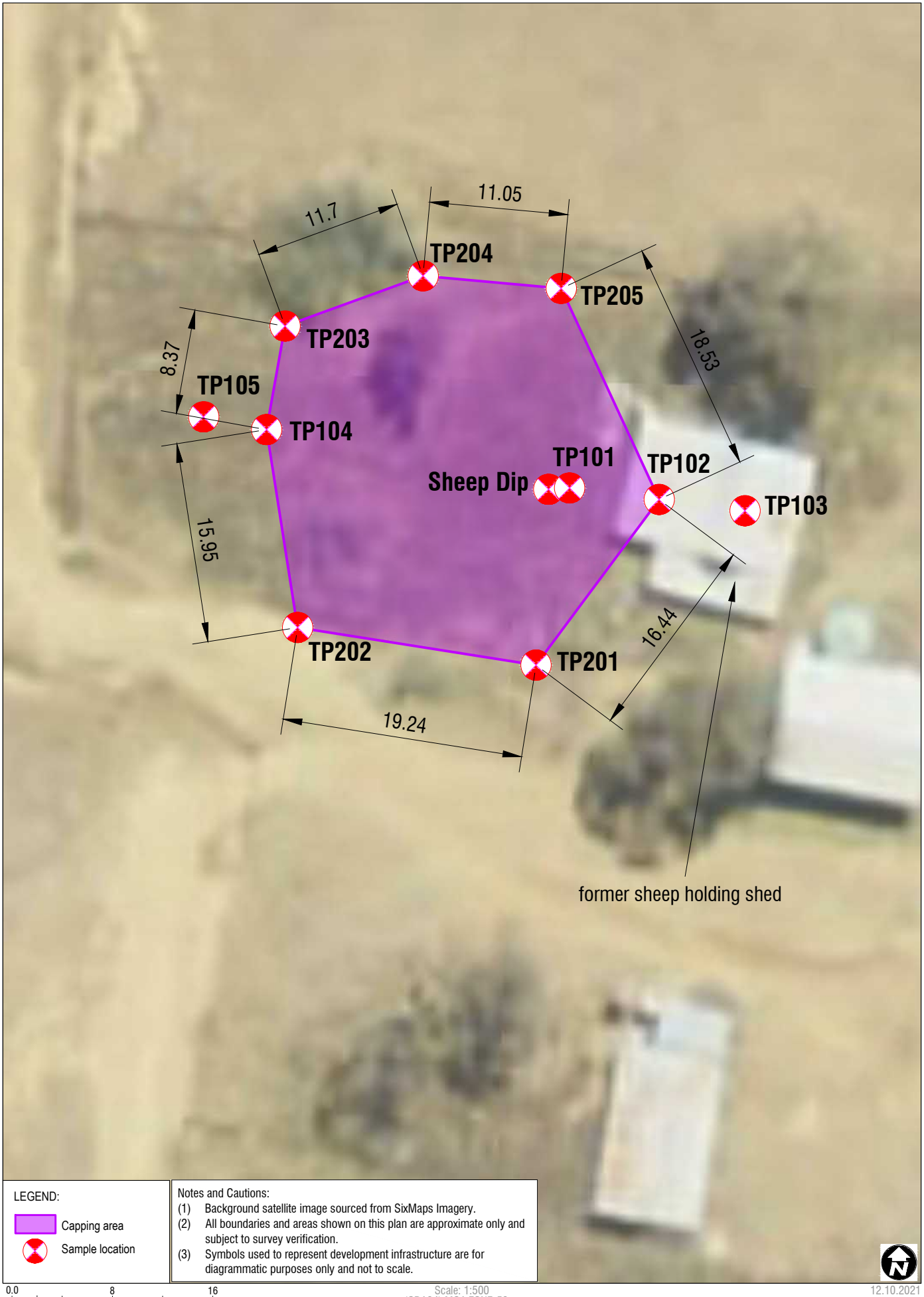
FIGURE 1



Remediation Area

SLR
www.slrconsultingaustralia.com.au

FIGURE 2



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.

