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Lead Paint Clearance

(Visual Inspection Only)

Yarralumla Primary School 21 July, 2019

Certificate of approval for issue of documents

Document Name	Lead Paint Clearance – Gambarri Preschool Yarralumla Primary School		
Date of Issue	18 August 2019	Job Number	T-01035
Client	ACT Property Group		
Site Sampling and Report Preparation			
			
Robson Environmental Pty. Ltd.		Robson Environmental Pty. Ltd.	
Reviewed		Approved	
			
Robson Environmental Pty. Ltd.		Robson Environmental Pty. Ltd.	

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9. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Robson Environmental Pty Ltd.

1 Introduction

Robson Environmental Pty. Ltd. (Robson) undertook a visual lead clearance inspection following the removal of leaf litter suspected to be contaminated with lead paint fragments and lead paint fragments at the Yarralumla Primary Gambarri Preschool Building which commenced on Friday 19 July and completed on Sunday 21 July 2019.

1.1 Objective

The purpose of the inspection was to assess the success of the precautionary removal of leaf litter, lead paint fragments and associated debris at the Gambarri Preschool Building 'Fairy Garden' owing to concerns regarding possible contamination with lead paint fragments.

1.2 Scope

The assessment consisted of:

- Visual inspection of the 'Fairy Gardens' and surrounding areas



4 Results

4.1 Visual Assessment

A visual assessment of the worksite on Sunday July 21, 2019 following the leaf litter and lead paint fragments removal work did not identify any leaf litter or lead paint fragments on the ground surfaces or in the surrounding areas.

Figure 1 to 12 shown below outline the representative areas where areas of leaf litter and lead paint fragments had been removed to a satisfactory level.



Figure 1: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 2: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 3: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 4: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 5: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 6: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 7: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 8: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 9: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 10: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 11: Ground surfaces after removal of leaf litter and lead paint fragments



Figure 12: Ground surfaces after removal of leaf litter and lead paint fragments

5 Conclusion and Recommendations

The lead paint clearance inspection undertaken at the Yarralumla Primary Gambarri Preschool Building on Sunday 21 July 2019 found the leaf litter suspected to be contaminated with lead paint fragments and lead paint fragments removal works at the 'Fairy Garden' and the surrounding areas to be satisfactory, as there was no visual sign of leaf litter and lead paint fragments remaining on the ground surfaces. These areas are now safe to be reoccupied.

It is noted that leaf litter located to the exterior south west corner of the Yarralumla Primary Gambarri Preschool Building is possibly contaminated with lead paint fragments as well. The remediation works has been planned and until these works are completed, access to this area should be restricted. Additional lead paint fragments may be present at depth and/or beyond the areas covered by this and other clearance certificates.

5.1 Recommendations

1. Workers conducting the repainting works should wear appropriate respiratory protection during the application of new paint, to provide protection against lead concentrations that are still adhered on to surfaces.
2. Workers should practice good personal hygiene practices following repainting works, including washing hands and face following the completion of the works and prior to eating, drinking or smoking.

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

The report, including any risk assessment presented, is based on the information obtained by Robson at the time of sampling. Any variation in the environment, activities, methods, practices, products, or equipment used may change exposures to hazards, invalidating the presented risk assessment. Robson recommends that risks be re-assessed prior to making any changes to the aforementioned factors.

The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

6 References





- Standards Australia, 2017, AS/NZS4361.2-2017: *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*, Standards Australia, Australia.
- U.S. Department of Housing and Urban Development 2012, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Second Edition*, Office of Health Homes and Lead Hazard Control, Washington, DC.

Lead Paint Clearance

(Visual Inspection Only)

Yarralumla Primary School 3-4 August 2019

Certificate of approval for issue of documents

Document Name	Lead Paint Clearance – Gambarri Centre - Yarralumla Primary School		
Date of Issue	18 August 2019	Job Number	T-01035
Client	ACT Property Group		
Site Sampling and Report Preparation			
 Robson Environmental Pty. Ltd.		 Robson Environmental Pty. Ltd.	
Reviewed		Approved	
 Robson Environmental Pty. Ltd.		 Robson Environmental Pty. Ltd.	
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1 Introduction

Robson Environmental Pty. Ltd. (Robson) undertook a visual lead clearance inspection following the removal of leaf litter and lead paint fragments from garden beds suspected to be contaminated with lead paint fragments at the Yarralumla Primary Gambarri Centre Building which commenced on Saturday 3 August and completed on Sunday 4 August 2019.

1.1 Objective

The purpose of the inspection was to assess the success of the precautionary removal of leaf litter and lead paint fragments from various garden beds around the Gambarri Centre building owing to concerns regarding possible contamination with lead paint fragments.

1.2 Scope

The assessment consisted of:

- Visual inspection of the garden bed located on the west side of the Gambarri Centre building (adjacent Montessori Villa entrance – primary school side); and
- Visual inspection of the garden beds located on the south west corner of the Gambarri Centre building (adjacent to front car park).



