



**ENVIRONMENTAL EARTH  
SCIENCES**  
CONTAMINATION RESOLVED

**SIX MONTHLY PERFORMANCE  
AUDIT, STAGE 1B IVANHOE  
ESTATE, MACQUARIE PARK, NSW  
FRASERS PROPERTY IVANHOE PTY LTD**

25 OCTOBER 2022  
122038 RP02  
VERSION 2



25 October 2022

**Frasers Property Ivanhoe Pty Ltd**

Level 2  
1C Homebush Bay Drive  
Rhodes NSW 2138

Attention: **Peter Statham**  
Project Manager

**Environmental management system (EMS) audit at Stage 1B Ivanhoe Estate,  
Macquarie Park, NSW**

Please find enclosed a copy of our report entitled as above. We appreciate the opportunity to undertake this next round of audit work for you. Should you have any queries, please do not hesitate to contact us on (02) 9922 1777.

For and on behalf of  
**Environmental Earth Sciences NSW**

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## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	REQUIREMENT	1
1.2	FRAMEWORK	1
1.3	PROJECT CONTEXT AND MANAGEMENT	2
1.4	OBJECTIVE	2
<b>2</b>	<b>AUDIT PARTICULARS.....</b>	<b>3</b>
2.1	TEAM	3
2.2	AUDIT SCOPE	3
2.3	AUDIT PERIOD	4
<b>3</b>	<b>AUDIT METHODOLOGY.....</b>	<b>5</b>
3.1	AUDIT AND ASSESSMENT TEAM	5
3.2	SITE INTERVIEWS	5
3.3	SITE INSPECTION	5
3.4	COMMUNITY CONSULTATION	5
3.5	CONSULTATION WITH RELEVANT AGENCIES	6
3.6	COMPLIANCE STATUS DESCRIPTORS	6
<b>4</b>	<b>AUDIT FINDINGS.....</b>	<b>6</b>
4.1	PREVIOUS AUDIT RECOMMENDATIONS / STATUS	6
4.2	SITE INSPECTION	8
4.3	DOCUMENTS REVIEWED	8
4.4	COMPLIANCE PERFORMANCE	9
4.5	SUMMARY OF AGENCY NOTICES, ORDERS, PENALTY NOTICES OR PROSECUTIONS	9
4.6	NON-COMPLIANCES	9
4.7	PLANS AND COMPLIANCE DOCUMENTS	9
4.7.1	Construction environmental management plan (CEMP)	9
4.8	ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)	10
4.9	PREDICTED ENVIRONMENTAL PERFORMANCE	10
4.10	ACTUAL ENVIRONMENTAL PERFORMANCE & COMPARISON	11
4.10.1	Construction soil & water management	11
4.10.2	Dust and air quality / odour management	13
4.10.3	Construction noise & vibration management	14
4.10.4	Waste management	15
4.10.5	Storage of materials	18
4.11	COMPLAINTS	19

4.12	INCIDENTS	19
4.13	SITE INTERVIEW	19
4.14	PREVIOUS REVIEW OF COMPLIANCE REPORT RECOMMENDATIONS	19
4.15	KEY STRENGTHS	19
<b>5</b>	<b>RECOMMENDATIONS</b> .....	<b>19</b>
5.1	NON-COMPLIANCES	19
5.2	OPPORTUNITIES FOR IMPROVEMENT	20
5.3	PROPONENT RESPONSE TO DRAFT INDEPENDENT AUDIT REPORT	21
<b>6</b>	<b>CONCLUSION</b> .....	<b>21</b>
<b>7</b>	<b>LIMITATIONS</b> .....	<b>22</b>
<b>8</b>	<b>REFERENCES</b> .....	<b>22</b>

## Tables

Table 1: Compliance status descriptors

Table 2: Noise management levels

Table 3: Comparison of forecasted waste percentages and actual

## Appendices

APPENDIX A: Planning Secretary Audit Team Agreement & NSW DPIE Correspondence

APPENDIX B: Independent Audit Tables

APPENDIX C: Independent Audit Declaration Form

APPENDIX D: Site Inspection Photographs

APPENDIX E: Daily and weekly site checklists

APPENDIX F: Waste management summary

APPENDIX G: Asbestos Waste documentation



# 1 INTRODUCTION

## 1.1 Requirement

Environmental Earth Sciences NSW was engaged by Frasers Property Australia (Frasers) to conduct a six-monthly performance audit of the project environmental management system (EMS) for part of Stage 1B of construction works at Ivanhoe Estate, Macquarie Park, NSW (the “project”).

The work was completed in accordance with the State Significant Development (SSD) Conditions of Consent within SSD 8903 MOD 4. The following schedule for independent environmental audits was prepared and submitted to the NSW Department of Planning, Industry and Environmental (DPIE) whereby the Planning Secretary confirmed the appointment of Environmental Earth Sciences as the independent auditor:

Environmental Earth Sciences (2020a), *Schedule for Independent Environmental Audit(s) at Stage 1 Ivanhoe Estate, Macquarie Park NSW* (ref: 120077\_Audit Schedule\_V1, 14 August 2020).

The following response from DPIE indicating concurrence with the abovementioned schedule and appointment is referred to below, and presented in **Appendix A**:

DPIE (2020), *Audit Program, Ivanhoe Estate Stage 1 SSD-8903-PA-2* (ref: Appointment of Experts, 24 August 2020).

An independent EMS audit is required by the conditions of consent for the development to demonstrate and verify Frasers’ project and their contractor’s compliance with the environmental management framework for the project.

## 1.2 Framework

These 6-monthly EMS performance evaluation audits are being undertaken to satisfy the requirements of the following standard and requirements:

- International Organisation for Standardisation (ISO), Standards Australia / Standards New Zealand (AS / NZS) *Environmental Management Systems – Requirements with Guidance for Use* (AS / NZS ISO 14001:2015) (Clause 9) (the “Standard”).
- NSW Department of Planning and Environment (DPE) (2015), *Independent Audit Guideline*.
- NSW DPE (2018), *Independent Audit: Post Approval Requirements Guidance*.
- NSW Department of Planning, Industry and Environment (DPIE) (2020a), *Compliance Reporting, Post Approval Requirements May 2020*.
- NSW DPIE (2020b), *Independent Audit, Post Approval Requirements May 2020*.

### 1.3 Project context and management

Frasers engaged Christie Civil Pty Ltd (Christie) as the contractor to undertake the construction of Stage 1B civil and bridge works for project, commencing in March 2022. This audit only pertains to the work activities that have been completed thus far by Christie in the central and south eastern portions of the site.

Works being undertaken for Stage 1B comprise:

- Construction of an access road from the Stage 1B portion of site through to Lyonpark Road.
- Construction of a curved post tensioned bridge.
- Drainage works.
- Construction of a carpark for existing operations building.

The following Construction Environmental Management Plan (CEMP) was prepared by Christie to document procedures and management associated with Stage 1B construction works:

Christie Civil Pty Ltd (2022), *Construction Environmental Management Plan – CEMP - Ivanhoe Estate Stage 1B Civil Works, Epping & Lyonpark Roads, Macquarie Park NSW* (01 April 2022; Revision F) (the “CEMP”).

### 1.4 Objective

The objective of the performance review environmental audit was to comply with Development Consent Conditions B5 – B9 of the Minister for Planning and Public Spaces, Development Consent, *Section 4.38* of the Environmental Planning and Assessment Act 1979, Consolidated Consent (ref: SSD 8903 MOD 1; 10 November 2020; SSD 8903 MOD 2; 7 May 2021, SSD 8903 MOD 3; 21 December 2021 and SSD 8903 MOD 4; 05 August 2022):

Part B: Prior to commencement of works / issue of a crown building works certificate / issue of subdivision work certificate:

- B5: No later than one month before the commencement of construction or within another timeframe agreed with the Planning Secretary, a program of independent environmental audits must be prepared for the development in accordance with AS/NZS ISO 19011:2014 Guidelines for auditing management systems (Standards Australia, 2014) and submitted to the Planning Secretary for information.
- B6: the scope of each audit must be defined in the program. The program must ensure that environmental performance of the development in relation to each compliance requirement that forms the audit scope is assessed at least once in each audit cycle.
- B7: the environmental audit program prepared and submitted to the Planning Secretary in accordance with Conditions B5 and B6 must be implement and completed with for the duration of the development.

- B8: all independent environmental audits of the development must be conducted by a suitable qualified, experienced and independent team of experts and be documented in an audit report which:
  - assesses the environmental performance of the development and its effects on the surrounding environment including the community;
  - assesses whether the development is complying with the terms of the consent;
  - reviews the adequacy of any document required under this consent; and
  - recommends measures or actions to improve the environmental performance of the development and improvements to any document required under this consent.
- B9: within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, a copy of the audit report must be submitted to the Planning Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.

## 2 AUDIT PARTICULARS

### 2.1 Team

The audit team comprised:

- Mark Stuckey – Primary technical reviewer; Environmental Management Systems (EMS) Lead Auditor; and Site Auditor – accredited under the Contaminated Land Management (CLM) Act 1997 (NSW).
- Chris Newland – reviewer and Project Director.
- Karin Azzam – auditor assistant and Project Manager.

### 2.2 Audit scope

Environmental Earth Sciences NSW undertook the following scope of works:

- Completion of the Audit by a team of suitably qualified experts.
- Submission of a document request to Frasers and Christie requesting relevant regulatory approvals (compliance documentation) including, but not limited to environmental monitoring results and waste disposal documentation.
- Site inspection by Environmental Earth Sciences NSW personnel to confirm details of the CEMP plans and approvals are being followed.

- Consultation with relevant persons from Frasers and Christie.
- Assess the environmental performance of the project and assess whether it is complying with the requirements in the Development Consent, the Independent Audit Post Approval Requirements (IAPAR) and CEMP (including any assessment, plan or program required under these approvals).
- Review the adequacy and currency of strategies, plans or programs required under the abovementioned approvals.
  - Monitoring and Environmental Audits (Condition A20).
  - Independent Environmental Audit (Conditions B5 – B9).
  - Construction Environmental Management Plan (Condition B40).
  - Construction Noise and Vibration Management Plan (Conditions B42 and C7).
  - Air Quality and Odour Management Plan (AQOMP) (Condition B43) and Dust Control Measures (Condition C38).
  - Construction Waste Management Plan (Conditions B44, C28 and C31).
  - Construction Soil and Water Management Plan (Condition B45) and Stormwater (Condition C49).
  - Contamination (Conditions B55, B56, B58, B61; C15 – C21; D5 – D6 and D52).
  - Hazardous Materials Management Plan (Conditions B64 - B65 and C32 – C33).
  - Vehicle Cleansing (Condition C35).
  - Stockpile Management (Condition C36).
  - Erosion and Sediment Control (Condition C37).
  - Bunding (Condition C52).
  - Post-Construction Dilapidation Report (Condition D19).
- Recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.
- Delivery of this Audit report detailing the results and recommendations of the Audit.

### 2.3 Audit period

The audit covers the six-monthly period between 12 April 2022 and 5 September 2022 and considers the performance against the CEMP and associated documentation.

## 3 AUDIT METHODOLOGY

### 3.1 Audit and assessment team

The audit and assessment process comprised the following members:

- **Environmental Earth Sciences NSW:** Mark Stuckey, Chris Newland and Karin Azzam;
- **Frasers Property Australia:** Peter Statham, Sarah Martin, Elisha Kordiak; and
- **Christie Civil:** Liam Bell, Martin Carey and James Seaton.

### 3.2 Site interviews

The following personnel were either interviewed and/or were involved with communication throughout the duration of the Audit and assessment process:

- **Frasers Property Australia:**
  - Peter Statham – Project Manager
  - Sarah Martin – Assistant development Manager
- **Christie Civil:**
  - Liam Bell – Site Engineer
  - Martin Carey – Construction Manager
  - James Seaton – Site Safety Officer

### 3.3 Site inspection

The performance review site inspection was conducted on 5 September 2022 by Karin Azzam (Environmental Earth Sciences), Sarah Martin (Frasers Property Australia) and Liam Bell, Martin Carey and James Seaton (Christie) and included:

- Inspection of a limited number of representative construction aspects being undertaken that could pose potential environmental risk.
- Audit of associated physical / operational / management controls for risk mitigation.

### 3.4 Community consultation

Community consultation was completed prior to the lodgement of the SSD DA and is detailed in the Consultation Outcome Report prepared by Elton Consulting – *Appendix Q* within the EIS (Elton, 2021).

The report outlines the following consultation initiatives that have been undertaken:

- A dedicated project email account has been setup for interested community members to ask questions and provide feedback.
- A letterbox drop was conducted to just over 7600 households within an 1km distribution area around the site on 3 June 2021. The drop provided affected landowners with postcards detailing the project, contact details and an invitation to a community drop-in session.
- A community drop-in session was held on 16 June 2021 between 5:30-7:30pm at Dunmore Lang College.

### 3.5 Consultation with relevant agencies

The Planning Secretary confirmed the appointment of Environmental Earth Sciences as the independent auditor. In accordance with the IAPAR, the Auditor must consult with the department, who may request that other parties or agencies are consulted, to obtain their input into the scope of the audit. Refer to **Appendix A** for the submission letter of the Audit Schedule to the Planning Secretary of the NSW DPIE as well as correspondence with NSW DPIE and the City of Ryde regarding input into the audit scope.

### 3.6 Compliance status descriptors

The findings from the Audit are assessed against the *Compliance Assessment Criteria* in DPE (2018) as detailed in **Table 1**.

**Table 1: Compliance status descriptors**

Status	Description
<b>Compliant</b>	The auditor has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with within the scope of the audit.
<b>Non-compliant</b>	The auditor has determined that one or more specific elements of the conditions or requirements have not been complied with within the scope of the audit.
<b>Not triggered</b>	A requirement has an activation or timing trigger that has not been met at the time when the audit is undertaken, therefore an assessment of compliance is not relevant.

## 4 AUDIT FINDINGS

### 4.1 Previous audit recommendations / status

Environmental Earth Sciences NSW has conducted the following independent environmental audits of the project environmental management system (EMS) for Stage 1 of construction works at Ivanhoe Estate.

Relevant reports include:

- Environmental Earth Sciences (2020), *Preliminary findings – independent environmental audit at Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120077\_EMS Audit\_V2, 17 December 2020) (Environmental Earth Sciences, 2020).
- Environmental Earth Sciences (2021), *Six monthly performance audit, Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120077\_Review of EMS\_V2; 1 October 2021).
- Environmental Earth Sciences (2022), *Six monthly performance audit, Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120038\_Six-monthly Audit\_V2; 16 August 2022).

The recommendations from the previous audit reports have been addressed, with the present status or outcome presented in **Table B (Appendix B)**.

The outcome of the following two recommendations from the previous audit reports are progressing and are complete pending implementation of recommendations in respect to the audit:

- Calibration records for water quality meter used on site should be available.

Status: Water quality monitoring using a water quality meter was not undertaken in the audit period between 12 April and 5 September 2022.

Environmental Earth Sciences has been informed by Frasers that Christie Civil Pty Ltd are now responsible for managing water monitoring on site.

Christie Civil will implement water quality monitoring on a monthly basis with a calibrated water quality meter. This will be in effect immediately, as per response received 13/10/2022.