0.0 8 16 m

Scale: 1:500
(GDA94) MGA ZONE 56

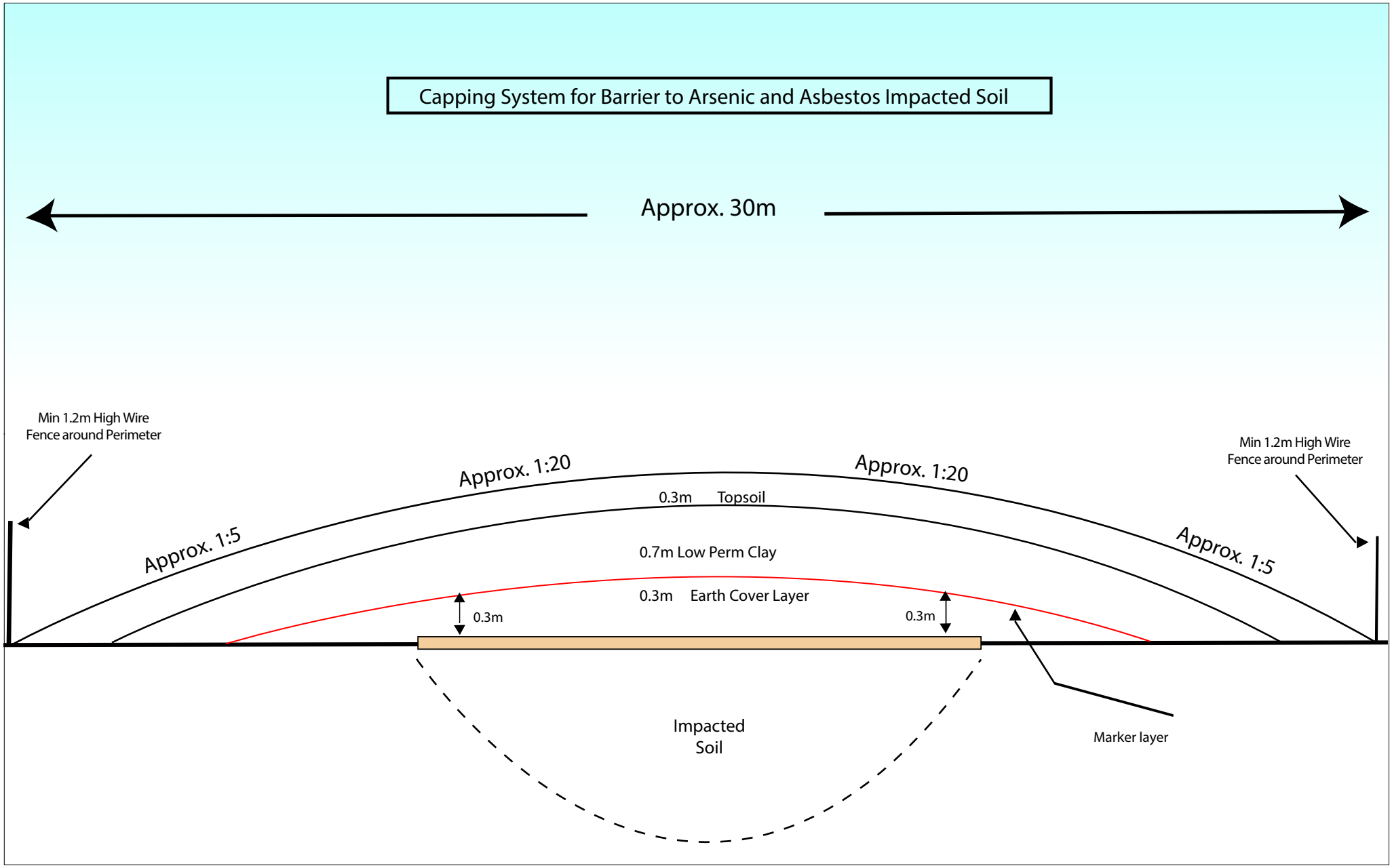
12.10.2021
610.30237

H:\Projects-SLR\610-SrvSYD\610-SYD\610.30237.00000 ProTen Implementation of RAP Rush Creek\06 SLR Data\01 CADGIS\CAD\SLR610302237_F3_CappingExtent_01.dwg