4 Results

4.1 Visual Assessment

Visual assessments of the worksites on Saturday 3 August and Sunday 4 August 2019 following the leaf litter removal work did not identify any leaf litter or lead paint fragments on the ground surfaces or in the surrounding areas where the remediation works were undertaken.

Figure 1 to 10 shown below outline the representative areas where areas of leaf litter and lead paint fragments had been removed to a satisfactory level.



Figure 1: Location of garden bed along Gambarri centre SW corner where remediation works were undertaken



Figure 2: Ground surface after remediation works at garden bed along Gambarri centre SW corner



Figure 3: Ground surface after remediation works at garden bed along Gambarri centre SW corner



Figure 4: Ground surface after remediation works at garden bed along Gambarri centre SW corner



Figure 5: Ground surface after remediation works at garden bed along Gambarri centre SW corner



Figure 6: Ground surface after remediation works at garden bed along Gambarri centre SW corner



Figure 7: Location of garden bed along Gambarri centre west side where remediation works were undertaken



Figure 8: Ground surface after remediation works at garden bed along Gambarri centre West side



Figure 9: Ground surface after remediation works at garden bed along Gambarri centre West side



Figure 10: Ground surface after remediation works at garden bed along Gambarri centre West side

5 Conclusion and Recommendations

The lead paint clearance inspections undertaken at the Yarralumla Primary Gambarri Centre Building on Saturday 3 August and Sunday 4 August 2019 found the leaf litter suspected to be contaminated with lead paint fragments and the lead paint fragments removal works at the west side and south west corner of the Gambarri Centre including the surrounding areas to be satisfactory, as there was no visual sign of leaf litter or lead paints remaining on the ground surfaces. These areas are now safe to be reoccupied.

It is noted that leaf litter remaining and located to the exterior south side of the Yarralumla Primary Gambarri Centre Building may also possibly be contaminated with lead paint fragments. Leaf litter removal works should be planned for these areas and until these works are completed, access to the areas should be restricted. Additional lead paint fragments may be present at depth and/or beyond the areas covered by this and other clearance certificates.

5.1 Recommendations

1. Workers conducting the repainting works should wear appropriate respiratory protection during the application of new paint, to provide protection against lead concentrations that are still adhered on to surfaces.
2. Workers should practice good personal hygiene practices following repainting works, including washing hands and face following the completion of the works and prior to eating, drinking or smoking.

While Robson has taken all care to ensure that this report includes the most accurate information available, samples were taken at certain times on the day or days indicated within the report and Robson is unable to comment on conditions at other times. Any statement of expected conditions at other times should be taken as possible conditions only.

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The findings contained within this report are developed from the interpretation of the results of specific sampling methods used in accordance with generally accepted practices and standards, based on the current state of knowledge. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the general conditions, and subsequent risk at the time of sampling. Should you have any questions or require further information please contact Robson Environmental.

6 References

- Standards Australia, 2017, AS/NZS4361.2-2017: *Guide to hazardous paint management, Part 2: Lead paint in residential, public and commercial buildings*, Standards Australia, Australia.
- U.S. Department of Housing and Urban Development 2012, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Second Edition*, Office of Health Homes and Lead Hazard Control, Washington, DC.

From: [Byrne, Evan](#)
To: [Ebner, Joanne](#)
Subject: FW: T01035_YarraPS_CanteenPantryLeadPaint_20190722 [SEC=UNCLASSIFIED]
Date: Thursday, 22 August 2019 2:24:17 PM
Attachments: [image001.jpg](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

Jo,

See below comments from Robson Environmental.

Please let me know if you would like me to arrange anything.

Evan Byrne

Project Officer

ACT Property Group / Property Upgrades

Chief Minister, Treasury and Economic Development Directorate | **ACT Government**

M: 0411 183 771

E: evan.byrne@act.gov.au

255 Canberra Avenue, Fyshwick, ACT 2609

"If you have any feedback for the ACT Property Group, please email actpgfeedback@act.gov.au"



From: [REDACTED]
Sent: Thursday, 22 August 2019 2:11 PM
To: Byrne, Evan <Evan.Byrne@act.gov.au>

Subject: RE: T01035_YarraPS_CanteenPantryLeadPaint_20190722 [SEC=UNCLASSIFIED]

Hi Evan,

I undertook the health risk assessment for this lead paint exposure risk, on [REDACTED] behalf. I have provided answers to your questions below.

- whether immediate action to stop using this area is required;
Yes I would recommend this area not be used. Given that this is a food handling area, presumably accessed by a vulnerable population, I don't believe the risk is justifiable. I have given more details on the risk assessment below.
- whether any short-term controls can be put in place to enable the continued use of this space prior to undertaking the abatement works; and
No I would not recommend any short-term controls. If the paint was in an area that people have limited interaction with (e.g. an external wall) short term controls would be

fine, but because of the risk presented by people having direct contact with the painted surface I don't believe paint stabilization methods such over-painting would be appropriate. Activities within the pantry, e.g. moving items on the bench, run the risk of damaging an over-paint coating.