Recommendation: Regular water quality monitoring of Shrimpton Creek and the sedimentation basin have been recommended in this September 2022 audit.

- Routinely update the Parkview CMP and all relevant sub environmental management plans.

Status: After request, Parkview provided their updated CMP on 13 October 2022, further outlining present site activities / stages / scope of works in Section 8.3 as recommended. Parkview are still to update relevant sub environmental management plans in accordance with development consent SSD 8903 conditions, including:

- Dust Management Plan (B40 c)
- Construction Noise and Vibration Management Plan (B42)
- Air Quality and Odour Management Plan (AQOMP) (B43)
- Construction Waste Management Plan (B44)

- Construction Soil and Water Management Plan (B45)

## 4.2 Site inspection

The Audit inspection was undertaken on 5 September 2022 by Karin Azzam (Environmental Earth Sciences), Sarah Martin (Frasers) and Liam Bell, Martin Carey and James Seaton (Christie).

At the time of the Audit inspection, clearing and grubbing of all vegetation at the site had been completed and construction earthworks for Stage 1B were in progress with excavation and export of VENM observed. Main activities observed at the time of inspection included:

- Earthworks and export of soil material / VENM material across site (**Photographs 2 – 7** in **Appendix D**).
- Excavation and installation of stormwater drainage (**Photograph 6** in **Appendix D**).
- The temporary relocated swale had just been excavated to divert upslope water directly into staged sediment retention basins allowing sediments to be deposited by settlement with water decanting into lower lying ponds with any overflow being discharged into grassy area (**Photographs 8, 10, 11** in **Appendix D**).
- Construction of the piling and the reinforced concrete slab over the creek crossing were observed to be complete. The concrete slab will support the weight of falseworks and the overall bridge construction process.
- Preparation earthworks for construction of road access between the Stage 1B project area and Lyonpark Road was noted to be underway in south-eastern portion of the site (**Photograph 19** in **Appendix D**).
- Laydown areas observed for inert construction materials.
- Internal / external movements of building materials / inert construction waste.
- Temporary site offices / ablution blocks noted to be present.

## 4.3 Documents reviewed

The documents reviewed as part of the six-monthly performance review Audit included:

- CEMP.
- Christie (2022), *Daily Site Checklists (May to August) – Ivanhoe Estate 1B Civil Works*.
- Christie (2022), *Safety & Environmental Inspection Checklists (May to August) – Ivanhoe Estate 1B Civil Works*.
- Alliance Geotechnical Pty Ltd (2022a), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1; 14 April 2022).



- Alliance Geotechnical Pty Ltd (2022b), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1 Rev 1; 3 May 2022).
- Alliance Geotechnical Pty Ltd (2022c), *Asbestos Clearance Certificate* (ref: 15030-ER-1-2; 16 May 2022).
- Alliance Geotechnical Pty Ltd (2022d), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3; 16 May 2022).
- Alliance Geotechnical Pty Ltd (2022e), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 1; 30 June 2022).
- Alliance Geotechnical Pty Ltd (2022f), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 2; 12 July 2022).
- Environmental Earth Sciences (2021a), *Virgin Excavated Natural Material Characterisation Assessment – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.1\_V3; 1 April 2021).
- Environmental Earth Sciences (2021b), *Virgin Excavated Natural Material (VENM) Characterisation Assessment (TP1 Area) – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.2\_V1; 12 February 2021).

Christie provided Environmental Earth Sciences with Export Cartage Tracking documents detailing VENM material removed from site during excavations.

#### 4.4 Compliance performance

The list of conditions imposed by the Conditions of Consent within SSD 8903 MOD 4 and CEMP are detailed in **Appendix B (Table A)** with this listing the compliance status of each condition, along with recommendations for further information (where required).

#### 4.5 Summary of agency notices, orders, penalty notices or prosecutions

There are no notices, orders, penalty notices or prosecutions relating to the activities undertaken at the site within the Audit period.

#### 4.6 Non-compliances

There are no non-compliances in relation to the review of documents listed in **Section 4.3**.

#### 4.7 Plans and compliance documents

##### 4.7.1 Construction environmental management plan (CEMP)

The CEMP was prepared to communicate procedures and management procedures to be implemented during the project, describing construction methodologies, processes, and procedures from site establishment through to practical completion.

The following environmental management plans (EMPs), controls and/or subsections are incorporated in the CEMP:

- Site Environmental Aspects, Impacts and Safeguards.
- Construction Soil & Water Management Plan (SSD 8903 MOD 4 Condition B42).
- Construction Noise and Vibration Management Plan (SSD 8903 MOD 4 Condition B42).
- Air Quality and Odour Management Plan (SSD 8903 MOD 4 Condition B43).
- Waste Management Plan (SSD 8903 MOD 4 Condition B44).
- Asbestos Management Plan (SSD 8903 MOD 4 Conditions B55, B64, B65, C19, C20, C21, C32 and C33).

#### 4.8 Environmental management systems (EMS)

Project activities for the Stage 1B component did not have a standalone EMS, rather separate management plans have been prepared relating to the project (as summarised in **Section 4.1**), however Christie operates under a current ISO 14001 accredited EMS.

#### 4.9 Predicted environmental performance

Predicted outcomes associated with the construction of the Project are described in the Construction Waste Management Plan (CWMP) (*Appendix 10* within the CEMP) and the following reports:

- Ethos Urban (2021), *Environmental Impact Statement SSD 15822622 – Ivanhoe Estate, Macquarie Park – Stage 2 ‘Midtown’*, 26 August 2021 Version 1.1 (the ‘EIS’).
- Frasers Property (2021), *Preliminary Construction Management Plan*, May 2021 Revision: A – For Development Application (the “PCMP”).

An assessment of compliance between actual and predicted impacts documented in the EIS and PCMP documents was undertaken, and as required by the IAPAR this included an assessment of potential off-site impacts. Through the course of the audit period, daily and weekly site inspections were undertaken to ensure environmental controls were performing as expected.

A summary of the actual versus predicted environmental impacts resulting from the civil works is reported at the end of each subsection below. Refer to **Appendix E** for completed daily site checklists and Safety and Environmental Inspection Checklist for the audit period.

## 4.10 Actual environmental performance & comparison

Environmental issues and corrective actions / comments are recorded in the daily and weekly checklists are summarised below:

- Daily site checklists:
  - Heavy rainfall was recorded as having flooded the site during the week commencing 4 July 2022 resulting in heavy mud and debris blocking drainage pipes in the sediment basin. Dredging of the sediment basin was recommended.
  - Heavy rain was also recorded in the week commencing 18 July 2022 resulting in turning “the site to mud”.
- Weekly inspection checklists:
  - Uncovered soil stockpiles exceeding the fence height were noted on site during weekly site inspection on 17 June 2022.
  - Extra silt controls were installed and the sediment basin was recorded as having been dredged on 1 July 2022.
  - The need for further dredging of the sediment basin was recorded on 8 July 2022.
  - The need for servicing and maintaining the sediment basin was recorded during the seven consecutive weekly site inspections; 15, 22, 28 July 2022 and 5, 12, 19, 26 August 2022.
  - The need for new silt controls and subsequent installation of silt controls around existing stormwater was recorded on 28 July 2022.
  - The need to repair silt controls was recorded on 26 August 2022.

### 4.10.1 Construction soil & water management

Observations from site inspection:

#### Soil management

- Site fencing and barriers in place across the site. Refer to **Photographs 9 and 13** in **Appendix D**.
- Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site (**Photograph 2** in **Appendix D**).
- Excavated material was being stockpiled and exported from site. Refer to the Waste Management Register in **Appendix F** for a summary of material removed from site.
- Stockpiles of mulch and excavated material were mostly uncovered but were present on site in manageable sizes, not exceeding 4 m in height.

- There were signs of uncontrolled sedimentation around one stormwater drain to the south of the site adjacent to Shrimpton Creek, likely exacerbated from recent heavy rain (**Photograph 15** in **Appendix D**).
- Storm water drains were well protected with gravel sausages, and along Road No.1 from Herring Road leading onto the site there was no evidence of heavy vehicles tracking soil from the internal roads (**Photographs 27 - 30** in **Appendix D**).

### Water management

- The larger sedimentation basin in the centre of the Stage 1B area was empty at the time of the inspection. Christie advised that the basin had been desilted and the water having been pumped into the staged detention ponds to the south of the site.
- A buoyant sediment and debris trap was installed downstream in Shrimpton Creek which was noted to be full of debris at the time of the inspection (**Photograph 17** in **Appendix D**).
- The water in the creek upstream of the bridge work and downstream from the sediment and debris trap was clear and slow moving with no visual and / or olfactory signs of contamination (**Photographs 16 – 18** in **Appendix D**).
- No water testing of creek surface water and/ or from sediment basin had been undertaken during the audit period.
- The temporary relocated swale had just been excavated to divert upslope water directly into staged sediment retention basins, allowing sediments to be deposited by settlement (water is decanted into lower lying ponds with any overflow being discharged into a grassy area) (**Photographs 7, 8, 10 and 11** in **Appendix D**).
- Low-level sedimentation management seemingly undertaken in accordance with procedures documented in the SWMP (within the CEMP) and were current at the time of Audit.

### Actual versus predicted environmental impacts

To ensure erosion and sediment controls (ESCP) are performing as expected, Section 6 of the Construction Soil & Water Management Plan (*Appendix 5* within the CEMP) lists the following controls:

- Daily & Weekly Site Inspections (**Appendix E**);
- Daily monitoring of the Bureau of Meteorology and, if inclement weather is forecast, a pre-rain inspection will be conducted to ensure all erosion and sediment controls are implemented or where they require repairing;
- Inspection of erosion and sediment controls post rain event and repair and cleaning of controls as required; and
- Review and amendment of ESCP plans if deemed ineffective during rain events.

In 2022, Greater Sydney has recorded the wettest July since records began in 1900 with many sites recording five to eight times their monthly averages. It is understood that the unseasonably heavy rainfall events in July caused uncontrolled erosion and sedimentation issues across the site, recorded in the daily and weekly site inspection checklists.

Environmental Earth Sciences notes that whilst environmental issues were recorded in the daily and weekly inspection checklists, corrective actions / status and maintenance of ESCP such as the dredging of the sediment basin that was observed were not always recorded.

No Public Complaints regarding construction soil and water management were received during the Audit period.

#### 4.10.2 Dust and air quality / odour management

Observations from site inspection:

- Construction hoardings have been built around the work site.
- Whilst most stockpiles were not covered, they were kept on site at manageable sizes not exceeding 4 m in height. Advice from Christie informed that earthworks on site was scheduled so that stockpiles of excavated material were taken offsite expediently to minimise the amount of time exposed stockpiles were left on site and thus control emissions of dust and/or VOCs/ odour.
- No trucks were exporting soil during the time of the inspection. Christie advised that all truckloads of excavation spoil are covered when leaving the site.
- No dust emissions and / or odours were noted during the time of the inspection.
- No active dust monitoring had been taken place during the audit period.

##### Actual versus predicted environmental impacts

Predicted environmental impacts documented in the Air Quality (WSP, 2018) (*Appendix AA* of the EIS) mention that emissions to air were predicted to be higher during periods of earthworks from disturbance of soil (excavation / storage), and transportation / vehicle movements. Assessment criteria for relevant air pollutants are tabulated in Section 4 of the air quality assessment.

The wet weather during the audit period has kept exposed soil material and stockpiles wet and Christie advised that active dust suppression has not been needed.

No dust emissions were noted in the daily and weekly safety and environmental inspections (**Appendix E**).

No Public Complaints regarding dust, air quality or odour were received during the Audit period.

Environmental Earth Sciences notes that there was no active dust and air quality monitoring during the audit period and any comparison of actual air pollutants to assessment criteria was not possible.

#### 4.10.3 Construction noise & vibration management

Observations from site inspection:

- Construction work was strictly undertaken within the hours of 7.00am and 7.00pm on Monday to Friday inclusive. Christie informed that minimal work on site was undertaken 8.00am to 4.00pm on Saturdays. No work was undertaken on Sundays and public holidays.
- Rock breaking, rock hammering, sheet piling, pile-driving and similar activities was not being undertaken at the time of the Audit inspection. It was noted that when these works were required, they were undertaken between 9.00am to 2.00pm, 2.00pm to 5.00pm on Monday to Friday, and 9.00 to 2.00pm on Saturday.
- No active sound / vibration monitoring was being undertaken during the Audit inspection.

#### Actual versus predicted environmental impacts

The Noise Impact Assessment (Acoustic Logic, 2021) (*Appendix V* within the EIS) mentions that proposed development activities are not expected to have any adverse impacts on surrounding sensitive receivers during construction. The report states that construction noise is predicted to generally comply with the nominated acoustic criteria (listed in **Table 2**).

Occasional exceedances of the noise criteria are not considered to be unreasonable and expected noise impacts will generally decrease throughout the construction period as building facades are erected and enclose the building construction works. The noise and vibration thresholds that construction activity should not exceed, taken from the noise impact assessment are listed below.

**Table 2: Noise management levels**

Receiver	Daytime Background Noise levels	'Noise affected'	'Highly noise affected'
Residential receivers to the north of work site (R2)	43	53	75
Residential properties across Epping Road to the west of the site (R5)	50	60	75
Sensitive receivers (commercial/ residential) to the east and south of work site (R4/ R3)	Commercial	70	

The predicted noise levels from the construction phase to sensitive receivers are tabulated in Section 10.3 of the Noise Impact Assessment report (Acoustic Logic, 2021). The report lists construction activities that are predicted to generate noise levels during the construction phase with the activities with the greatest potential to generate noise and vibration being:

- Hammering (Excavator with hydraulic hammer / jack hammering).
- Rock / concrete saws.

- Piling activities.

Where noise management levels are exceeded (which may occur when working close to the site's western, northern, and southern boundaries), the following appropriate mitigation measures should be adhered to:

- Providing construction hoarding around the site perimeter to assist with noise screening to northern receivers.
- Using alternative equipment as much as practicable to minimise activities with the greatest noise impacts (hammering; rock/concrete saws; piling activities).
- Using silencing devices such as engine shrouding or industrial silencers fitted to exhausts and requiring on-site work vehicles to turn off their engines when practicable.
- Implementing noise respite periods as consistent with ICNG recommendations where continuous exceedances are unavoidable.

No Public Complaints regarding noise and / or vibration were received during the Audit period.

Environmental Earth Sciences notes that there was no active noise and vibration monitoring during the audit period and any comparison of actual noise and vibration to management levels was not possible.

#### 4.10.4 Waste management

Waste material for the Stage 1B area was sampled by Douglas Partners, David Lane & Associates Environmental Services Pty Ltd (DLA), JBS&G Australia Pty Ltd, Environmental Earth Sciences and Alliance Geotechnical Pty Ltd. Waste was classified in accordance with NSW EPA (2014) — *Waste Classification Guidelines Part 1: Classifying Waste* (EPA, 2014) (the "Waste Guidelines").

The results of the material classification are documented in the following reports:

- Environmental Earth Sciences (2021a), *Waste Classification of Material at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120120\_WC\_V3; 31 March 2021).
- Alliance Geotechnical Pty Ltd (2022a), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1; 14 April 2022).
- Alliance Geotechnical Pty Ltd (2022b), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1 Rev 1; 3 May 2022).
- Alliance Geotechnical Pty Ltd (2022c), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3; 16 May 2022).
- Alliance Geotechnical Pty Ltd (2022d), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 1; 30 June 2022).