SLR
www.slrconsultingaustralia.com.au

Capping Extent

FIGURE 3



SLR	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:

SLR

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:

SLR

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-excavation

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-excavation

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:

SLR

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:

SLR

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:

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 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:

SLR

Site: RUSHES CREEK ROAD, RUSHES CREEK, NSW 2346

Project: LONG TERM ENVIRONMENTAL MANAGEMENT PLAN

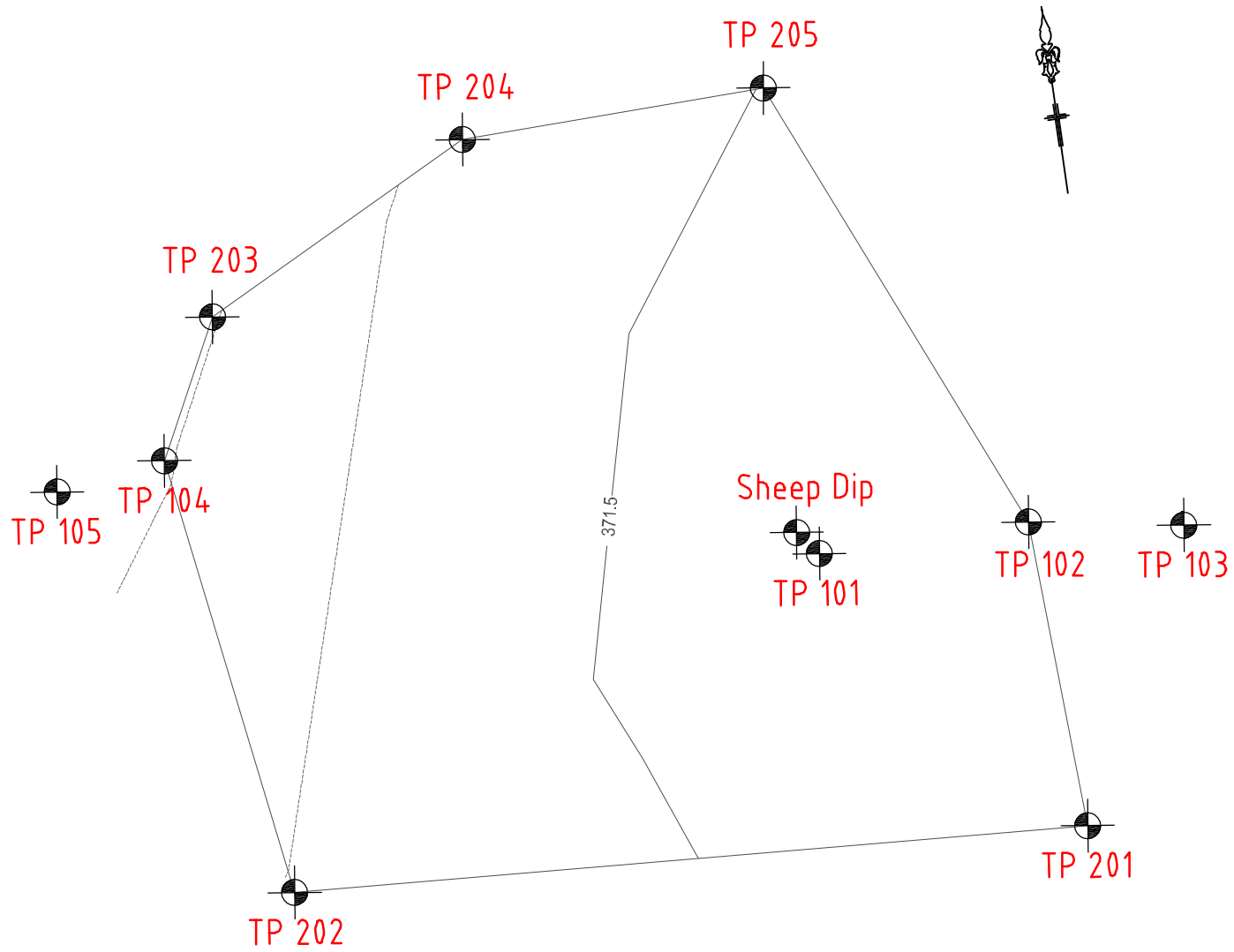
Date: 09 DECEMBER 2021

Drawing: **PHOTOGRAPHIC LOG**

Appendix B

APPENDIX C

Survey Plans



SHEEP DIP PLAN

Scale 1:250
Contours at 0.1m Intervals