- any advice on the health risks of potential exposure to date would be helpful
It's not really possible to determine the exposure risk to date. The health risk will depend on the amount of exposure, considering the amount of time a person spends in the areas, the amount of lead in the area, and the occurrence of events that will liberate lead from the paint (e.g. knocking or rubbing items on the bench), and personal factors which increases a person's risk from exposure. Children, babies and pregnant or breastfeeding women (lead can pass through breast milk and through the placenta) are most at risk, and given the location of this paint I would expect that these groups will be present in this area.

Given the condition of the paint it is clear that lead will have been liberated from the paint in the past, which will have presented an exposure risk to people accessing the pantry. Having said this, it is not an area that people probably spend a lot of time, so periods of exposure have probably been short, and the wearing of the paint has probably occurred over a long period of time, so exposures at any one time have probably not been particularly high. What concerns me, however, is that this is a food preparation area, which greatly increases the risk of people ingesting lead.

On a balance of probabilities exposures have probably not been notably elevated in the past, but given that you have clear evidence of damage to the paint, a vulnerable population and an elevated risk of ingestion of lead, the lead paint in this area does present a potentially significant exposure risk.

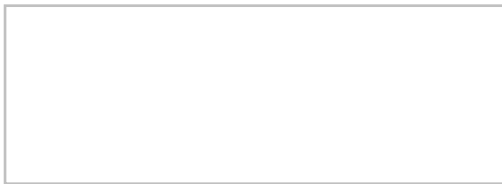
There is some good information about lead exposure risks here:

- <https://www.betterhealth.vic.gov.au/health/healthyliving/Lead-exposure-and-your-health>
- <https://www.aioh.org.au/static/uploads/files/inorganic-lead-and-occupational-health-issues-wfougbfmdqkv.pdf>
- <https://www.healthdirect.gov.au/lead-poisoning>

If you have any further questions about exposure risks, please feel free to direct them to me. All other questions etc. would be best to continue to go to Josh.

Kind regards,



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From: Byrne, Evan [<mailto:Evan.Byrne@act.gov.au>]

Sent: Wednesday, 21 August 2019 12:33 PM

To: [Redacted]

Cc: [Redacted]

Subject: RE: T01035_YarraPS_CanteenPantryLeadPaint_20190722 [SEC=UNCLASSIFIED]



In regard to the canteen pantry at Yarralumla, could you please confirm the following;

- whether immediate action to stop using this area is required;
- whether any short-term controls can be put in place to enable the continued use of this space prior to undertaking the abatement works; and
- any advice on the health risks of potential exposure to date would be helpful

Evan Byrne

Project Officer

ACT Property Group / Property Upgrades

Chief Minister, Treasury and Economic Development Directorate | **ACT Government**

M: 0411 183 771

E: evan.byrne@act.gov.au

255 Canberra Avenue, Fyshwick, ACT 2609

"If you have any feedback for the ACT Property Group, please email actpgfeedback@act.gov.au"



From: [Redacted]

Sent: Sunday, 18 August 2019 2:46 PM

To: Byrne, Evan <Evan.Byrne@act.gov.au>

Cc: J [Redacted]

Subject: T01035_YarraPS_CanteenPantryLeadPaint_20190722

Good afternoon Evan,

My apologies for the delay of this report.

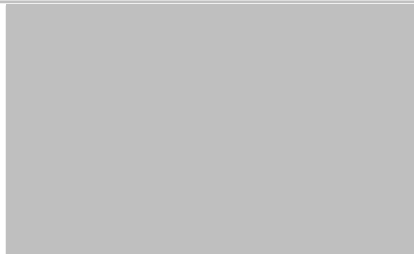
Please find attached completed lead paint survey report.

I appreciate your patience in this matter.

If you have any questions please feel free to contact me.

Thanks.

Kind regards,



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Lead Paint Clearance

(Visual Inspection Only)

Yarralumla Primary School 18 August 2019

Certificate of approval for issue of documents

Document Name	Lead Paint Clearance – Yarralumla Primary Gambarri Centre		
Date of Issue	23 August 2019	Job Number	T-01035
Client	ACT Property Group		
Site Sampling and Report Preparation			
 Robson Environmental Pty. Ltd.		 Robson Environmental Pty. Ltd.	
Reviewed		Approved	
 Robson Environmental Pty. Ltd.		 Robson Environmental Pty. Ltd.	
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1 Introduction

Robson Environmental Pty. Ltd. (Robson) undertook a visual lead clearance inspection following the removal of leaf litter, lead paint fragments and soil from garden beds suspected to be contaminated with lead paint fragments at the Yarralumla Primary Gambarri Centre Building which commenced on Saturday 17 August and completed on Sunday 18 August 2019.

1.1 Objective

The purpose of the inspection was to assess the success of the precautionary removal of leaf litter, lead paint fragments, soil and associated debris from garden beds around the Gambarri Centre building owing to concerns regarding possible contamination with lead paint fragments.