- Alliance Geotechnical Pty Ltd (2022e), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 2; 12 July 2022).

Waste tracking documentation was recorded by Christie and provided to Environmental Earth Sciences. Refer to **Appendix F** for documentation of waste material disposed from site.

### **General Solid Waste (GSW)**

During the audit period:

- Approximately 2,193 m<sup>3</sup> or ~4,005 tonnes GSW (recyclable spoil) was disposed offsite to MET Recycling, 134 Carnarvon Street, Silverwater NSW 2128; and to Ecorr Eco Resource Recovery, 155A Newton Road, Wetherill Park NSW.
- Approximately 608.5 tonnes GSW (Non- recyclable) was disposed offsite to Sydney Recycling Park, 17 – 23 Clifton Ave, Kemps Creek NSW 2178.

### **GSW (Special Waste – Asbestos)**

During the audit period, 62 m<sup>3</sup> or 114 tonnes GSW (Special Waste – Asbestos) was disposed offsite to Bingo Waste Services Pty Ltd, Eastern Creek Ecology Park.

One fragment of bonded asbestos material was detected during *in-situ* material classification field work of an area to be excavated during bridge abutment construction works on 5 April 2022 by a Senior Environmental Consultant from Alliance Geotechnical Pty Ltd. The Waste classification process was documented in the following report:

- Alliance Geotechnical Pty Ltd (2022a), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1; 14 April 2022).

### **Asbestos management**

Asbestos remediation works were conducted in accordance with:

- Christie Civil Pty Ltd (2022a), *Asbestos Management Plan, Ivanhoe Estate – Stage 1B Civil Works, Epping & Lyonpark Roads, Macquarie Park*, (dated 22 March 2022, Rev: A, Doc Name: SSPF1 – Asbestos Management Plan) (the "AMP").

Following removal of asbestos impacted material, a suitably qualified person from Alliance Geotechnical Pty Ltd conducted an asbestos clearance inspection with results and findings formalised in the following report:

- Alliance Geotechnical Pty Ltd (2022) *Asbestos Clearance Certificate* (ref: 15030-ER-2-1; 16 May 2022).

Please refer to **Appendix G** for documentation of asbestos management including waste classification report, clearance certificate and weighbridge dockets from receiving facilities.



## **Asphalt, brick and concrete**

For this stage 359.4 tonnes of asphalt, brick and concrete were disposed offsite to:

- Concrete Recyclers, 14 Thackeray Street, Camellia NSW 2142;
- Cleanaway Ryde Resource Recovery Centre, 145 Wicks Road, North Ryde 2116.

Refer to **Appendix F** for disposal documentation of GSW (recyclable), GSW Non-recyclable, GSW (Special Waste – Asbestos) and asphalt, brick and concrete.

## **Excavated natural material (ENM) and Virgin excavated material (VENM)**

Assessment was undertaken to determine whether natural materials met the chemical and physical properties for VENM defined in Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act).

To ascertain whether the unconsolidated weathered bedrock (clay) material was suitable for beneficial reuse, assessment of chemical and physical attributes was undertaken with reference to the Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (POEO) (Waste) Regulation 2014 – *the excavated natural material order 2014* (the “ENM Order”).

Results and findings from the VENM assessments were documented in the following reports:

- Environmental Earth Sciences (2021l) – *Virgin Excavated Natural Material Characterisation Assessment – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.1\_V3; 1 April 2021); and
- Environmental Earth Sciences (2021m) – *Virgin Excavated Natural Material (VENM) Characterisation Assessment (TP1 Area) – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.2\_V1; 12 February 2021).

During this audit period, approximately 3,582 m<sup>3</sup> or 5,394 tonnes of VENM (clay, sandstone and shale) were beneficially reused offsite and was exported to Lugard Street, Penrith. Refer to **Appendix F** for details of the VENM exported from the site.

### **Actual versus predicted environmental impacts**

The PCMP delineates management during the construction phase of the development. It should be noted that waste management during demolition was assessed and approved as part of the Stage 1 SSDA (SSD 8903).

The PCMP states that the engaged Principal Contractor will be responsible for transporting all non-recyclable materials to EPA approved landfill sites. Recyclable materials will be disposed by the Principal Contractor at the most appropriate recycling depot. Waste bins will be stored on-site and separated between recyclable and non-recyclable material for construction staff.

The Waste Management Register kept by Christies was provided to Environmental Earth Sciences for review and documented that approximately 11,507 tonnes to date of waste have left the site with approximately 95% having been recycled. The Waste Management

Register is provided in **Table C (Appendix F)** with associated weighbridge dockets from receiving facilities.

The forecast of the types and percentages of waste that will be produced (listed in *Table 8* in *Section 5* of the CWMP) have been compared to the current Waste Management Register provided to Environmental Earth Sciences and is presented in **Table 3**.

**Table 3: Comparison of forecasted waste percentages and actual**

Forecasted		Actual*		
Material	Estimated waste percentages	Material	Tonnes	Waste percentages
General Site Waste	10%	General Solis Waste (non-recyclable)	608.5	5.3%
Timber / formwork	5%	----	----	----
Concrete	10%	Concrete	239.24	2%
Asphalt	5%	Asphalt	60.16	0.5%
Excavated spoil	67%	Excavated General Solid Waste – recycled	4005.1	34.8%
		VENM	5394.35	46.8%
Steel	3%	----	----	----

**Notes:**

\* As of September 2022

As predicted, to date the majority of waste that has been taken offsite consists of excavated spoil with 46.8% consisting of VENM and 34.8% consisting of excavated General Solid Waste – Recyclable.

#### 4.10.5 Storage of materials

Materials storage seemingly undertaken in accordance with procedures documented in the CEMP which was current at the time of Audit. Observations from site inspection for material storage in the southern portion of the site:

- Areas for storage of construction materials were generally defined with good housekeeping considering the challenges faced by the limited available space.
- Areas for storage of storage of waste were clearly demarcated into separate waste streams (e.g., general waste sign on side of skip bin).
- Laydown areas and for materials used available space sufficiently (refer to **Photograph 19** in **Appendix D**).
- There was a dedicated area for hazardous substances (e.g., flammable liquids), in the southern portion of the site away from earthworks and next to spill kits. Some containers

were noted to be stored in unlocked cages and cabinets. Some containers (mostly empty) were stored on the ground outside the cages and cabinets (refer to **Photographs 21 – 26** in **Appendix D**).

Management of construction waste seemingly undertaken in accordance with procedures documented in the CWMP which was current at the time of Audit. In accordance with SSD 8903 MOD 4 Condition B44 and the CEMP, general inert construction waste is being separated between recyclable and non-recyclable offsite at an EPA licenced facility.

#### 4.11 Complaints

Environmental Earth Sciences was not made aware of any complaints being reported during the six-monthly period between 12 April 2022 to 5 September 2022.

#### 4.12 Incidents

Environmental Earth Sciences was not made aware of any incidents being reported during the six-monthly period between 12 April 2022 to 5 September 2022.

#### 4.13 Site interview

The site interview associated for the Audit was undertaken on 5 September 2022 by Karin Azzam, with Sarah Martin (Frasers) and Liam Bell, Martin Carey and James Seaton (Christie) in attendance.

#### 4.14 Previous review of compliance report recommendations

Environmental Earth Sciences NSW has conducted previous independent environmental audits of the project and associated activities. Refer to **Table B (Appendix B)** for details on previous recommendations.

#### 4.15 Key strengths

Christie is completing civil works generally in accordance with the Consolidated Consent CEMP. There are good records of waste management kept along with good communication.

## 5 RECOMMENDATIONS

### 5.1 Non-compliances

There were no aspects of non-compliance (minor or otherwise) for the Stage 1B civil works for the audit period, however opportunities for improvements are listed in **Section 5.2**.

## 5.2 Opportunities for improvement

The Auditor recommends the following improvement opportunities:

- The buoyant sediment and debris trap installed downstream in Shrimpton Creek should be routinely checked and emptied when near to full. The status of the sediment trap will need to be evaluated and documented in the daily and weekly Safety and Environmental Inspection checklists and corrective action noted where required.
- Uncontrolled sedimentation was noted around certain stormwater drains. Sediment controls around stormwater drains need to be cleaned and maintained more frequently especially before and after heavy rainfall events. Status and corrective actions need to be recorded in the daily and weekly Safety and Environmental Inspection checklists.
- The quality of surface water in the creek, upstream and downstream of bridge works, and in the sediment retention basins should be monitored monthly using a calibrated water quality meter, noting water quality parameters (e.g., pH, electrical conductivity and turbidity / suspended solids) and any visual / olfactory indications of contamination or eutrophication. Calibration records for water quality meter should be available.
- The area for storage of hazardous chemicals on site should be tidied up and all containers should be clearly labelled and kept in lockable and ventilated storage. Empty containers need to be disposed of appropriately.
- Update to the Construction Waste Management Plan (Appendix 10 of the CEMP) to include nominated authorised receiving facilities of all waste and recycling generated.
- There is no active dust monitoring onsite. Dust monitors should be set up adjacent to sensitive receptors.
- The AQOMP does not include key performance indicators, monitoring measures, response mechanisms and contingencies. It is recommended that the AQOMP should be updated to include these.
- The project has established noise management levels (Acoustic Logic 2019) however no active noise monitoring was conducted during the Audit period. Any exceedances of the “highly noise affected level” cannot be quantified. Noise meters should be set up adjacent to sensitive receptors.
- Ensure that corrective actions such as dredging of the sediment basin and the clearing and maintenance of sediment controls around stormwater drains are recorded in the daily and weekly site checklists.
- Routinely update the CEMP and all relevant sub environmental management plans, and/or specifically update CEMP and all relevant sub environmental management plans when changes to construction methods occur.
- Routinely update the Parkview CMP and all relevant sub environmental management plans. The CMP needs to clearly outline the present site activities / stages / scope of works and be updated in accordance with the development consent SSD 8903.

### 5.3 Proponent response to draft Independent Audit report

As permitted by IAPAR (*section 4.3.1*), Christie Civil provided a response to the draft Independent Audit Report which is tabulated and provided in **Appendix B (Table C)**.

It is noted that the response from Christie Civil provides a timetable for implementation of the recommendations and commentary.

As required by the IAPAR (*section 4.3.1*), **Appendix B (Table C)** presents a summary of the Auditor's view in relation to the response provided by Christie Civil and additional information provided by Parkview.

## 6 CONCLUSION

Environmental Earth Sciences NSW was engaged by Frasers Property Australia (Ivanhoe) to conduct a six-monthly performance audit of the project EMS for Stage 1B of construction works at Ivanhoe Estate, Macquarie Park, NSW in accordance with SSD Conditions of Consent within SSD 8903 MOD 4.

The construction of Stage 1B was awarded to Christie Civil Pty Ltd and this audit report presents the findings from the period between 12 April 2022 and 5 September 2022.

The overall outcome of the independent audit was generally positive. Compliance records were organised and available at the time of the site inspection and project personnel from Christie Civil were available for interviews and were forthcoming with requests for information.

Relevant environmental and compliance monitoring records were being collected and reported as required to provide verification of compliance to statutory requirements and the broader Project environmental requirements.

In summary:

- There were 38 conditions assessed.
- There were no aspects of non-compliance (minor or otherwise) for the Stage 1B civil works for the audit period.
- There were eleven opportunities for improvements identified relating to improvement to water quality monitoring, erosion and sediment controls, active noise and dust monitoring and CEMP updates.

Detailed findings are presented in **Table A (Appendix B)**. Recommendations and actions proposed to address the findings are presented in **Table C (Appendix B)** together with proponent response to the draft Independent Audit report.

The relatively small number of findings – mainly administrative with low environmental / community impact – is a testament to good compliance focus of the auditees.

## 7 LIMITATIONS

This report has been prepared by Environmental Earth Sciences NSW ACN 109 404 006 in response to and subject to the following limitations:

1. The specific instructions received from Frasers Property Australia;
2. The specific scope of works set out in PO122021\_V1 issued by Environmental Earth Sciences NSW for and on behalf of Frasers Property Australia;
3. May not be relied upon by any third party not named in this report for any purpose except with the prior written consent of Environmental Earth Sciences NSW (which consent may or may not be given at the discretion of Environmental Earth Sciences NSW);
4. This report comprises the formal report, documentation sections, tables, figures and appendices as referred to in the index to this report and must not be released to any third party or copied in part without all the material included in this report for any reason;
5. The report only relates to the site referred to in the scope of works being located at Building A1, Stage 1 Ivanhoe Estate, Macquarie Park, NSW (the “site”);
6. This report is not a geotechnical or planning report suitable for planning or zoning purposes; and
7. Our General Limitations set out at the back of the body of this report.

## 8 REFERENCES

Alliance Geotechnical Pty Ltd (2022a), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1; 14 April 2022).

Alliance Geotechnical Pty Ltd (2022b), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-1 Rev 1; 3 May 2022).

Alliance Geotechnical Pty Ltd (2022c), *Asbestos Clearance Certificate* (ref: 15030-ER-1-2; 16 May 2022).

Alliance Geotechnical Pty Ltd (2022d), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3; 16 May 2022).

Alliance Geotechnical Pty Ltd (2022e), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 1; 30 June 2022).

Alliance Geotechnical Pty Ltd (2022f), *Waste Classification and Virgin Excavated Natural Material Report* (ref: 15030-ER-1-3 Rev 2; 12 July 2022).

- Christie Civil Pty Ltd (2022a), *Construction Environmental Management Plan – CEMP – Ivanhoe Estate Stage 1B Civil Works, Epping & Lyonpark Roads, Macquarie Park NSW* (01 April 2022; Revision F) (the “CEMP”).
- Christie (2022b), *Daily Site Checklists (May to August) – Ivanhoe Estate 1B Civil Works*.
- Christie (2022c), *Safety & Environmental Inspection Checklists (May to August) – Ivanhoe Estate 1B Civil Works*.
- Christie (2022d), *Weighbridge dockets of material going offsite (May to August) – Ivanhoe Estate 1B Civil Works*.
- Department of Environment & Climate Change (DECC) (2009) – *Interim Construction Noise Guideline* (DECC, 2009).
- Elton Consulting (2021), *Midtown Stage 2SSDA – Engagement Outcomes Report* (dated: 1 July 2021 (Elton, 2001).
- Ethos Urban (2021), *Environmental Impact Statement SSD 15822622 – Ivanhoe Estate, Macquarie Park – Stage 2 ‘Midtown’, 26 August 2021 Version 1.1* (the ‘EIS’).
- Environmental Earth Sciences (2020a), *Schedule for independent environmental audit(s) at Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120077\_Audit Schedule\_V1, 14 August 2020).
- Environmental Earth Sciences (2020b), *Preliminary findings – independent environmental audit at Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120077\_EMS Audit\_V2, 17 December 2020) (Environmental Earth Sciences, 2020).
- Environmental Earth Sciences (2021a), *Virgin Excavated Natural Material Characterisation Assessment – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.1\_V3; 1 April 2021) and
- Environmental Earth Sciences (2021b), *Virgin Excavated Natural Material (VENM) Characterisation Assessment (TP1 Area) – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120\_ENM\_No.2\_V1; 12 February 2021).
- Environmental Earth Sciences (2021c), *Six monthly performance audit, stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120077\_Review of EMS\_V2, 1 October 2021)
- Environmental Earth Sciences (2022), *Six monthly performance audit, Stage 1 Ivanhoe Estate, Macquarie Park, NSW* (ref: 120038\_Six-monthly Audit\_V2; 16 August 2022).
- Frasers Property (2021), *Preliminary Construction Management Plan, May 2021 Revision: A – For Development Application* (the “PCMP”).
- Minister for Planning and Public Spaces, *Development Consent, Section 4.38 of the Environmental Planning and Assessment Act 1979*, Consolidated Consent (dated: 10 November 2020; reference: SSD 8903 MOD 1 and dated 7 May 2021; reference: SSD 8903 MOD 2).