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 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

Location	Northing	Easting	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
DIAL1100 BEFORE YOU DIG

LEGEND (EXISTING – LIGHT PROPOSED – DARKER)
CENTRE LINE, KERB AND GUTTER, TOP OF BATTER, SURFACE DRAINAGE, EDGE OF BITUMEN SEAL, FENCELINE, SEWERMAIN, WATERMAIN (& SIZE), STORMWATER DRAINAGE, OVERHEAD POWER, UNDERGROUND ELECTRICAL
TREE, SHRUB, SIGN, SEWER MANHOLE, INSPECTION PIT, DOWNPIPE & ROOFWATER OUTLET, POWER POLE, STREETLIGHT, GUIDE POST, WATER (HYDRANT,VALVE,METER), TELSTRA PIT AND CABLES

Rev.	DESCRIPTION	APPROVED	DATE
A	Sheep Dip co-ordinates	M.Beath	17.11.21

Cad: 21079 Rev A
Civilcad: 21079V20
Survey: L.Smith
Drawn: M.Beath
Designed: N/A
Checked: J.Herdegen

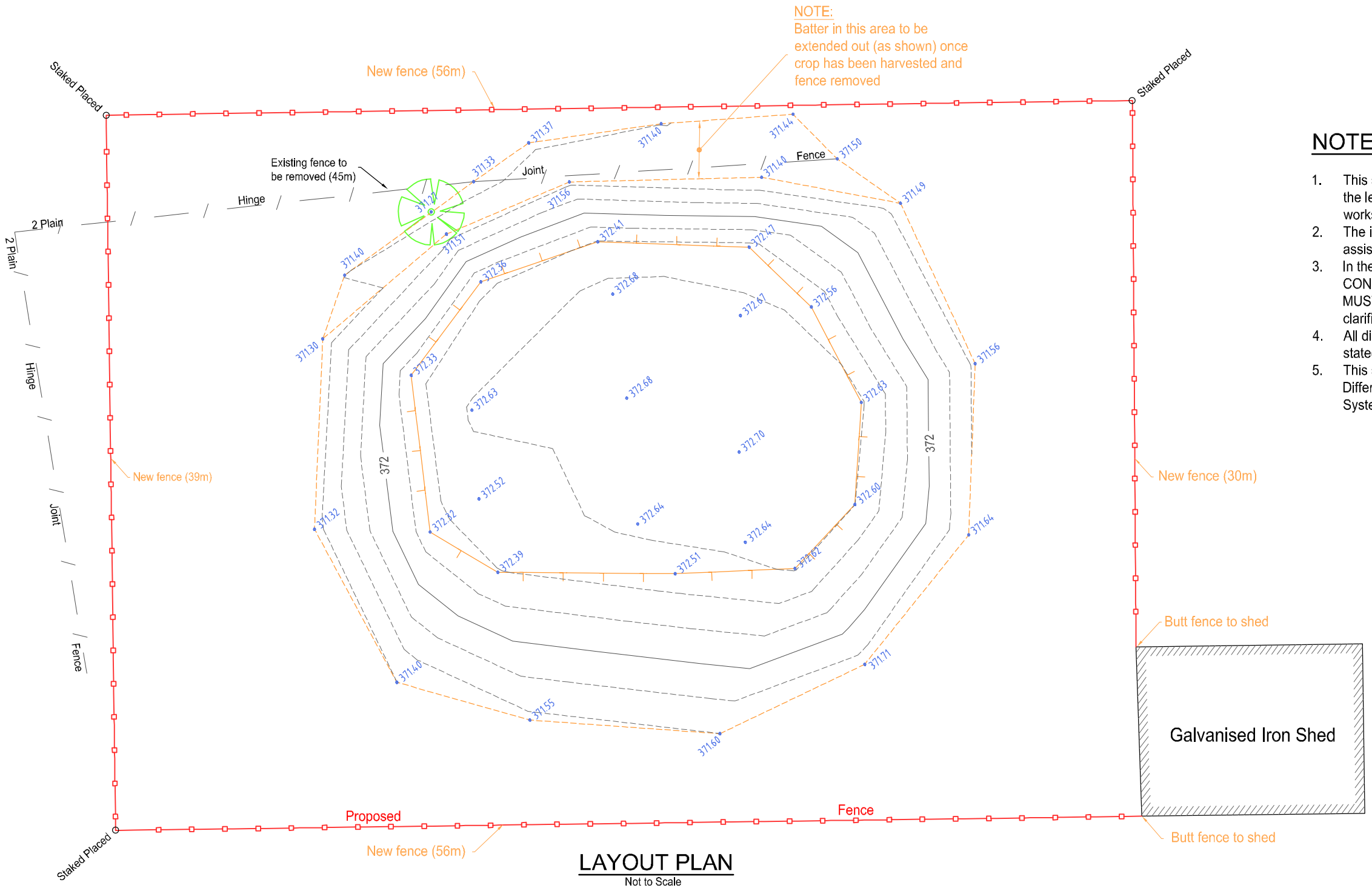
Original A3 Drawing Scale Bar: A3 Scale 1:250 (H) 2.5 0.0 2.5 5.0