1.2 Scope

The assessment consisted of a visual inspection of the soil area along the south east of the Gambarri Centre building;



4 Results

4.1 Visual Assessment

Visual assessments of the worksites on Saturday 17 August and Sunday 18 August 2019 following the leaf litter removal work did not identify any leaf litter or lead paint fragments on the ground surfaces or in the surrounding areas where the leaf litter had been removed.

Figure 1 to 7 shown below outline the representative areas where areas of the remediation works had been removed to a satisfactory level.



Figure 1: Location of garden bed south east of Gambarri Centre entrance where the remediation works was undertaken



Figure 2: Ground surface after the remediation works in garden bed south east of Gambarri Centre entrance where the remediation works was undertaken



Figure 3: Ground surface after the remediation works in garden bed south east of Gambarri Centre entrance where the remediation works was undertaken

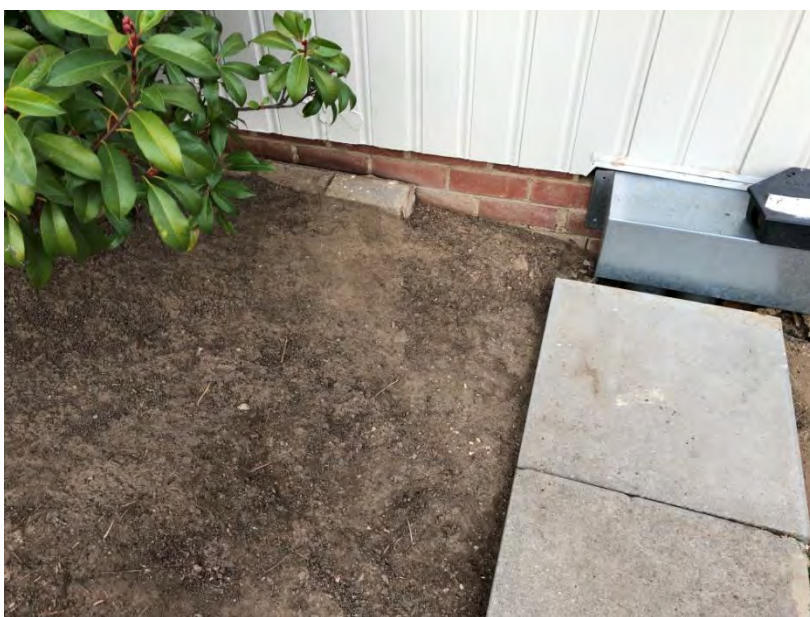


Figure 4: Ground surface after the remediation works in garden bed south east of Gambarri Centre entrance where the remediation works was undertaken



Figure 5: Ground surface after the remediation works in garden bed south east of Gambarri Centre entrance where the remediation works was undertaken



Figure 6: Location of garden bed south east of Gambarri Centre Music Room where the remediation works was undertaken



Figure 7: Ground surface after the remediation works in garden bed south east of Gambarri Centre Music Room where the remediation works was undertaken

5 Conclusion and Recommendations

The lead paint clearance inspections undertaken at the Yarralumla Primary Gambarri Centre Building on Saturday 17 and Sunday 18 August 2019 found the leaf litter and soil suspected to be contaminated with lead paint fragments and the lead paint fragments removal works to the ground surfaces located to garden beds south of the Gambarri Centre Building including the surrounding areas to be satisfactory, as there was no visual sign of leaf litter or lead paint fragments remaining on the ground surfaces. These areas are now safe to be reoccupied.

Additional lead paint fragments may be present at depth and/or beyond the areas covered by this and other clearance certificates.

5.1 Recommendations

1. Workers conducting the repainting works should wear appropriate respiratory protection during the application of new paint, to provide protection against lead concentrations that are still adhered on to surfaces.
2. Workers should practice good personal hygiene practices following repainting works, including washing hands and face following the completion of the works and prior to eating, drinking or smoking.

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- U.S. Department of Housing and Urban Development 2012, *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing Second Edition*, Office of Health Homes and Lead Hazard Control, Washington, DC.

Document Reference: T01035_EAR_SA_Lead_20190823

Evan Byrne
ACT Property Group

225 Canberra Avenue,
Fyshwick, ACT 2609.

Evan.Byrne@act.gov.au

Friday, 23 August 2019

Dear Evan,

Re: T01035 – Lead in Soil Assessment – Yarralumla Gambarri Centre 24 Loftus street Yarralumla ACT 2600 (Block 12 Section 82 Yarralumla ACT 2600).

INTRODUCTION

ACT Property Group engaged Robson Environmental Pty Ltd (Robson) in July 2019 to undertake an assessment of soil for potential lead contamination in areas surrounding the Gambarri Centre building located at Loftus street Yarralumla ACT 2600, herein referred to as 'the site'. The location of the site is shown on **Figure 1**.

It is understood that there is known lead based paint (greater than 0.1 percent weight/weight (%w/w) on certain buildings on the site. This paint had been assessed as being in a poor condition (flaking) and it has been recommended that the paint be removed to reduce exposure risk. On completion of abatement it has been requested that the soil within the footprint of the remediation activity be assessed for potential lead contamination.