NSW Department of Planning and Environment (DPE) (2015), *Independent Audit Guideline, Post-approval requirements for State Significant Developments, October 2015*, (DPE, 2015).

NSW DPE (2018) *Independent Audit Post Approval Requirements* (DPE, 2018).

NSW Department of Planning, Industry and Environment (DPIE) (2020a), *Compliance Reporting Post Approval Requirements May 2020*.

NSW DPIE (2020b), *Independent Audit, Post Approval Requirements May 2020*.

Parkview Constructions Pty Ltd (2020), *Construction Management Plan for: Ivanhoe Estate – Building A1, Macquarie Park NSW* (29 September 2022; Version 7.0, Revision D) (the “CMP”).

Standards Australia / Standards New Zealand (AS / NZS) (2015) *Environmental Management Systems – Requirements with Guidance for Use* (AS / NZS ISO 14001:2015).



# ENVIRONMENTAL EARTH SCIENCES GENERAL LIMITATIONS

## **Scope of services**

The work presented in this report is Environmental Earth Sciences response to the specific scope of works requested by, planned with and approved by the client. It cannot be relied on by any other third party for any purpose except with our prior written consent. Client may distribute this report to other parties and in doing so warrants that the report is suitable for the purpose it was intended for. However, any party wishing to rely on this report should contact us to determine the suitability of this report for their specific purpose.

## **Data should not be separated from the report**

A report is provided inclusive of all documentation sections, limitations, tables, figures and appendices and should not be provided or copied in part without all supporting documentation for any reason, because misinterpretation may occur.

## **Subsurface conditions change**

Understanding an environmental study will reduce exposure to the risk of the presence of contaminated soil and or groundwater. However, contaminants may be present in areas that were not investigated, or may migrate to other areas. Analysis cannot cover every type of contaminant that could possibly be present. When combined with field observations, field measurements and professional judgement, this approach increases the probability of identifying contaminated soil and or groundwater. Under no circumstances can it be considered that these findings represent the actual condition of the site at all points.

Environmental studies identify actual sub-surface conditions only at those points where samples are taken, when they are taken. Actual conditions between sampling locations differ from those inferred because no professional, no matter how qualified, and no sub-surface exploration program, no matter how comprehensive, can reveal what is hidden below the ground surface. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from that predicted. Nothing can be done to prevent the unanticipated. However, steps can be taken to help minimize the impact. For this reason, site owners should retain our services.

## **Problems with interpretation by others**

Advice and interpretation is provided on the basis that subsequent work will be undertaken by Environmental Earth Sciences NSW. This will identify variances, maintain consistency in how data is interpreted, conduct additional tests that may be necessary and recommend solutions to problems encountered on site. Other parties may misinterpret our work and we cannot be responsible for how the information in this report is used. If further data is collected or comes to light we reserve the right to alter their conclusions.

## **Obtain regulatory approval**

The investigation and remediation of contaminated sites is a field in which legislation and interpretation of legislation is changing rapidly. Our interpretation of the investigation findings should not be taken to be that of any other party. When approval from a statutory authority is required for a project, that approval should be directly sought by the client.

## **Limit of liability**

This study has been carried out to a particular scope of works at a specified site and should not be used for any other purpose. This report is provided on the condition that Environmental Earth Sciences NSW disclaims all liability to any person or entity other than the client in respect of anything done or omitted to be done and of the consequence of anything done or omitted to be done by any such person in reliance, whether in whole or in part, on the contents of this report. Furthermore, Environmental Earth Sciences NSW disclaims all liability in respect of anything done or omitted to be done and of the consequence of anything done or omitted to be done by the client, or any such person in reliance, whether in whole or any part of the contents of this report of all matters not stated in the brief outlined in Environmental Earth Sciences NSW's proposal number and according to Environmental Earth Sciences general terms and conditions and special terms and conditions for contaminated sites.

To the maximum extent permitted by law, we exclude all liability of whatever nature, whether in contract, tort or otherwise, for the acts, omissions or default, whether negligent or otherwise for any loss or damage whatsoever that may arise in any way in connection with the supply of services. Under circumstances where liability cannot be excluded, such liability is limited to the value of the purchased service.

## APPENDIX A: PLANNING SECRETARY AUDIT TEAM AGREEMENT & NSW DPIE CORRESPONDENCE

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**By email:** chris.koukoutaris@frasersproperty.com.au

24 August 2020

Dear Chris

**Audit Program  
Ivanhoe Estate Stage 1 SSD-8903-PA-2**

I refer to recent correspondence submitted by Frasers Property Australia (SSD-8903-PA-2) informing the Department as required by condition B5 of SSD-8903 that Environmental Earth Sciences NSW (**auditor**) has been engaged to conduct a program of independent environmental auditing of Stage 1 Ivanhoe Estate SSD-8903. It is noted that the audit program consists of the initial independent environmental audit of Stage 1 in October / November 2020 followed by an annual audit.

Please note that the Independent Audit must be lead by a suitably qualified auditor and be prepared, undertaken and finalised in accordance with the requirements of Conditions B8 and B9 of SSD 8903. The Department also requests that consideration be given to the *Compliance Reporting Post Approval Requirements May 2020 (PAR 2020)* to the extent that it does not contradict Conditions B8 and B9 of SSD 8903. Failure to meet these requirements will require revision and resubmission. The PAR 2020 may be accessed at <https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/Assess-and-regulate/About-Compliance/compliance-reporting-post-approval-requirements-2020-05-19.pdf>

Please append this correspondence to the Independent Audit Report.

Yours sincerely

A handwritten signature in black ink, appearing to read 'J Pope'.

Julia Pope  
**Team Leader Compliance - Metro**  
As nominee of the Secretary

## Karin Azzam

---

**From:** Maria Divis <Maria.Divis@planning.nsw.gov.au>  
**Sent:** Tuesday, 20 September 2022 6:42 AM  
**To:** Mark Stuckey; DPE PSVC Compliance Mailbox  
**Cc:** peter.statham@frasersproperty.com.au; sarah.martin@frasersproperty.com.au; elisha.kordiak@frasersproperty.com.au; Karin Azzam; Chris Newland  
**Subject:** RE: 122038 EMS audit, Ivanhoe East

Some people who received this message don't often get email from maria.divis@planning.nsw.gov.au. [Learn why this is important](#)

**[EXTERNAL EMAIL]** DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Good morning Mark,

Thank you for consulting with the Department of Planning and Environment (the **department**) in order to obtain input into the scope of the Independent Environmental Audit (**IEA**), in accordance with the Independent Audit Post Approval Requirements 2020 (**IAPARs**).

The department is not aware of any specific areas of concern in relation to the project that need to be included within the scope of the audit, further to those referenced in your below email. Please ensure that the requirements of the Conditions of Consent and the IAPARs are satisfied in the submission.

The department suggests consultation with local Council.

Kind regards,

**Maria Divis**  
**Senior Compliance Officer** (Mon-Thurs)

Planning & Assessment | Department of Planning and Environment  
T 02 8275 1156 | E [Maria.Divis@planning.nsw.gov.au](mailto:Maria.Divis@planning.nsw.gov.au)  
Locked Bag 5022 | PARRAMATTA NSW 2124  
[www.dpie.nsw.gov.au](http://www.dpie.nsw.gov.au)



*The Department of Planning and Environment acknowledges that it stands on Aboriginal land. We acknowledge the traditional custodians of the land and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.*

---

**From:** Mark Stuckey <mstuckey@eesigroup.com>  
**Sent:** Friday, 16 September 2022 3:32 PM  
**To:** Maria Divis <Maria.Divis@planning.nsw.gov.au>; DPE PSVC Compliance Mailbox

## APPENDIX B: INDEPENDENT AUDIT TABLES

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**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
<b>Schedule 2 - Part A      Monitoring and Environmental Audits</b>						
<b>A20</b>	1	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification and independent environmental auditing. Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.	Evidence of monitoring and environmental audit provided in this report.	----	Compliant	
<b>Schedule 2 - Part B      Independent Environmental Audit</b>						
<b>B5</b>	2	No later than one month before the commencement of construction or within another timeframe agreed with the Planning Secretary, a program of independent environmental audits must be prepared for the development in accordance with AS/NZS ISO 19011-2014: Guidelines for Auditing Management Systems (Standards Australia, 2014) and submitted to the Planning Secretary for information.	A schedule for independent environmental audit(s) was prepared by Environmental Earth Sciences: <ul style="list-style-type: none"> <li>Environmental Earth Sciences (2020a), <i>Schedule for independent environmental audit(s) at Stage 1 Ivanhoe Estate, Macquarie Park, NSW</i> (ref: 120077_Audit Schedule_V1, 14 August 2020).</li> </ul> <p>The schedule was submitted to the Department of Planning, Industry and Environmental (DPIE) whereby the Planning Secretary confirmed the appointment of Environmental Earth Sciences as the independent auditor. Refer to Appendix A for the correspondence letter:</p> <ul style="list-style-type: none"> <li>DPIE (2020), <i>Audit Program, Ivanhoe Estate Stage 1 SSD-8903-PA-2</i> (ref: Appointment of Experts, 24 August 2020).</li> </ul>	----	Compliant	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B6	3	The scope of each audit must be defined in the program. The program must ensure that environmental performance of the development in relation to each compliance requirement that forms the audit scope is assessed at least once in each audit cycle.	The audit scope is defined in the following: Environmental Earth Sciences (2020a), <i>Schedule for independent environmental audit(s) at Stage 1 Ivanhoe Estate, Macquarie Park, NSW</i> (ref: 120077_Audit Schedule_V1, 14 August 2020).	----	Compliant	
B7	4	The environmental audit program prepared and submitted to the Planning Secretary in accordance with Conditions B5 and B6 above must be implemented and complied with for the duration of the development.	It is noted in DPIE (2020) that an annual audit will be implemented and complied with for the duration of the development.	----	Compliant	
B8	5	All independent environmental audits of the development must be conducted by a suitably qualified, experienced and independent team of experts and be documented in an audit report which <ul style="list-style-type: none"> <li>a) assesses the environmental performance of the development, and its effects on the surrounding environment including the community;</li> <li>b) assesses whether the development is complying with the terms of this consent;</li> <li>c) reviews the adequacy of any document required under this consent; and</li> <li>d) recommends measures or actions to improve the environmental performance of the development, and improvements to any document required under this consent.</li> </ul>	Independent environmental audit conducted by Environmental Earth Sciences under the guidance of Mark Stuckey, the Environmental Management Systems (EMS) Lead Auditor; and Site Auditor – accredited under the Contaminated Land Management (CLM) Act 1997 (NSW).	----	Compliant	
B9	6	Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Planning Secretary, a copy of the audit report must be submitted to the Planning Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary. Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.	A copy of the audit report is submitted by Frasers Property Australia to the Planning Secretary and the City of Ryde Council.	----	Compliant	
<b>Schedule 2 - Part B</b>		<b>Pre-Construction Dilapidation Report</b>				

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B25	7	The Applicant is to engage a suitably qualified structural engineer to prepare a Pre-Construction Dilapidation Report, detailing the current structural condition of all existing adjoining buildings, infrastructure and roads within the 'zone of influence'. The report shall be submitted to the Certifier and Council, prior to issue of the relevant Crown Building Works Certificate for Building A1, or any works commencing, whichever is earlier.	<p>Mainland Civil engaged GreenPlus Property Services as the suitably qualified structural engineer to prepare Pre-Construction Dilapidation Reports:</p> <ul style="list-style-type: none"> <li>GreenPlus Property Services (Nov 2020a) – <i>Pre-construction Dilapidation Inspection, Herring Road in Conjunction with Re-development of Midtown at 1 Ivanhoe Avenue, Macquarie Park</i> (ref: 820049.1_(Rs), dated 10 November 2020).</li> <li>GreenPlus Property Services (Nov 2020b) – <i>Pre-construction Dilapidation Inspection, Display Suite, In Conjunction with Re-development of Midtown at 1 Ivanhoe Avenue, Macquarie Park</i> (ref: 820049.2_(Rv.1), dated 10 November 2020).</li> <li>GreenPlus Property Services (Nov 2020c) – <i>Pre-construction Dilapidation Inspection 155 Herring Road, 1-3 Lachlan Avenue and 1, 3, 5, 7 Peach Tree Road (External Ground and Elevations), In Conjunction with Re-development of Midtown at 1 Ivanhoe Avenue, Macquarie Park</i> (ref: 820049.3_(Rv.1), dated 10 November 2020).</li> </ul>	---	Compliant	
<b>Schedule 2 - Part B Construction Environmental Management Plan (CEMP)</b>						
B40	8	<p>Prior to the commencement of any works, the Applicant shall prepare and implement a Construction Environmental Management Plan (CEMP) for the development and be submitted to the Certifier. The CEMP must be prepared in consultation with, and address the relevant requirements of, Council. The CEMP must:</p> <p>a) describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase;</p>	<p>Christie Civil Pty Ltd (2022), Construction Environmental Management Plan, Ivanhoe Estate - Stage 1B Civil Works Epping &amp; Lyonpark Roads, Macquarie Park (dated 1 April 2022, Revision F) (the 'CEMP').</p> <p>a) The relevant stages and phases of construction are listed in the CEMP in section 1.4. The stages of the falsework foundation construction work over Shrimpton Creek are described Section 2, Appendix 1 of the CEMP</p>		Compliant	



**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B40	9	b) describe all activities to be undertaken on the site during site establishment and construction of the development;	Site activities are listed in Section 1.1 of the CEMP. Site activities include: dilapidation report, site clearing, new driveway entrance to LIF building carpark, temporary access over Shrimptons Creek, 10 bored piles, form, reo pour abutments, retaining walls, bridge piers, falsework to bridge deck, post tensioning of bridge deck, relocating of electrical kiosk, electrical works, services works, stormwater works including GPT, paving, landscaping Road construction activities include: <ul style="list-style-type: none"> <li>- Excavation</li> <li>- Place basecourse</li> <li>- Kerb and gutter</li> <li>- Asphalt,</li> <li>- Line marking</li> </ul>	---	Compliant	
B40	10	c) include a Dust Management Plan, incorporating the mitigation measures outlined in the Air Quality Assessment, prepared by WSP, dated October 2018.	Refer to the Air Quality and Odour Management Plan (AQOMP) – Appendix 9 of the CEMP for details of dust, air quality and odour management. 5.4.2: mitigation measures outlined in the Air Quality Assessment (WSP,2018) as detailed in 5.4.2	The AQOMP acknowledge that there is potential for dust and particulate matter to have a nuisance impact on sensitive receptor that would trigger mitigating measures. However, there is no active dust monitoring on site to measure any potential impact. What is the reasoning for not having dust gauges installed onsite?	Not triggered	Dust generated is minimal as there is a watercart onsite full time. Should complaints of dust from sensitive receivers be advised, dust monitoring may be implemented.
B40	11	d) clearly outline the stages/phases of construction that require ongoing environmental management monitoring and reporting;	The following require ongoing environmental management monitoring and reporting: soil and water control, dust, noise and vibration, hazardous materials, contaminated materials, construction waste management and complaints.	----	Compliant	
B40	12	e) detail statutory and other obligations that the Applicant is required to fulfil during site establishment and construction, including approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;	Section 1.3 of the CEMP refers to <i>SSPF21 - Project Legal Register</i> and <i>SOPF3.02.6 - Site Environmental Aspects, Impacts &amp; Safeguards</i> for the relevant NSW legislation Section 1.3.2 states that prior to commencement of any works including clearing works on site, approval to proceed shall be issued by Frasers Property.	----	Compliant	
B40	13	f) be prepared in consultation with Council and include specific consideration of measures to address any requirements of Council during site establishment and construction;		----		