Datum Description:
PM 117735 RL 349.753 GDA 2020
Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek

BATH STEWART ASSOCIATES
DEVELOPMENT CONSULTANTS
SURVEYORS – ENGINEERS – PLANNERS – PROJECT MANAGERS
239 Marius Street TAMWORTH NSW 2340
Telephone (02) 6766 5966 A.C.N. 002 745 020
office@bathstewart.com.au

PROTEN
1582 RUSHES CREEK RD RUSHES CREEK
LOT 171 DP 752169
22.10.2021 – SHEEP DIP CO-ORDINATES – ORIGINAL CONDITION

Ref. No: 21079
Sheet No : 01 of 01
Revision : A



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

LEGEND

123.45 Location & Level of finish surface

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

www.dialbeforeyoudig.com.au
DIAL 1100 BEFORE YOU DIG

LEGEND (EXISTING – LIGHT PROPOSED – DARKER)

CENTRE LINE
KERB AND GUTTER
TOP OF BATTER
SURFACE DRAINAGE
EDGE OF BITUMEN SEAL
FENCELINE
SEWERMAIN
WATERMAIN (& SIZE)
STORMWATER DRAINAGE
OVERHEAD POWER
UNDERGROUND ELECTRICAL

TREE, SHRUB, SIGN
SEWER MANHOLE, INSPECTION PIT
DOWNPIPE & ROOFWATER OUTLET
POWER POLE
STREETLIGHT, GUIDE POST
WATER (HYDRANT,VALVE,METER)
TELSTRA PIT AND CABLES

Rev.	DESCRIPTION	APPROVED	DATE
K	Sheep Dip Remediation Works - Final	M.Beath	17.11.21
J	Pad 7 - Shale surface levels	M.Beath	17.11.21
I	Pad 6 - Shale surface levels	M.Beath	26.10.21

Cad: 21079 Rev K
Civilcad: 21422V24
Survey: L.S. & L.B.
Drawn: M.Beath
Designed: N/A
Checked: J.Herdegen