OBJECTIVE

The objective of the assessment documented within this letter report was to assess the soil for potential lead contamination to determine the potential lead exposure risk to occupants of the site.

SCOPE OF WORK

The scope of work undertaken for the soil assessment included the following:

- Preparation of a safe work method statement (SWMS) for works on the site;
- Mobilisation of a suitably qualified environmental consultant (SQEC) to locate the sample locations and with the use of a stainless steel shovel collect near surface soil samples;
- In total six (6) sample locations were selected across the site to determine whether lead contamination was present within the footprint of the remediation activity;
- Based on the known source of the lead contamination (exterior paint on the buildings) the soil samples were taken from a depth of 0.0-0.2 meters below ground level (mbgl).
- The soil samples were submitted to National Association of Testing Authorities (NATA) accredited laboratory. Laboratory analysis of the soil samples included the following:
 - Analysis of six (6) primary soil samples; one (1) sample per location;
 - All primary samples were analysed for lead;

- As part of the QA/QC program the analysis of one (1) duplicate and one (1) rinsate was also collected for analysis;
- The duplicate and the rinsate sample were analysed as per the primary samples.
- Review and interpretation of field and laboratory results;
- Preparation of this assessment report detailing the findings of the soil assessment.

ADOPTED ASSESSMENT CRITERIA

The purpose of this soil assessment was to assess the soil for potential lead contamination. Therefore, the surface soil has been assessed against the criteria presented in the National Environment Protection Council (NEPC, 1999) '*National Environment Protection (Assessment of Site Contamination) Measure 1999*' as amended in May 2013 (ASC NEPM, 2013) for both health-based investigation levels (HIL) as well as ecological investigation levels (EIL) for the protection of terrestrial ecosystems.

As a conservative approach it is considered that the most applicable criteria to assess the potential risk to human health from contaminant concentrations are the ASC NEPM (2013) HIL 'A' '*Residential with garden accessible soil (home grown produce less than 10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools*' criteria.

The ASC NEPM (2013) indicates that the EIL should generally be applied to contaminants in the top 2 meters of soil at the finished surface/ground level for generic land use settings, therefore the ASC NEPM (2013) EIL urban residential/public open space criteria have also been considered.

SAMPLING METHODOLOGY

The sampling and assessment works were undertaken in accordance with the following the following ACT legislation and ACT EPA endorsed guidelines:

- ACT Environment Protection Act 1997;
- ACT Environment Protection Regulation 2005;
- Work Health and Safety Act 2011;
- Work Health and Safety Regulation 2011;
- ACT EPA (2009) '*Contaminated Sites – Environment Protection Policy*';
- Australian Standard AS4361.2-2017 '*Guide to Hazardous Paint Management, Part 2: Lead Paint in Residential, Public and Commercial Buildings*';
- Australian Standard AS4482.1-2005 '*Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds*';
- NSW EPA (1995) '*Sampling Design Guidelines*'.
- National Environment Protection Council (NEPC, 1999) '*National Environment Protection (Assessment of Site Contamination) Measure 1999*', amended 2013, herein referred to as the ASC NEPM (2013).

The number of sample locations required to assess the site was based on the area of targeted locations surrounding the Gambarri centre or where the presence of paint flakes had been observed on the soil surface. Due to the linear nature of the assessment area Robson considers a sampling density of one (1) sample every 5 linear meters (lm) appropriate for purposes of this assessment.

- The northern face of the Gambarri Centre had an area of concern spanning approximately fifteen (15) lm so three (3) soil samples were taken;
- The southern face of the Gambarri Centre had an area of concern spanning approximately seventeen (17) lm so three (3) soil samples were taken but SS22 was damaged in transit so only 2 soil samples were analysed from this area;
- The northeast area of the Gambarri centre had an area of concern spanning approximately five (5) lm so one (1) soil sample was taken.

Soil samples were collected in general accordance with Robson SOP 'Soil Sampling and Logging' (EAR-SOP003). At each location, primary soil samples were collected at the near surface (0.0-0.1 mbgl); the targeted depth.

Each sample was collected from the stainless steel shovel using a new, clean pair of nitrile gloves. Soil samples were placed into a clean laboratory-supplied glass jar marked with unique sample identification and sealed with a Teflon-lined screw cap, and immediately placed into a container for transport to a National Association of Testing Authorities (NATA) accredited laboratory. Chain of custody (COC) documentation was completed and accompanied the samples to the laboratory.

For quality assurance/quality control (QA/QC) purposes, a duplicate sample was collected and analysed at a minimum rate of 1 in 20 samples. The duplicate sample was submitted to the primary laboratory and used to assess the reproducibility of the sampling and analytical methods. The QA/QC samples were labelled with no reference to the primary sample on the sample container or COCs to ensure the analytical results were not biased by the laboratories. In addition, as part of the QA/QC process a rinsate sample was collected. The objective of the rinsate sample was to assess the adequacy of decontamination procedure between sampling.