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SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B40	14	g) describe the roles and responsibilities for all relevant employees involved in the site establishment and construction of the works;	Roles and responsibilities for all relevant employees are detailed in Section 1.5.4 of the CEMP and include the following: Project Manager, Site Supervisor (Foreman) and Site Engineers.	----	Compliant	
B40	15	h) detail how the environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address identified potential environmental impacts, including but not limited to noise, traffic and air impacts;	Project operations and activities that have a significant impact on the environment are monitored during daily and weekly site checks. Daily Site checklists and Weekly Safety and Environmental Checklists have been provided to Environmental Earth Sciences for review.	There are no active noise or dust monitoring on site.  Active noise and dust monitoring on site is recommended.	Not triggered	If noise complaints are received, noise monitors can be considered adjacent to sensitive receivers. Dust generated is minimal as there is a watercart onsite full time. Should complaints of dust from sensitive receivers be advised, dust monitoring may be implemented.
B40	16	i) include measures to ensure adequate groundwater entitlement is sourced in order to account for groundwater flows into the construction excavations, unless any exemption applies;	Not required. Groundwater entitlement is not expected to flow into the excavation zones. According to Douglas Partners Groundwater Monitoring report (dated 30 July 2018, project 86043.01 Revision 5.005.Rev0), the ground water levels are typically below the bulk excavation levels of the works and therefore groundwater entitlement into the construction excavations is not expected and highly unlikely.	Not required.	Not triggered	
B40	17	j) management of groundwater during construction;	Refer to point 'i' above.		Not triggered	
B40	18	k) document and incorporate all relevant sub environmental management plans (Sub-Plans), control plans, studies and monitoring programs required under this part of the consent; and	The CEMP contain all relevant environmental management plans (Sub-plans) required under this consent.	----	Compliant	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B40	19	l) include arrangements for community consultation and complaints handling procedures during construction.	<p>Section 1.6.3 (CEMP): Complaints Handling Procedure: All environment complaints received from the public and/or regulatory agency are investigated by the Project Manager and ensure Frasers Properties are notified immediately. All public complaints received (either written or verbal) must be documented to contain the following information:</p> <ul style="list-style-type: none"> <li>• The nature and extent of the complaint</li> <li>• The method by which the complaint was made</li> <li>• The name and address of the person lodging the complaint</li> <li>• Details of location, dates, times and effects of the complaint</li> <li>• The action taken to address the complaint including follow up contact with the complainant</li> </ul> <p>When verbal complaints are received, they shall be documented by company personnel who shall ensure the complaint has been correctly recorded. All public complaints shall be recorded using the <i>Complaint Report</i> and entered onto a <i>Contact and Complaints Register</i>, or the Client's system. From here the issue raised is recorded as a Non-conformance in an NCR Report.</p> <p>Refer to Section 1.6.3 (CEMP) for prescribed corrective/preventative actions to be taken to address all Public Complaints.</p>	<ul style="list-style-type: none"> <li>• No complaints received during Audit period.</li> </ul>	Not triggered	
<p><b>Schedule 2 - Part B      Construction Noise and Vibration Management Plan (CNVMP) – Appendix 8 of the CEMP</b></p>						
B42	20	a) be prepared in accordance with the EPA's Interim Construction Noise Guideline	<p>Christie Civil Pty Ltd (2022), Construction Noise and Vibration Management Plan for Ivanhoe Estate, Stage 1B Civil Works - Macquarie Park, Frasers Property (dated 22/02/2022, Revision A) (the 'CNVMP' report) – Appendix 8 of the CEMP.</p> <p>Section 4: The CNVMP report was prepared in accordance with the EPA's Interim Construction Noise Guidelines.</p>	----	Compliant	
B42	21	b) identify nearby sensitive receivers and land uses;	<p>Section 5: Nearest Receivers - seven receivers identified and land uses listed.</p>	----	Compliant	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B42	22	c) identify the noise management levels for the project;	Section 7: Noise Management Level Construction noise management levels applicable to the development have been determined based on the minimum background noise level recorded and the construction noise management level detailed in this report.	Noise management levels have been determined for the project, however there is no quantitative assessment with active noise monitoring conducted during Audit period.	Compliant	
B42	23	d) identify the construction methodology and equipment to be used and the key sources of noise and vibration;	Section 7: details noise making activities required to complete works. Section 9 of the CNVMP: Vibration Management: Christie Civil works that are expected to cause vibration is vibrating roller during roadworks.	----	Compliant	
B42	24	e) details of all reasonable and feasible management and mitigation measures to be implemented to minimise construction noise and vibration;	Section 7: Noise monitoring plan: Noise control measures. Section 8: Vibration Management Plan - vibration control measures.	The project has established noise management levels (Acoustic Logic 2019) however no active noise monitoring was conducted during the Audit period. Any exceedances of the “highly noise affected level” cannot be quantified. – Active noise monitoring on site is recommended.	Not triggered	If noise complaints are received, noise monitors can be considered adjacent to sensitive receivers.
B42	25	f) be consistent with and incorporate all relevant recommendations and noise and vibration mitigation measures outlined in the Stage 1 DA Acoustic Assessment, prepared by Acoustic Logic, dated 15 October 2019	Section 5: Nearest Receivers - details the nearest properties likely to be affected.	The project has established noise management levels (Acoustic Logic 2019) however no active noise monitoring was conducted during the Audit period. Any exceedances of the “highly noise affected level” cannot be quantified. – Active noise monitoring on site is recommended.	Not triggered	If noise complaints are received, noise monitors can be considered adjacent to sensitive receivers.
B42	26	g) ensure all potentially impacted sensitive receivers are informed by letterbox drops prior to the commencement of construction of the nature of works to be carried out, the expected noise levels and duration, as well as contact details for a construction community liaison officer; and	Community consultation was completed prior to the lodgement of the SSD DA and is detailed in the Consultation Outcome Report prepared by Elton Consulting – <i>Appendix Q</i> within the EIS (Elton, 2021).	----	Compliant	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B42	27	h) include a suitable proactive construction noise and vibration monitoring program which aims to ensure the construction noise and vibration criteria in this consent are not exceeded.	Section 8 lists noise mitigation methods to minimise noise and complaints.	Active noise monitoring on site is recommended to record any potential exceedances of the "highly noise affected level".	Not triggered	If noise complaints are received, noise monitors can be considered adjacent to sensitive receivers.
	28		Section 9 notes that the activity that have the potential to produce significant ground vibration include – Vibration roller during roadworks. The vibration produced from a 10t vibrating roller and the frequency of the vibration is not expected to impact either of the adjoining buildings on Lyonpark Road. The subgrade is expected to be a clay base which will also assist in absorbing vibration. It is not proposed to establish vibration monitors.	Environmental Earth Sciences is satisfied that vibration monitors are not needed for the Stage 1B Project.	Not triggered	
<b>Schedule 2 - Part B Air Quality and Odour Management Plan (AQOMP) – Appendix 9 of the CEMP</b>						
B43	29	<p>Prior to the commencement of any works, an Air Quality and Odour Management Plan (AQOMP) must be prepared and submitted to the Certifier. The AQOMP must recommend measures to minimise and manage any odours arising from excavation, stockpiling and removal of contaminated soils including, but not limited to:</p> <p>a) staged excavation to limit the surface area of exposed odorous material;</p>	<p>Christie Civil Pty Ltd (2022), Air Quality and Odour Management Plan for Ivanhoe Estate, Stage 1B Civil Works - Macquarie Park, Frasers Property (dated 22/02/2022, Revision A) (the 'AQOMP' report) – Appendix 9 of the CEMP.</p> <p>Section 3 describes mitigation measures to be implemented to limit any emissions to air during construction.</p> <p>Observations from audit site inspection (05/09/2022): Whilst most stockpiles were not covered, they were kept on site at manageable sizes not exceeding 4 m in height. Advice from Christie informed that earthworks on site was scheduled so that stockpiles of excavated material were taken offsite expediently to minimise the amount of time exposed stockpiles were left on site and thus control emissions of dust and/or VOCs/odour.</p>	Not required.	Not triggered	

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SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B43	30	b) application of odour suppressants;	Section 3 describes mitigation measures to be implemented to limit any emissions to air during construction. No application of odour suppressants were taking place during the audit period. No odorous material observed and no odour was detected during audit site inspection.	Christie confirmed odour suppressants were not required during the January - September 2022 audit period.	Not triggered	
B43	31	c) effective covering of stockpiles and truckloads of excavation spoil; and	Section 3: Minimising the transfer of excavated material within the site and loading from the source of the excavation is ideal however when this is not possible, and stockpiles are generated they will be limited to 4m in height. If there is a requirement to go higher due to space/loading requirements, material stockpiles will need to be wetted during the day and covered overnight. All trucks carting material off site will cover their loads prior to leaving the site.	Uncovered stockpiles are present on site but are all under 4 m in height. The export of material is staged to limit the time stockpiles are present on site. All truckloads leaving the site are covered.	Not triggered	
B43	32	d) expedited removal of odorous material from the development to a facility legally able to accept those wastes.	Section 3: Once waste classification for the odorous material is obtained, the material will be removed and transported to a facility licenced to accept the waste.	No odorous material observed. Christie Civil confirm odour suppressants were not required during the audit period.	Not triggered	
B43	33	The AQOMP must include proactive and reactive management strategies, key performance indicators (KPIs), monitoring measures, record keeping, response mechanisms, contingency and compliance reporting measures.	Section 3 lists mitigation measures.  Daily and weekly site inspections did not record any dust or odours during the audit period.	The AQOMP does not include key performance indicators, monitoring measures, response mechanisms and contingencies.  – Active noise monitoring on site is recommended.	Not triggered	Christie Civil do not believe these are required.
<b>Schedule 2 - Part B      B44. Construction Waste Management Plan (CWMP) – Appendix 10 of the CEMP</b>						
B44	34	a. the estimated volume or weight of materials that will be reused, recycled or removed from the site;	Refer to Waste Management Register provided to Environmental Earth Sciences in <b>Appendix F</b> for documentation of material reused, recycled or removed from site.  Storage areas were during audit field visit.	The CWMP does not include estimation of volume and / or weight of material reused, recycled or removed from site but percentage alone. It is recommended to amend the CEMP to include estimation of volume of material leaving the site.	Not triggered	
B44	35	b. on-site material storage areas during construction;	Section 5 lists materials and methods used during construction to minimise waste in.		Not triggered	
B44	36	c. materials and methods used during construction to minimise waste;		----	Compliant	



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SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B44	37	d. provide details demonstrating compliance with the relevant legislation, particularly with regard to the removal of asbestos and hazardous waste, the method of containment and control of emission of fibres to the air;	<p><b>Section 3</b> lists relevant legislations and guidelines and;</p> <p><b>Section 5:</b> tabulates checklists for waste streams, listing requirements and evidence needed for Building and Demolition waste, Asbestos waste, VENM, ENM and other.</p> <p>An Asbestos Management Plan is included in <b>Appendix 12</b> of the CEMP and outlines general procedures for asbestos removal.</p>	----	Compliant	
B44	38		<p>No airborne monitoring for potential asbestos fibres required during Audit period.</p> <p>One fragment of bonded asbestos material was detected during in situ material classification field work of an area to be excavated during bridge abutment construction works on the 5 April 2022 by a Senior Environmental Consultant from Alliance Geotechnical Pty Ltd. The Waste classification process was documented in the following report:</p> <ul style="list-style-type: none"> <li>Alliance Geotechnical Pty Ltd (2022a), <i>Waste Classification and Virgin Excavated Natural Material Report</i> (ref: 15030-ER-1-1; 14 April 2022).</li> </ul> <p>Following removal of asbestos impacted material, a suitably qualified person from Alliance Geotechnical Pty Ltd conducted an asbestos clearance inspection with results and findings formalised in the following report:</p> <ul style="list-style-type: none"> <li>Alliance Geotechnical Pty Ltd (2022) <i>Asbestos Clearance Certificate</i> (ref: 15030-ER-2-1; 16 May 2022).</li> </ul>	----	Compliant	

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SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B44	39	e. nomination of the end location of all waste and recycling generated from a facility authorised to accept the material type for processing or disposal; and	Section 5 – Tables 2 to 6 are checklists for different waste streams.  Receiving facilities have not been nominated in the CWMP.	Refer to <b>Appendix F</b> for the Waste management Register.  It is recommended to update the CWMP nominating receiving facilities for waste generated and taken offsite.	Complete / Compliant.	A table of nominated facilities used for waste will be added to Waste Management Plan as advised. <i>Christie provided their updated Construction Waste Management Plan on 24 October 2022, outlining nominated authorised receiving facilities of all waste and recycling generated in Appendix D.</i>
B44	40	f. identification within the CWMP of the responsibility for the transferral of waste and recycling bins within the property to the collection point.	Section 5 – Tables 2 to 6 are checklists for different waste streams identifying the responsibilities for the transferral of waste.		Compliant	
<b>Schedule 2 - Part B      B45. Construction Soil and Water Management Plan (CSWMP)</b>						
B45	41	a. location and extent of all necessary sediment and erosion control measures for the site;	Sediment basin constructed in eastern portion of the site, upstream of Shrimptons Creek. Figures 3, 10, 13 and 15 show the proposed locations of the sedimentation basin, silt fences, ground cover (geofabric).	----	Compliant	
B45	42	b. catchment plan;	Figures 3, 10, 13 and 15 show the elevation contours and overland flow paths across the site.	----	Compliant	
B45	43	c. sediment basin(s) locations including details showing how runoff from the entire site will be directed to the sediment basin(s). Requirements for sediment basins are specified below;	Figure 3 show the location of the sediment basins and the relocated swale redirected to divert upslope water around work area.	----	Compliant	
B45	44	d. all relevant details and calculations of the sediment basins including sizes, depths, flocculation, outlet design, all relevant sections, pump out systems, and depths;	Calculations of the sediment basin are included in Section 2.2.8 of the CSWMP <i>5.7.3: Temporary sediment basin: size 20 m x 35 m, depth / max ponding level 0.54 m, minimum volume of 1065 m<sup>3</sup>, outlet pipes with sieve-style filtration system.</i>	----	Compliant	