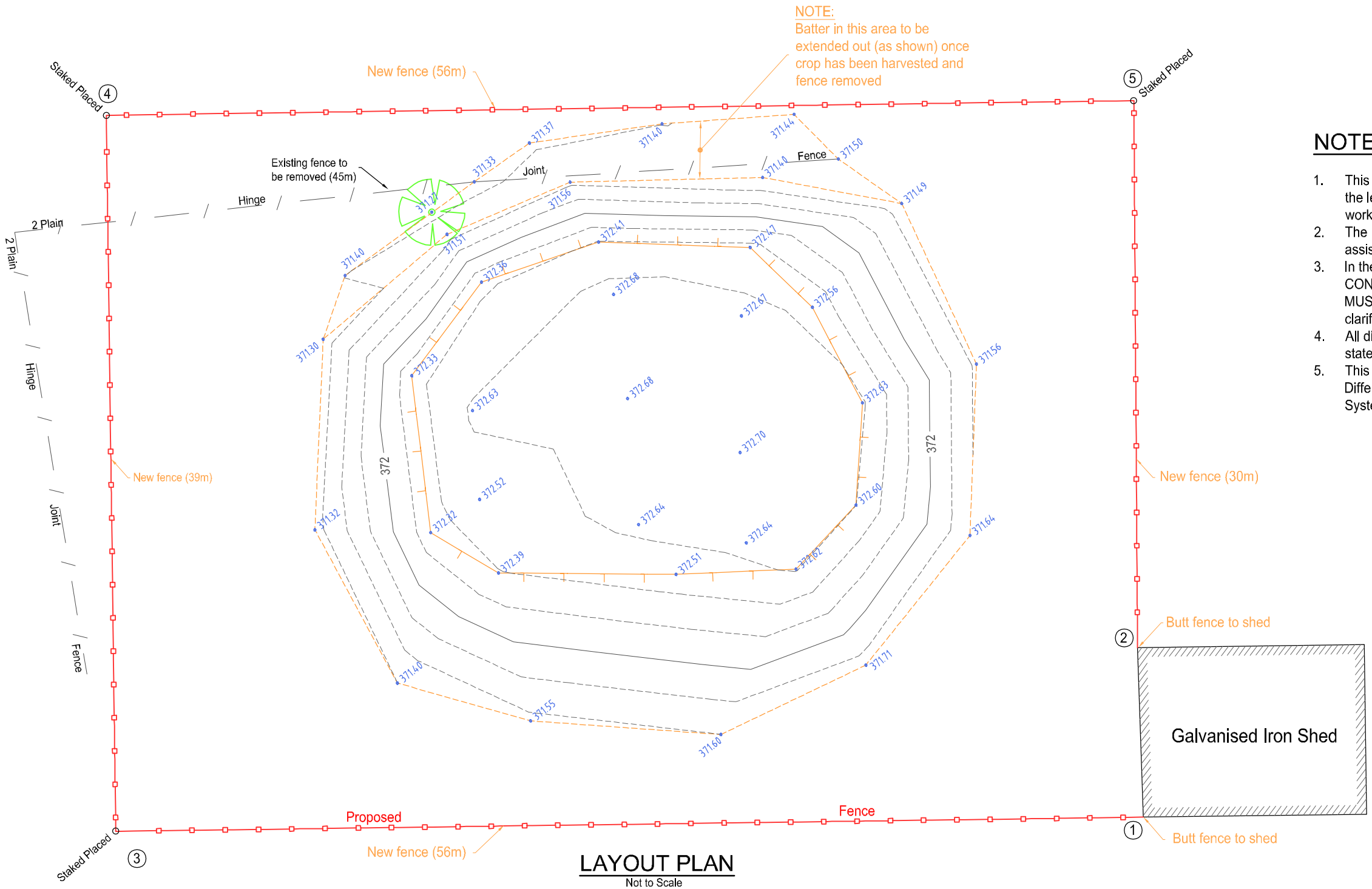
Original A3 Drawing Scale Bar:
Not to Scale

Datum Description:
PM 117735 RL 349.753 GDA 2020
Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek

BATH STEWART ASSOCIATES
DEVELOPMENT CONSULTANTS
SURVEYORS – ENGINEERS – PLANNERS – PROJECT MANAGERS
239 Marius Street TAMWORTH NSW 2340
Telephone (02) 6766 5966 A.C.N. 002 745 020
office@bathstewart.com.au