FIELDWORK AND OBSERVATIONS

An SQEC from Robson undertook the fieldwork on 28 July and 4 August 2019. The sample locations are shown on **Figure 2** and the field observations are summarised below and photographs are shown in **Attachment A**.

- SS18 to SS20 were located in the soil bed north of the Gambarri centre and east of the covered walkway;
- SS21 and SS23 were located on the southern end of the Gambarri Centre in the soil bed outside the class rooms and SS24 was located northeast of the Gambarri centre in the soil bed north of the primary school.

The soil present within the sample locations was observed to be fill and comprised of a dry silty sand, brown, loose with some rootlets and organic matter.

There were no odours or visual indications of contamination including asbestos containing material (ACM) observed.

A total of seven (7) primary soil samples were collected from near the surface (0.0 – 0.2) at each location, however only six (6) were analysed by the laboratory due to sample damage in transit.

The QA/QC samples collected for the assessment included the following:

- Sample QC01 which is a duplicate of primary sample SS24 (0.0-0.2);
- A rinsate (identified as R1).
 - Sample collected from stainless steel shovel following decontamination.

LABORATORY ANALYSIS

The primary samples, the duplicate, the rinsate and the lead paint samples were submitted to [REDACTED], which is NATA accredited for the analysis performed.

All primary samples were analysed for lead.

Analytical Results

The analytical results are summarised in **Table 1** and the sample receipts, COC documentation and certified laboratory analytical reports are included in **Attachment B**.

In summary, the surface soil samples analysed returned lead concentrations below the ASC NEPM (2013) HIL 'A' and EIL residential and urban open space criteria of 300 milligrams per kilogram (mg/kg) (most sensitive). The lead concentration in soil samples analysed ranged from 15 to 130 mg/kg.

QUALITY ASSURANCE AND QUALITY CONTROL RESULTS (QA/QC)

Field QA/QC

As indicated previously, a duplicate sample was collected and analysed to assess the reproducibility of the sampling procedures and the laboratory analytical methods used. This was assessed via calculation of the Relative Percentage Difference (RPD) for a primary soil sample and the corresponding field duplicate sample. The calculation of the RPDs is a method of normalising two (2) values and allows a comparison between values and represents the differences between the primary and QC sample, divided by the average of the two (2) results expressed as a percentage. The RPD is calculated using the following formula:

$$RPD = \frac{\text{Result No. 1} - \text{Result No. 2} \times 100}{\text{Mean result}}$$

Calculated RPD results would be considered acceptable when the value is less than 50 %. Also, when the analyte concentration is less than five (5) times the laboratory LOR any RPD is considered acceptable. Should the RPD value exceed 50%, then further investigation to the cause of the difference between the primary and QC results would be undertaken.

The analytical results and calculation of the RPDs for the duplicate pairs are presented in **Table 2**.

The analytical results for the rinsate sample R1 were below the laboratory detection limit and indicates that field decontamination procedures were effective and are therefore considered acceptable.

The analytical results for the rinsate sample R1 are presented in **Table 3**.

Laboratory QA/QC

The results of the laboratory internal quality control program are included along with the laboratory reports in **Attachment B**. The acceptable limits for the laboratory QA/QC are presented below in **Table A**.

Table A: Summary of Acceptable Laboratory QA/QC Limits

Sample Type	Acceptable Limits
Surrogate Spikes – Not required for this job	BTEX/VOC (soil) 70% - 130% Water 30% - 140%
Method Blanks	Less than the LOR
Duplicate Sample	Maximum allowable difference (MAD) criteria where: $MAD = 100 \times \text{Statistical Detection Limit (SDL)}/\text{Mean} + \text{Limiting Repeatability (LR)}$
Laboratory Control Sample	80% - 120% (soil and water); 69%-131% (paint)
Matrix Spikes	70% - 130% (metals)

In summary the laboratory QA/QC results indicate the following:

- The spike and surrogate recovery results were within the laboratory's acceptable range;
- The concentrations of the laboratory blanks were below the LOR;
- The laboratory duplicate sample analyses were within the acceptable limits set by the laboratory;
- The laboratory control samples were within acceptable QC limits set by the laboratory.

Based on the results of the implemented field quality control and the results of the internal quality control implemented by the laboratory, Robson considers the analytical results provided in the laboratory reports to be acceptable for the purposes of this assessment.

CONCLUSIONS AND RECOMMENDATIONS

Based on the field observations and the analytical results Robson concludes the following:

- The soil present in areas surrounding the Gambarri Centre following the lead paint abatement works pose a negligible lead exposure risk to the site occupants and further action is not required.

Please do not hesitate to contact the undersigned on [REDACTED] should you have any queries regarding this letter.

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For and on behalf of Robson Environmental.