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B45	45	e. all details of basement and other excavation pump out and dewatering treatment systems including flocculation and any proposed discharge from the site from dewatering and pump out systems. Requirements for dewatering are specified below;	<p>The larger sedimentation basin in the centre of the Stage 1B area was empty at the time of the inspection. Christie advised that the basin had been desilted and the water having been pumped into the staged sediment retention basins to the south of the site.</p> <p>The staged basins are allowing sediments to be deposited by settlement (water is decanted into lower lying ponds with any overflow being discharged into a grassy area).</p> <p>Photographs of the staged basins from the audit inspection are presented in Appendix D.</p>		Not triggered	
B45	46	f. identification and management of any stormwater run-on to the site from adjacent sites;	<p>The CSWMP has not identified stormwater run-on from adjacent sites.</p> <p>Daily Site checklists and Weekly Safety and Environmental Checklists have been provided to Environmental Earth Sciences for review.</p> <p>No stormwater run-on from adjacent sites was recorded.</p>	----	Compliant	
B45	47	g. location of any temporary stockpiles (soil, spoil, topsoil or otherwise) and accompanying sediment and erosion control measures;	<p>Figures 3, 10, 13 and 15 show locations of stockpile locations and sediment and erosion control measures across the site.</p> <p>During performance review audit site inspection on 5 September 2022, Karin Azzam noted the following:</p> <ul style="list-style-type: none"> <li>• Soil stockpiles were present onsite.</li> <li>• Sediment basin constructed in eastern portion of the site.</li> <li>• Sediment fencing and silt socks installed.</li> <li>• Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site.</li> </ul>	----	Compliant	
B45	48	h. location and details of all vehicle wash down bays and associated erosion and sediment control measures such as earthen bunds; and	<ul style="list-style-type: none"> <li>• Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site. Water blasters used to clear tyres also.</li> </ul>	----	Compliant	

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B45	49	i. a daily and weekly site inspection checklist consistent with IECA Best Practice Erosion and Sediment Control documents.	Daily and weekly site inspection checklists were made available and reviewed by the Auditor ( <b>Appendix E</b> ) and issues recorded are summarised in Section 4.10 of this audit report.	The auditor recommends that corrective actions such as dredging of the sediment basin and the clearing and maintenance of sediment controls around stormwater drains should be better recorded in the daily and weekly site checklists.	Not triggered	Noted and these will be captured
B45	50	a. according to the NSW Blue Book (section 6.3.4 and Appendix E). The calculations of the sediment basin size must be submitted with the CSWMP;	Calculations of the sediment basin are included in Section 2.2.8 of the CSWMP Details of the basin are as follows: - Total minimum volume = 1065m <sup>3</sup> - Base RL. = 47.0 - Max ponding level in 100YR = RL 47.54. size 20 m x 35 m, depth / max ponding level 0.54 m, minimum volume of 1065 m <sup>3</sup> , outlet pipes with sieve-style <i>filtration system</i> .	----	Not triggered	
B45	51	b. using type D soils (unless otherwise demonstrated by an analysis of site soils by a qualified geotechnical);	Basin to be constructed and maintained in accordance with Blue Book and Basin to be constructed in accordance with Geotechnical Report (Reference: 86043.03; dated 8 September 2020).	----	Compliant	
B45	52	c. for all events up to the peak flow rate from the 1 in 10-year ARI event for the site for the 5-day rainfall event; and	On review of Figure 5.7.3a Basin Detail Plan in the Integrated Management Plan (Mainland Civil), Environmental Earth Sciences is satisfied that the sediment basin is designed for all events up to the peak flow rate from the 1 in 10-year ARI event for the site for the 5-day rainfall event.	----	Compliant	
B45	53	d. to include a gypsum flocculent to be added to the sediment basin in accordance with Appendix E of the Blue Book.	Section 5.7.4: gypsum, liquid alum or flocculent blocks to be used as flocculent.	----	Not triggered	
B55	54	The Applicant must ensure that following demolition of any existing buildings, roads, electricity substations and in-ground utilities as part of the Stage 1 works, further investigation of soil contamination is undertaken within the footprint of those buildings, roads, electricity substations and inground utilities prior to undertaking any construction works. Details confirming compliance must be submitted to the Certifier prior to the commencement of any remediation works.				

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B56	55	The Applicant must conduct additional site investigations and prepare an updated Remedial Action Plan (RAP) to address any identified contamination with proper regard to the: (a) NSW EPA Sampling Design Guidelines, 1995; (b) Consultants Reporting on Contaminated Land (Contaminated Land guidelines (EPA, 2020); (d) National Environment Protection (Assessment of Site Contamination) Measure (as amended 2013); and (e) Relevant guidelines approved under section 105 of the Contaminated Land Management Act 1997. Details confirming compliance must be submitted to the Certifier prior to the commencement of any remediation works.	Environmental Earth Sciences prepared an updated RAP • Environmental Earth Sciences (2021o) – <i>Technical Memorandum: Addendum to Remediation Action Plan at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120077_RAP Addendum_V1; 29 January 2021)	----	Compliant	
B58	56	The Applicant must provide details of the proposed remediation and validation strategy to the accredited site auditor in a Works Plan and a Validation Sampling and Analysis Quality Plan for review by the site auditor prior to remediation works commencing. Details confirming compliance must be submitted to the Certifier prior to undertaking any remediation works.	The following documents were submitted to the accredited site auditor prior to commencement of remediation works • Environmental Earth Sciences (2021n) – <i>Technical Memorandum: Additional Investigation at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120077_Technical Memo_V1; 29 January 2021). • Environmental Earth Sciences (2021o) – <i>Technical Memorandum: Addendum to Remediation Action Plan at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120077_RAP Addendum_V1; 29 January 2021).	----	Compliant	
B61	57	The Applicant is to ensure that all reports prepared for the assessment of contamination must be prepared, or reviewed and approved, by a consultant certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) Scheme (Camp(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. Details confirming compliance must be submitted to the Certifier prior to undertaking any remediation works.	All reports prepared for the assessment of contamination were reviewed and approved by: Mark Stuckey Senior Principal / Certified Professional Soil Scientist, Contaminated Site Assessment and Management (CPSS CSAM); or Dr Anna Sheldon Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM).	---	Compliant	

**Table A: Independent Audit Table**

B64	58	The Applicant shall comply with any notification requirements to SafeWork NSW concerning the handling and removal of any asbestos.	<p>Asbestos material was managed in accordance with the site-specific AMP (Appendix 12 of the CEMP).</p> <p>During the audit period, 62 m<sup>3</sup> or 114 tonnes GSW (Special Waste – Asbestos) was disposed offsite to Bingo Waste Services Pty Ltd, Eastern Creek Ecology Park.</p> <p>One fragment of bonded asbestos material was detected during <i>in-situ</i> material classification field work of an area to be excavated during bridge abutment construction works on 5 April 2022 by a Senior Environmental Consultant from Alliance Geotechnical Pty Ltd. The Waste classification process was documented in the following report:</p> <ul style="list-style-type: none"> <li>Alliance Geotechnical Pty Ltd (2022a), <i>Waste Classification and Virgin Excavated Natural Material Report</i> (ref: 15030-ER-1-1; 14 April 2022).</li> </ul> <p>Asbestos remediation works were conducted in accordance with:</p> <ul style="list-style-type: none"> <li>Christie Civil Pty Ltd (2022a), <i>Asbestos Management Plan, Ivanhoe Estate – Stage 1B Civil Works, Epping &amp; Lyonpark Roads, Macquarie Park</i>, (dated 22 March 2022, Rev: A, Doc Name: SSPF1 – Asbestos Management Plan) (the "AMP").</li> </ul> <p>Following removal of asbestos impacted material, a suitably qualified person from Alliance Geotechnical Pty Ltd conducted an asbestos clearance inspection with results and findings formalised in the following report:</p> <ul style="list-style-type: none"> <li>Alliance Geotechnical Pty Ltd (2022) <i>Asbestos Clearance Certificate</i> (ref: 15030-ER-2-1; 16 May 2022).</li> </ul> <p>Please refer to <b>Appendix G</b> for documentation of asbestos management including waste classification report, clearance certificate and weighbridge dockets from receiving facilities.</p>		Compliant	
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**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B65	59	Prior to the commencement of any work, the Applicant is required to satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 'asbestos wastes'.	Refer to evidence collected to consent B65 above.	---	Compliant	
C7	60	The development must be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009). All feasible and reasonable noise and vibration mitigation measures shall be implemented and any activities that could exceed the construction noise or vibration management levels shall be identified and managed in accordance with the CEMP and CNVMP.	In preparing this CNVMP plan, Christie have considered the following guideline: - DECC Interim Construction Noise Guideline.		Compliant	
C8	61	If the noise from a construction activity is substantially tonal or impulsive in nature (as described in Chapter 4 of the NSW Industrial Noise Policy), 5 dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise management levels	Noise is not substantially tonal or impulsive in nature.		Compliant	
C9	62	The Applicant must schedule intra-day 'respite periods' for construction activities predicted to result in noise levels in excess of the "highly noise affected" levels, including the addition of 5 dB to the predicted levels for those activities identified in the <i>Interim Construction Noise Guideline</i> as being particularly annoying to noise sensitive receivers.	No noise complaints were received by Christie or Frasers Property.		Compliant	
C10	63	Wherever practical, and where sensitive receivers may be affected, piling activities are completed using bored piles. If driven piles are required, they must only be installed where outlined in the CEMP.				

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
<b>C11</b>	64	Vibration caused by construction at any residence or structure outside the subject site must be limited to: (a) for structural damage vibration to buildings (excluding heritage buildings), British Standard BS 7385 Part 2-1993 Evaluation and Measurement for Vibration in Buildings; (b) for structural damage vibration to heritage buildings, German Standard DIN 4150 Part 3 Structural Vibration in Buildings Effects on Structure; (c) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6472- Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80 Hz) for low probability of adverse comment; and (d) these limits apply unless otherwise outlined in the CEMP.	Section 8 of the CNVMP details the vibration goals based on German Standard DIN4150-3 (1999-02).		Compliant	
<b>C15</b>	65	The Applicant must implement the recommendations of the Remedial Action Plan (Condition B56) as approved by the accredited site auditor.	The following report documented the remediation works and subsequent validation assessment in accordance with the Remedial Action Plan: • Environmental Earth Sciences (2021p) – Validation Report for Ivanhoe Estate (Location BH8), Corner Herring Road and Epping Road, Macquarie Park, NSW (ref: 120077_VAL_BH8_V1; 12 March 2021). NSW EPA accredited Site Auditor (James Davis of Enviroview) issued a Site Audit Report (Enviroview, 2021a) and Site Audit Statement (Enviroview, 2021b) declaring that ‘the soil remediation and validation works have been appropriately undertaken and that it is considered that the soils at the site are suitable for the proposed land use’: • Enviroview Pty Ltd (2021a) – Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021a). • Enviroview Pty Ltd (2021b) – NSW EPA Site Auditor Scheme, Site Audit Statement, Ivanhoe Estate, Macquarie Park, NSW 2113; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021b).		Compliant	
<b>C16</b>	66	The Applicant must ensure that an appropriate marker layer is installed above any emplaced contaminated fill material contained on the development site.	No contaminated fill material is contained on the development site and therefore marker layer is not required.	Not required.	Not triggered.	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
<b>C17</b>	67	The Applicant must ensure all in-ground services are installed above the marker layer, referred to in Condition C16, to minimise any risks to workers undertaking future maintenance work in service trenches.	No contaminated fill material is contained on the development site and therefore marker layer is not required.	Not required.	Not triggered.	
<b>C18</b>	68	Where applicable, the Applicant must develop a Long-Term Environmental Management Plan following remediation of the development site to document: (a) the expected limitations on the development site use; (b) relevant environmental and health and safety processes and procedures; (c) management processes, procedures and responsibilities to be adopted by future site users within the development site; and (d) details on the location and extent of emplaced asbestos impacted soil and other contaminated soil to be contained on the site.	A Long-Term Environmental Management Plan is not required for this site as fill material and underlying natural material was excavated and disposed offsite.	Not required.	Not triggered.	
<b>C19</b>	69	The Applicant is to ensure that any contamination identified as meeting the trigger in the EPA Guidelines for the Duty to Report Contamination is notified in accordance with requirements of section 60 of the Contaminated Land Management Act 1997.	Not applicable.	Not required.	Not triggered.	
<b>C20</b>	70	The Applicant is to ensure the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site that would result in significant contamination.	Pre-existing contamination was remediated and validated.	Not required.	Not triggered.	
<b>C21</b>	71	Should any new information come to light during demolition or construction works which has the potential to alter previous conclusions about site contamination, the Department must be immediately notified and works must cease. Works must not recommence on site until the Department confirms works can recommence.	Asbestos impacted material was identified as an unexpected finding and managed in accordance with Christies Asbestos Management Plan ( <i>Appendix 12 of the CEMP</i> ).	----	Compliant	



**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
C28	72	Notwithstanding the CWMP referred to in Condition B44, the Applicant must ensure that: a) all waste generated by the development is classified and managed in accordance with the EPA's Waste Classification Guidelines Part 1: Classifying Waste 2009; b) all waste generated by the development is treated and/or disposed of at a facility that has sufficient capacity to and may lawfully accept that waste; c) any vehicle used to transport waste or excavation spoil from the site is covered before leaving the premises; d) the wheels of any vehicle, trailer or mobilised plant leaving the site and cleaned of debris prior to leaving the premises.	a) All waste generated were classified and managed in accordance with the NSW EPA (2014) — <i>Waste Classification Guidelines – Part 1: Classifying Waste</i> (EPA, 2014). b) All waste generated by the development were disposed at facilities that have sufficient capacity to and may lawfully accept that waste. c) Christie advised that all trucks had covered their loads prior to leaving site. d) Metal rumble grid installed at site exit to facilitate removal of sediment and other materials prior to vehicles leaving site.		Compliant	
C31	73	Waste materials must be appropriately stored and secured within a designated waste area onsite at all times, prior to reuse or being sent offsite. This includes waste materials such as paper and containers which must not litter the site or leave the site onto neighbouring public or private property. Receipts of all waste/recycling tipping must be retained and produced in a legible form to any authorised officer of the Council who asks to see them.	Receipts of all waste/recycling tipping are retained by Christie Civil and provided to Environmental Earth Sciences as part of this audit. Good housekeeping practices were noted during Environmental Earth Sciences site inspections.	----	Compliant	
C32	74	Any hazardous materials, including asbestos, must be identified before demolition work commences and be removed in a safe manner.	Buildings demolished prior to commencement of Stage 1A construction works. Environmental Earth Sciences and GreenPlus Property conducted a site wide visual inspection of the ground surface following demolition of buildings: Environmental Earth Sciences (2020) – <i>Clearance certificate for Stages 2, 3 and 4 at Ivanhoe Estate, Macquarie Park, NSW</i> (ref: 120064_CC_V1; 23 June 2020).	----	Compliant	
C33	75	Removal of asbestos and other hazardous building materials must be undertaken by a suitably licensed contractor and an asbestos clearance certificate must be provided before waste classification, disposal or site validation is undertaken.	----	No management required	Compliant	
C34	76	All vehicles involved in the excavation and / or demolition process and departing from the property with materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	----	----	Compliant	



**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
C35	77	Prior to the commencement of work and during construction works, suitable measures are to be implemented to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the site. It is an offence to allow, permit or cause materials to pollute or be placed in a position from which they may pollute waters.	Metal rumble grid installed at site exit to facilitate removal of sediment and other materials prior to vehicles leaving site.	---	Compliant	
C36	78	The Applicant must ensure: a) stockpiles of material do not exceed 4 metres in height; b) stockpiles of material are constructed and maintained to prevent cross contamination; and c) suitable erosion and sediment controls are in place for stockpiles.	a) Environmental Earth Sciences field staff attended site regularly from January - March 2021 and monthly during May - July 2021 and stockpiles were below 4 m in height. b) Stockpiles of asbestos impacted material were kept separate to avoid cross contamination prior to offsite disposal. c) During performance review audit site inspection, the following was noted: • Site fencing and barriers in place across the site and in good condition. • Sediment basin constructed in eastern portion of the site. • Sediment fencing and silt socks installed and in good condition. Refer to <b>Photographs 4 - 12 in Appendix D.</b>		Compliant	
C37	79	All erosion and sediment control measures are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Erosion and sediment control measures were noted on the day of the audit inspection.  There were signs of uncontrolled sedimentation around one stormwater drain to the south of the site adjacent to Shrimpton Creek, likely exacerbated from recent heavy rain ( <b>Photograph 15 in Appendix D</b> ).  Storm water drains were well protected with gravel sausages, and along Road No.1 from Herring Road leading onto the site there was no evidence of heavy vehicles tracking soil from the internal roads ( <b>Photographs 27 - 30 in Appendix D</b> ).  A buoyant sediment and debris trap was installed downstream in Shrimpton Creek which was noted to be full of debris at the time of the inspection ( <b>Photograph 17 in Appendix D</b> ).	Erosion and Sediment Controls need to be cleaned and maintained more frequently especially before and after heavy rainfall events. Status and corrective actions need to be recorded in the daily and weekly Safety and Environmental Inspection checklists.	Not triggered.	The sedimentation around stormwater pits and drains will be cleaned out regularly and monitored. Areas around drains have been lined with Geofabric to provide ground cover and minimise erosion or chance for contaminated water to enter the stormwater system.