PROTEN
1582 RUSHES CREEK RD RUSHES CREEK
LOT 171 DP 752169
16.11.2021 – SHEEP DIP REMEDIATION AREA & FENCING

Ref. No: 21079
Sheet No : 01 of 01
Revision : K



LAYOUT PLAN

Not to Scale

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

LEGEND

123.45 Location & Level of finish surface

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 (EXISTING – LIGHT PROPOSED – DARKER)

CENTRE LINE, KERB AND GUTTER, TOP OF BATTER, SURFACE DRAINAGE, EDGE OF BITUMEN SEAL, FENCELINE, SEWERMAIN, WATERMAIN (& SIZE), STORMWATER DRAINAGE, OVERHEAD POWER, UNDERGROUND ELECTRICAL

TREE, SHRUB, SIGN, SEWER MANHOLE, INSPECTION PIT, DOWNPIPE & ROOFWATER OUTLET, POWER POLE, STREETLIGHT, GUIDE POST, WATER (HYDRANT,VALVE,METER), TELSTRA PIT AND CABLES

Rev.	DESCRIPTION	APPROVED	DATE
R	Rev K updated with co-ordinates added - As Requested	M.Beath	08.12.21
Q	Pads 1-8 Partial WAE	J.Herdegen	02.12.21
P	Shed 4 - Bolt Setout	J.Herdegen	01.12.21

Cad: 21079 Rev R
Civilcad: 21422V24
Survey: L.S. & L.B.
Drawn: M.Beath
Designed: N/A
Checked: J.Herdegen

Original A3 Drawing Scale Bar:
Not to Scale

Datum Description:
PM 117735 RL 349.753 GDA 2020
Located on the eastern side of Rushes Creek Rd 130m south of Rushes Creek

BATH STEWART ASSOCIATES
DEVELOPMENT CONSULTANTS
SURVEYORS – ENGINEERS – PLANNERS – PROJECT MANAGERS
239 Marius Street TAMWORTH NSW 2340
Telephone (02) 6766 5966 A.C.N. 002 745 020
office@bathstewart.com.au

PROTEN
1582 RUSHES CREEK RD RUSHES CREEK
LOT 171 DP 752169
08.12.2021 – SHEEP DIP REMEDIATION AREA FENCE CO–ORDINATES

Ref. No: 21079
Sheet No : 01 of 01
Revision : R

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 Ponded Water?					
4	% Grass Cover					
5	Are trees or shrubs growing on the cap?					
6	Is there evidence of disturbance of the capping?					
7	Other					

Note – Photographs to also be recorded of the capping condition

Photograph A	Photograph B
Photograph C	Photograph D

ASIA PACIFIC OFFICES

ADELAIDE
60 Halifax Street
Adelaide SA 5000
Australia
T: +61 431 516 449

BRISBANE
Level 16, 175 Eagle Street
Brisbane QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

CANBERRA
GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

DARWIN
Unit 5, 21 Parap Road
Parap NT 0820
Australia
T: +61 8 8998 0100
F: +61 8 9370 0101

GOLD COAST
Level 2, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY
21 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300

MELBOURNE
Level 11, 176 Wellington Parade
East Melbourne VIC 3002
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

NEWCASTLE CBD
Suite 2B, 125 Bull Street
Newcastle West NSW 2302
Australia
T: +61 2 4940 0442

NEWCASTLE
10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
F: +61 2 4037 3201

PERTH
Grd Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

SYDNEY
Tenancy 202 Submarine School
Sub Base Platypus
120 High Street
North Sydney NSW 2060
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

TOWNSVILLE
12 Cannan Street
South Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

WOLLONGONG
Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 2 4249 1000

AUCKLAND
Level 4, 12 O'Connell Street
Auckland 1010
New Zealand
T: 0800 757 695

NELSON
6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628

WELLINGTON
12A Waterloo Quay
Wellington 6011
New Zealand
T: +64 2181 7186

SINGAPORE
39b Craig Road
Singapore 089677
T: +65 6822 2203