Attachments

Statement of Limitations

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Figures

Figure 1: Site Location Plan

Figure 2: Sample Location Plan

Tables

Table 1: Soil Analytical Results

Table 2: Soil QA/QC Results

Table 3: Water QA/QC Results

Attachments

Attachment A: Photographs

Attachment B: Sample Receipt Advice, COC Documentation and Laboratory Reports

STATEMENT OF LIMITATIONS

The findings contained within this report are the result of the interpretation of discrete/specific sampling methodologies used in accordance with normal practices and standards. To the best of Robson's knowledge, our assessment of the data represents a reasonable interpretation of the assessed material on the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the entire site. In addition, the assessment did not include the direct sampling and analysis of groundwater.

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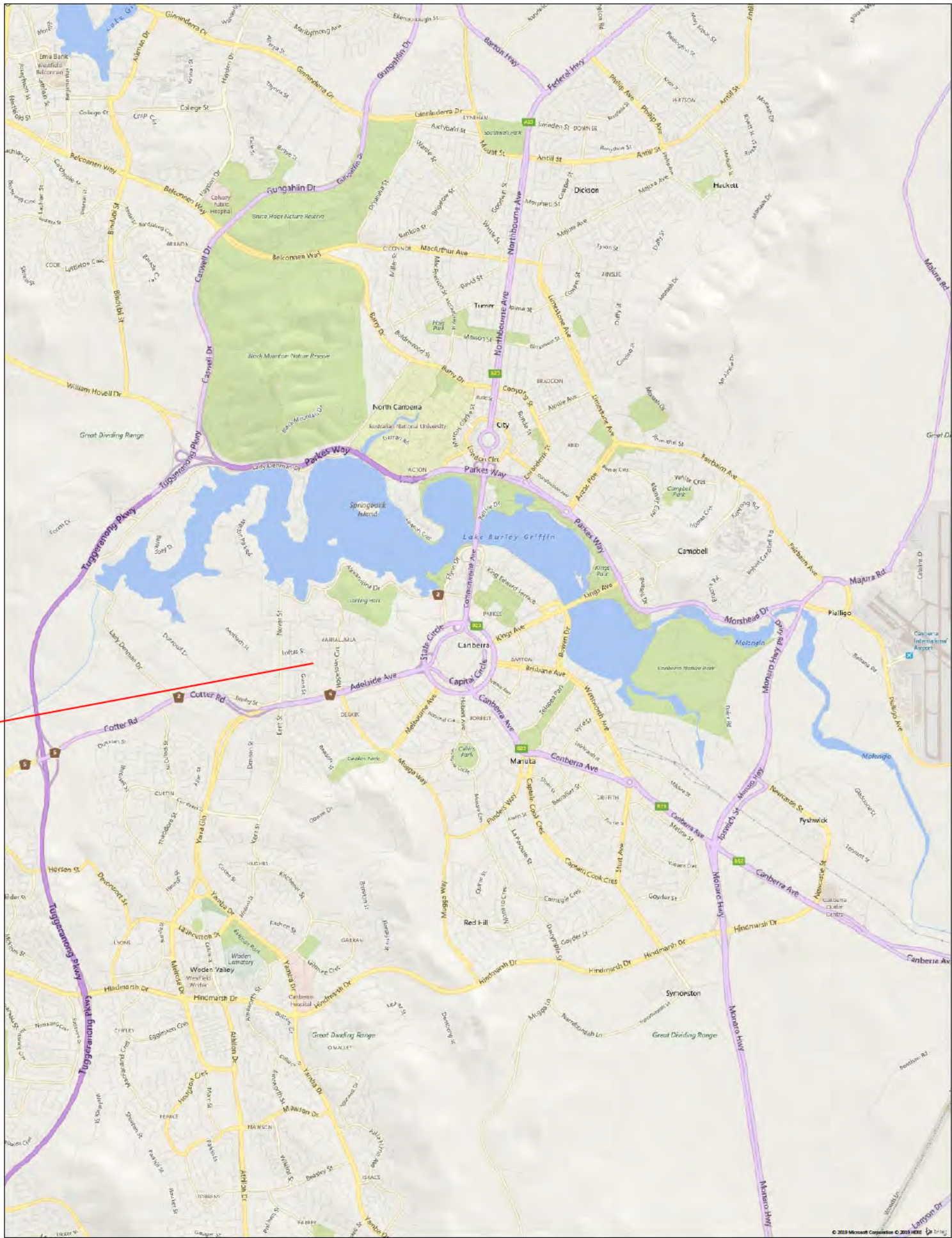
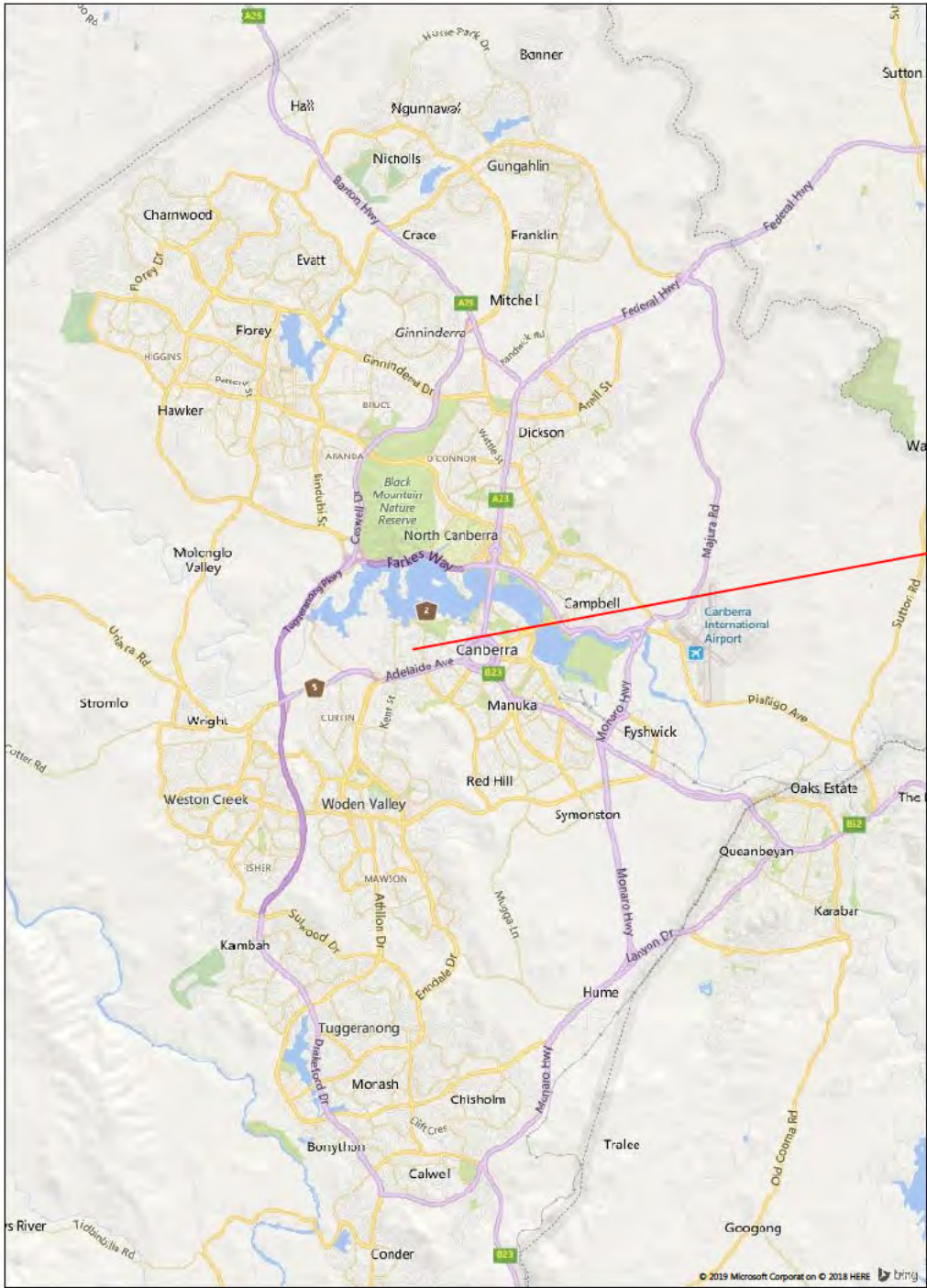
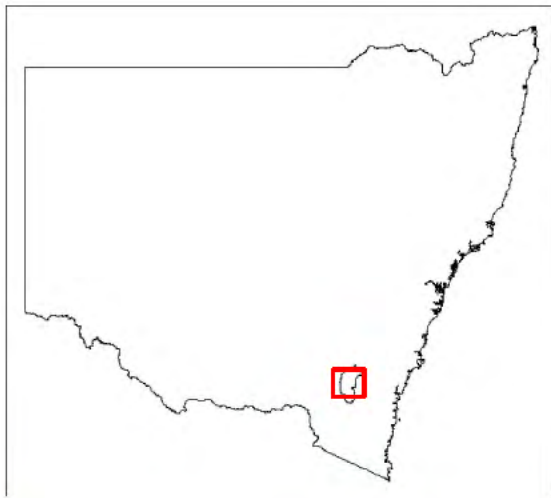
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HSEQ Management System			
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FIGURES



LEGEND

DOCUMENT 49

NOTES
Scale, locations, and boundaries are approximate only.

 Environmental Excellence through Experience, Endeavor and Evaluation	Robson Environmental Pty Ltd P: 02 6239 5656 F: 02 6239 5669 E: admin@robsonenviro.com.au PO Box 112, Fyshwick ACT 2609 www.robsonenviro.com.au ABN: 55 008 660 900	CLIENT: ACT PROPERTY GROUP	SITE: YARRALUMLA PRIMARY, PRE AND AFTER SCHOOL CARE	PROJECT: LEAD IN SOIL ASSESSMENT	SCALE (m): 0 15 30	DRAWN: 	FIGURE: 1	DATE: 12/08/2019
				TITLE: SITE LOCATION PLAN		CHECKED: 	PROJECT: 43010 of 54	REV: A