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
C38	80	<p>Adequate measures shall be taken to prevent dust from affecting the amenity of the neighbourhood during construction. In particular, the following measures should be adopted:</p> <p>a) physical barriers shall be erected at right angles to the prevailing wind direction or shall be placed around or over dust sources to prevent wind or activity from generating dust emissions;</p> <p>b) earthworks and scheduling activities shall be managed to coincide with the next stage of development to minimise the amount of time the site is left cut or exposed;</p> <p>c) all materials shall be stored or stockpiled at suitable locations and stockpiles shall be maintained at manageable sizes which allow them to be covered, if necessary, to control emissions of dust and/or VOCs/odour;</p> <p>d) the surface should be dampened slightly to prevent dust from becoming airborne but should not be wet to the extent that run-off occurs;</p> <p>e) all vehicles carrying spoil or rubble to or from the site shall at all times be covered to prevent the escape of dust or other material;</p> <p>f) all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays;</p> <p>g) gates shall be closed between vehicle movements and shall be fitted with shade cloth; and</p> <p>h) cleaning of footpaths and roadways shall be carried out regularly.</p>	<p>a) Physical barriers are in place to prevent wind or activity from generating dust emissions.</p> <p>b) Earthworks were in progress during the time of the audit inspection. Christie advised that earthworks were being scheduled so excavated material could be taken offsite expediently.</p> <p>c) minimal amount of construction material was noted being stored on site.</p> <p>d) The grounds were wet due to recent rainfall events.</p> <p>e) Christie advised that all vehicles carrying spoil offsite were covered.</p> <p>f) Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site.</p> <p>g) Gate is fitted with shade cloth.</p> <p>h) Roadways regularly cleaned. Any tracking of soil from the internal to external roads was not noted during audit inspection.</p>		Compliant	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
<b>C49</b>	81	During construction, the following measures should be incorporated with direction from a suitably qualified Chartered Civil Engineer (registered on the NER of Engineers Australia) or equivalent: (a) construction equipment, materials, stockpile, access roads and work platforms should not be sited within floodways where the distribution of flood flows will be significantly altered and increase flood impacts on adjoining properties; (b) hazardous material should be sited so that the risk of such material entering a watercourse during a flood event is minimised; (c) appropriate activities and methodologies should be put in place that addresses awareness, preparedness, response and recovery from a flood event in regard to such things as work health and safety, waterway impacts, site impacts and site re-establishment should a flood event occur during construction; and (d) temporary measures shall be provided and regularly maintained during demolition, excavation and construction to prevent sediment and polluted waters discharging from the site.	(a) Environmental Earth Sciences noted generally good housekeeping practices during the site audit inspection. (b) Diesel and petrol are stored in fuel jerry cans away from site works. (c) Sediment basin constructed in eastern portion of the site. (d) Sediment basin constructed in eastern portion of the site. Sediment fencing and silt socks.	(a) The area for storage of hazardous chemicals on site should be tidied up and all containers should be clearly labelled and kept in lockable and ventilated storage. Empty containers need to be disposed of appropriately.	Not triggered.	Noted. The area will be tidied up and ensure all materials are labelled. The area is already well ventilated, and substances are stored in a lockable storage container (bunded)
<b>C52</b>	82	The Applicant shall store all chemicals, fuels and oils used on-site in appropriately bunded areas in accordance with the requirements of all relevant Australian Standards, EPL requirements and/or EPA's Storing and Handling Liquids: Environmental Protection – Participants Handbook.	Christie stores diesel and petrol onsite. Diesel and petrol are stored in fuel jerry cans in bunded fuel cages on site away from earthworks.	The area for storage of hazardous chemicals on site should be tidied up and all containers should be clearly labelled and kept in lockable and ventilated storage. Empty containers need to be disposed of appropriately.	Compliant	Noted. The area will be tidied up and ensure all materials are labelled. The area is already well ventilated, and substances are stored in a lockable storage container (bunded)

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
D5	83	The recommendations of the Remedial Action Plan (Condition B56) are to be implemented, including provision of a Section A Site Audit Statement, issued by an EPA accredited site auditor, to the Certifier at the completion of remediation and validation works, certifying suitability of that part of the site requiring remediation as identified in the Remedial Action Plan for the approved use.	NSW EPA accredited Site Auditor (James Davis of Enviroview) issued a Site Audit Report (Enviroview, 2021a) and Site Audit Statement (Enviroview, 2021b) declaring that 'the soil remediation and validation works have been appropriately undertaken and that it is considered that the soils at the site are suitable for the proposed land use': <ul style="list-style-type: none"> <li>• Enviroview Pty Ltd (2021a) – <i>Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113</i>; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021a).</li> <li>• Enviroview Pty Ltd (2021b) – <i>NSW EPA Site Auditor Scheme, Site Audit Statement, Ivanhoe Estate, Macquarie Park, NSW 2113</i>; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021b).</li> </ul>	----	Compliant	
D6	84	On completion of remediation work and prior to any occupation, the relevant requirements of clauses 17 and 18 of SEPP 55 – Remediation of Land, being notification to Council, shall be complied with. Groundwater is not to be abstracted from the site for beneficial use.	The following report documented the remediation works and subsequent validation assessment in accordance with the Remedial Action Plan: <ul style="list-style-type: none"> <li>• Environmental Earth Sciences (2021p) – <i>Validation Report for Ivanhoe Estate (Location BH8), Corner Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120077_VAL_BH8_V1; 12 March 2021).</li> </ul> It is Environmental Earth Sciences understanding that groundwater was not abstracted from the site for beneficial use.	----	Compliant	
D19	85	Prior to the occupation or use of each building: a) the Applicant must engage a suitably qualified person to prepare a post-construction dilapidation report. This report must ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure and roads. b) the report is to be submitted to the Certifier. In ascertaining whether adverse structural damage has occurred to adjoining buildings, infrastructure and roads, the Certifier must: c) compare the post-construction dilapidation report with the pre-construction dilapidation report required by these conditions; d) have written confirmation from the relevant authority that there is no adverse structural damage to their infrastructure and roads; and e) a copy of this report is to be forwarded to the Certifier, the Planning Secretary and each of the affected property owners.	----	GreenPlus Property Services is engaged by Mainland Civil to complete the post-construction dilapidation report.	Not triggered as the report is yet to be completed.	

**Table A: Independent Audit Table**

SSD 8903 MOD 4 Condition of Consent		Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
D52	86	A Section A1 Site Audit Statement – or a Section A2 Site Audit Statement accompanied by an Environmental Management Plan (prepared by a NSW EPA-accredited Site Auditor) – certifying that the site is suitable for the proposed use, must be submitted to the Planning Secretary and the Certifier prior to use of the relevant buildings and infrastructure included in this consent.	NSW EPA accredited Site Auditor (James Davis of Enviroview) issued a Site Audit Report (Enviroview, 2021a) and Site Audit Statement (Enviroview, 2021b) declaring that ‘the soil remediation and validation works have been appropriately undertaken and that it is considered that the soils at the site are suitable for the proposed land use’: <ul style="list-style-type: none"> <li>• Enviroview Pty Ltd (2021a) – <i>Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113</i>; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021a).</li> <li>• Enviroview Pty Ltd (2021b) – <i>NSW EPA Site Auditor Scheme, Site Audit Statement, Ivanhoe Estate, Macquarie Park, NSW 2113</i>; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021b).</li> </ul>	----	Compliant	
		<b>Notes:</b>				
		Complaint				
		Non-compliant				
		Not triggered				

**Table B: Previous audit comments/ recommendations – Status or Outcome**



Condition	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponents Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
<b>Proponent response to Environmental Earth Sciences (2020) Preliminary findings – independent environmental audit at Stage 1 Ivanhoe Estate, Macquarie Park, NSW (ref: 122077_EMS Audit_V2, 17 December (2020))</b>					
<b>B42. Construction Noise and Vibration Management Plan (CNVMP)</b>	Prior to the commencement of any works, a CNVMP prepared by a suitably qualified person shall be submitted to the Certifier. The CNVMP must be prepared in consultation with, and address the relevant be prepared in accordance with the EPA's <i>Interim Construction Noise Guideline</i> .		Environmental Earth Sciences (2020) Auditor Recommendation: <i>Please identify the suitably qualified person, experience and credentials to demonstrate compliance to Condition B42.</i>	Osterman Consult was engaged by Mainland Civil to conduct noise and vibration monitoring. Refer to <b>Appendix C</b> of <i>Version 1</i> of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for noise and vibration monitoring reports.	<b>Complete / Compliant.</b>
<b>B42. CNVMP</b>	Ensure all potentially impacted stakeholders are informed by letterbox drops prior to the commencement of construction of the nature of works to be carried out, the expected noise levels and duration, as well as contact details for a construction community liaison officer.		Auditor recommendation: <i>Mainland Civil to provide example of letter issued.</i>	Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents. Refer to <i>Appendix C</i> of <i>Version 1</i> of the previous six-monthly compliance audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the notification letter: <ul style="list-style-type: none"> <li>Mainland Civil Pty Ltd (2020c), <i>Notice of Construction Commencement, Ivanhoe Estate – (dated 16 December 2020).</i></li> </ul>	<b>Complete / Compliant.</b>

**Table B: Previous audit comments/ recommendations – Status or Outcome**

Condition	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponents Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
<b>B45. Construction Soil and Water Management Plan (CSWMP)</b>	A Sediment Basin is required for every catchment discharging from the site as part of any CSWMP. Sediment basin(s) are to be designed as follows: for all events up to the peak flow rate from the 1 in 10-year ARI event for the site for the 5-day rainfall event.		Auditor recommendation: Further information required as cannot find reference to this. Please provide evidence that these events were factored for the sediment basin design.	On review of <b>Figure 5.7.3a Basin Detail Plan</b> in the IMP, Environmental Earth Sciences is satisfied that the sediment basin is designed for all events up to the peak flow rate from the 1 in 10-year ARI event for the site for the 5-day rainfall event.	<b>Complete / Compliant.</b>
<b>Proponent response to Environmental Earth Sciences (2021) – Six monthly performance audit, Stage 1 Ivanhoe Estate, Macquarie Park, NSW (ref: 120077_EMS_V2, 1 October 2021) (Environmental Earth Sciences, 2021).</b>					
<b>C36 Stockpile Management</b>	The Applicant must ensure: a) stockpiles of material do not exceed 4 metres in height; b) stockpiles of material are constructed and maintained to prevent cross contamination; and c) suitable erosion and sediment controls are in place for stockpiles.	Frasers Property received a complaint on 14 March 2021 from a local resident concerned about spoil in a stockpile collapsing towards her residence due to heavy rainfall. Mainland Civil investigated the complaint on 15 March and recommended flattening out of the stockpiles to improve the unsightly view for the neighbouring residents.	Limit the height of stockpiles and ensure stockpiles are compacted and secure at the end of each day.	Bulk and detailed earthworks by Mainland Civil have since been completed site.	<b>Complete / Compliant.</b>
<b>B40 (c) Construction Environmental Management Plan (CEMP)</b>	Include a Dust Management Plan, incorporating the mitigation measures outlined in the Air Quality Assessment, prepared by WSP, dated October 2018.	Section 5.8.4 refers to multiple monitors, but only one dust gauge installed each month. What is the reasoning for not having multiple dust gauges installed onsite?	Due to the size of the site, multiple dust gauges should be installed for monthly monitoring.	Bulk and detailed earthworks by Mainland Civil have been completed at the site.	<b>Complete / Compliant.</b>



**Table B: Previous audit comments/ recommendations – Status or Outcome**



Condition	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponents Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
<b>B42 (f) Construction Noise and Vibration Management Plan (CNVMP)</b>	Be consistent with and incorporate all relevant recommendations and noise and vibration mitigation measures outlined in the Stage 1 DA Acoustic Assessment, prepared by Acoustic Logic, dated 15 October 2019.	Section 6: Nearest Receivers - details the nearest properties likely to be affected from the report (Acoustic Logic, 2020), Master Plan for Ivanhoe Estate, Macquarie Park – Additional Noise Monitoring 30/1/2020.	Regular noise monitoring should be conducted focusing on more than one noise sensitive location.	Not required to be undertaken during this audit reporting period.	<b>Complete / Compliant.</b>
<b>B45. Construction Soil and Water Management Plan (CSWMP)</b>		Calibration records for water quality meter should be available.	Water quality meter to be calibrated and records provided to Environmental Earth Sciences.	<p>Records not provided at the time of issue of this audit report. Deadline provided, with advice to provide any such calibration records for meters used.</p> <p>Item to be closed out upon provision of information. Recommended to be submitted in the next audit cycle.</p> <p>Water quality monitoring with a water quality meter was not undertaken in the audit period between 12 April 2022 and 5 September 2022.</p> <p>Environmental Earth Sciences has been informed by Frasers that Christie Civil Pty Ltd are now responsible for managing the construction water on site.</p> <p>Regular water quality monitoring of Shrimpton Creek and the sedimentation basin using a calibrated water quality meter has been recommended in the September 2022 audit.</p>	<p><b>Progressing.</b></p> <p>Compliant pending records of water quality parameters by calibrated water quality meter are provided to Environmental Earth Sciences.</p> <p>Christie Civil will implement water quality monitoring on a monthly basis with a calibrated water quality meter. This will be in effect immediately, as per response received 13/10/2022.</p>

**Table B: Previous audit comments/ recommendations – Status or Outcome**



Condition	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponents Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
B42 Construction Noise and Vibration Management Plan (CNVMP)		Noise meter is overdue for calibration.	Noise meter to be calibrated.	Not required to be implemented during this audit reporting period.	<b>Complete / Compliant.</b>
Proponent response to Environmental Earth Sciences (2022) – Six monthly performance audit, Stage 1 Ivanhoe Estate, Macquarie Park, NSW (ref: 122038_Six-monthly Audit_V2, 16 August 2022) (Environmental Earth Sciences, 2022).					
B45. Construction Soil and Water Management Plan (CSWMP)  5.7 SWMP: Table  5.7.2 Soil and Water Sources and Mitigation Methods  5.7.3 Temporary sediment basin			Calibration records for water quality meter should be available. This supporting information has been requested and will be furnished by Parkview.	Water quality monitoring with a water quality meter was not undertaken in the audit period between 12 April 2022 and 5 September 2022.  Environmental Earth Sciences has been informed by Frasers that Christie Civil Pty Ltd are now responsible for managing water monitoring on site.  Regular water quality monitoring of Shrimpton Creek and the sedimentation basin using a calibrated water quality meter has been recommended in the September 2022 audit.	<b>Progressing.</b>  Compliant pending records of water quality parameters by calibrated water quality meter are provided to Environmental Earth Sciences.  Christie Civil will implement water quality monitoring on a monthly basis with a calibrated water quality meter. This will be in effect immediately, as per response received 13/10/2022.

**Table B: Previous audit comments/ recommendations – Status or Outcome**



Condition	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponents Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
<p><b>B40, B42, B43, B44, B45</b>  <b>Construction Environmental Management Plan (CEMP)</b></p>			<p>Routinely update the Parkview Construction Management Plan (CMP) and all relevant sub environmental management plans.</p> <p>The CMP needs to clearly outline the present site activities / stages / scope of works and be updated in accordance with the development consent SSD 8903. The integrated management plan (Mainland Civil 2020) refers to Stage 1 Bulk excavations and roadworks.</p>	<p>After request, Parkview provided their updated CMP on 13 October 2022, outlining present site activities / stages / scope of works in Section 8.3.</p> <p>Parkview are still to update relevant sub environmental management plans in accordance with development consent SSD 8903 condition B40, B42, including:</p> <ul style="list-style-type: none"> <li>• Dust Management Plan</li> <li>• Construction Noise and Vibration Management Plan</li> <li>• Air Quality and Odour Management Plan</li> <li>• Construction Waste Management Plan</li> <li>• Construction Soil and Water Management Plan</li> </ul>	<p><b>Progressing.</b></p> <p>Compliant pending Parkview updates relevant sub environmental management plans.</p>

**Table C: Proponent response to draft Independent Audit Report**

Item	Description of item	Proponent Response	Timetable for implementation	Auditor comment
<b>Proponent - Christie Civil Pty Ltd</b>				
<b>1</b>	The buoyant sediment and debris trap installed downstream in Shrimpton Creek should be routinely checked and emptied when near to full. The status of the sediment trap will need to be evaluated and documented in the daily and weekly Safety and Environmental Inspection checklists and corrective action noted where required.	Christie Civil will include this the checking of the silt boom downstream of Shrimptons Creek into the weekly site inspection.	Immediate	Records of the daily / weekly 'Safety and Environmental Inspection' checklists with comments and requested actions undertaken will be reviewed as part of the next and subsequent 6-monthly audits. The buoyant sediment and debris trap installed downstream in Shrimpton Creek will be inspected as part of the next 6-monthly audit.
<b>2</b>	Uncontrolled sedimentation was noted around certain stormwater drains. Sediment controls around stormwater drains need to be cleaned and maintained more frequently especially before and after heavy rainfall events. Status and corrective actions need to be recorded in the daily and weekly Safety and Environmental Inspection checklists.	The sedimentation around stormwater pits and drains will be cleaned out regularly and monitored. Areas around drains have been lined with Geofabric to provide ground cover and minimise erosion or chance for contaminated water to enter the stormwater system.	Immediate	Records of the daily / weekly 'Safety and Environmental Inspection' checklists with comments and requested actions undertaken will be reviewed as part of the next 6-monthly audit. Stormwater pits & silt fences will be inspected for any sedimentation impacts will be inspected as part of the next and subsequent 6-monthly audits.
<b>3</b>	The quality of surface water in the creek, upstream and downstream of bridge works, and in the sediment retention basins should be monitored monthly using a calibrated water quality meter, noting water quality parameters (e.g., pH, electrical conductivity and turbidity / suspended solids) and any visual / olfactory indications of contamination or eutrophication. Calibration records for water quality meter should be available.	Christie Civil will implement the monitoring of water quality upstream and downstream each month.	Immediate	Records of monthly water quality monitoring of Shrimptons Creek and of surface water from the sedimentation basin will be reviewed in will be reviewed as part of the next and subsequent 6-monthly audits. Calibration records for water quality meter have been requested to be made available for inspection.
<b>4</b>	The area for storage of hazardous chemicals on site should be tidied up and all containers should be clearly labelled and kept in lockable and ventilated storage. Empty containers need to be disposed of appropriately.	Noted. The area will be tidied up and ensure all materials are labelled. The area is already well ventilated, and substances are stored in a lockable storage container (bundled)	14/10/2022	The storage area for hazardous chemicals will be inspected again as part of the next 6-monthly audit to ensure appropriate labelling and storage is being undertaken.
<b>5</b>	Update to the Construction Waste Management Plan (Appendix 10 of the CEMP) to include nominated authorised receiving facilities of all waste and recycling generated.	A table of nominated facilities used for waste will be added to Waste Management Plan as advised.	14/10/2022	<b>Complete / Compliant.</b> Christie provided their updated Construction Waste Management Plan on 24 October 2022, outlining nominated authorised receiving facilities of all waste and recycling generated in Appendix D.

**Table C: Proponent response to draft Independent Audit Report**

Item	Description of item	Proponent Response	Timetable for implementation	Auditor comment
6	There is no active dust monitoring onsite. Dust monitors should be set up adjacent to sensitive receptors.	Dust generated is minimal as there is a watercart onsite full time. Should complaints of dust from sensitive receivers be advised, dust monitoring may be implemented.	N/A	It is noted that dust generation was minimal due to prevailing wet weather over the period of this audit, however the current audit requirement remains. According to SSD 8903 MOD 4 Condition of Consent B43, the 'Air Quality and Odour Management Plan' (AQOMP) must include proactive and reactive management strategies, key performance indicators (KPIs), monitoring measures, record keeping, response mechanisms, contingency and compliance reporting measures.
7	The AQOMP does not include key performance indicators, monitoring measures, response mechanisms and contingencies. It is recommended that the AQOMP should be updated to include these.	We do not believe these are required.	N/A	As above the current audit requirement remains. According to SSD 8903 MOD 4 Condition of Consent B43 the AQOMP must include proactive and reactive management strategies, KPIs, monitoring measures, record keeping, response mechanisms, contingency and compliance reporting measures.
8	The project has established noise management levels (Acoustic Logic 2019) however no active noise monitoring was conducted during the Audit period. Any exceedances of the "highly noise affected level" cannot be quantified. Noise meters should be set up adjacent to sensitive receptors.	If noise complaints are received, noise monitors can be considered adjacent to sensitive receivers.	N/A	Noted, however current audit finding remains. According to SSD 8903 MOD 4 Condition of Consent B42h, the 'Construction Noise and Vibration Management Plan' (CNVMP) must include a suitable and proactive construction noise and vibration monitoring program which aims to ensure the operational construction noise and vibration criteria in this consent are tracked and not exceeded.  The project has established noise management levels (Acoustic Logic, 2019) however no active noise monitoring was conducted during the Audit period. Any exceedances of the "highly noise affected level" cannot be quantified.
9	Ensure that corrective actions such as dredging of the sediment basin and the clearing and maintenance of sediment controls around stormwater drains are recorded in the daily and weekly site checklists.	Noted and these will be captured	Immediate	Records of the daily / weekly 'Safety and Environmental Inspection' checklists with comments and actions undertaken will be inspected as part of the next 6-monthly audit.
10	Routinely update the CEMP and all relevant sub environmental management plans, and/or specifically update CEMP and all relevant sub environmental management plans when changes to construction methods occur.	Noted and to be updated regularly as advised within CEMP.	Immediate	Updated CEMP will be reviewed as part of the next 6-monthly audit.

**Table C: Proponent response to draft Independent Audit Report**

Item	Description of item	Proponent Response	Timetable for implementation	Auditor comment
<b>Proponent - Parkview Construction Pty Ltd</b>				
11	Routinely update the Parkview CMP and all relevant sub environmental management plans. The CMP needs to clearly outline the present site activities / stages / scope of works and be updated in accordance with the development consent SSD 8903.	After request, Parkview provided their updated CMP on 13 October 2022, outlining present site activities / stages / scope of works in Section 8.3.	---	<p>Part of audit requirement remains applicable.</p> <p>The updates to present site activities, stages and scope of works detailed in Section 8.3 have been noted and are considered compliant.</p> <p>Parkview are still yet to update relevant environmental management sub-plans in accordance with development consent SSD 8903 condition B40, B42, including:</p> <ul style="list-style-type: none"> <li>• Dust Management Plan</li> <li>• Construction Noise and Vibration Management Plan</li> <li>• Air Quality and Odour Management Plan</li> <li>• Construction Waste Management Plan</li> <li>• Construction Soil and Water Management Plan</li> </ul>

## APPENDIX C: INDEPENDENT AUDIT DECLARATION FORM

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**Independent Audit Report Declaration Form**

<b>Project Name</b>	Stage 1 Ivanhoe Estate
<b>Consent Number</b>	SSD 8903 MOD 1
<b>Description of Project</b>	Review of Environmental Management Practices as part of Stage 1 Construction Works, Building A1 area
<b>Project Address</b>	Ivanhoe Estate, Macquarie Park, NSW
<b>Proponent</b>	Frasers Property Australia
<b>Title of Audit</b>	Independent Six-monthly Environmental Audit, Stage 1 Ivanhoe Estate, Building A1, Macquarie Park, NSW (Version 2)
<b>Date</b>	16 August 2022

I declare that I have undertaken the Independent Audit and prepared the contents of the attached Independent Audit Report and to the best of my knowledge the audit has been undertaken in accordance with relevant condition(s) of consent and the Independent Audit Compliance Requirements (Department 2018):

- i. the findings of the audit are reported truthfully, accurately and completely;
- ii. I have exercised due diligence and professional judgement in conducting the audit;
- iii. I have acted professionally, objectively and in an unbiased manner;
- iv. I am not related to any proponent, owner or operator of the project neither as an employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the audit, or by relationship as spouse, partner, sibling, parent, or child;
- v. I do not have any pecuniary interest in the audited project, including where there is a reasonable likelihood or expectation of financial gain or loss to me or spouse, partner, sibling, parent, or child;
- vi. neither I nor my employer have provided consultancy services for the audited project that were subject to this audit except as otherwise declared to the Department prior to the audit; and
- vii. I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from payment for auditing services) from any proponent, owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.

**Notes:**

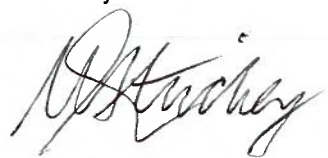
- a. Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or





misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and

- b. The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both).

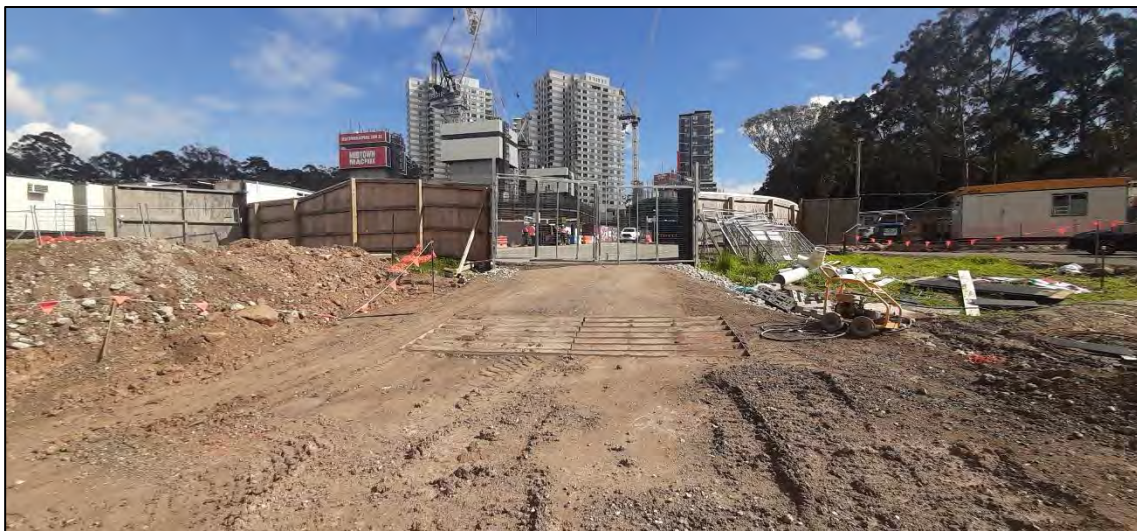
<b>Independent Auditor Declaration</b>	
<b>Name of Auditor</b>	Mark Stuckey
<b>Signature</b>	
<b>Qualification</b>	Environmental Management Systems (EMS) Lead Auditor; and Site Auditor – accredited under the Contaminated Land Management (CLM) Act 1997 in New South Wales
<b>Company</b>	Environmental Earth Sciences NSW
<b>Company Address</b>	PO Box 380, North Sydney NSW 2059

## APPENDIX D: SITE INSPECTION PHOTOGRAPHS

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1. Entrance to Christie Civil site office – facing east from access road.



2. Heavy vehicle entrance to Christie Civil site – facing northwest towards access road. Shaker grid in foreground and Christie site office (right).



3. Earthworks in progress - facing west from eastern corner of site.





4. Sedimentation basin in central portion of site – drained and desilted.



5. Earthworks in progress – facing southeast towards Shrimpton Creek.



6. Excavation and installation of stormwater drainage





7. Excavated swale for temporary diversion of upslope stormwater along the southwestern boundary of the site – facing northwest.



8. The initial and furthest upslope sedimentation retention basin in the southwestern portion of the site - facing south with trees lining the southwestern boundary beyond.



9. Silt fence present with the sedimentation retention ponds beyond (right).





**10.** The second and main sedimentation retention basin. Water appeared clear with no signs of algae, visual and / or olfactory signs of contamination.



**11.** Overflow water from sedimentation retention basin being discharged into grassy area. Vegetation appears healthy with no signs of die-back or signs of contamination.



**12.** Mulch stockpiles in southern portion of site – facing northeast.





**13.** Class A hoarding installed around the site - facing east.



**14.** Construction over Shrimptons Creek crossing, piling and reinforced concrete slab – facing southeast.



**15.** Signs of uncontrolled sedimentation around stormwater drain in the south south the site adjacent to Shrimpton Creek.





16. Shrimpton Creek – downstream.



17. Shrimpton Creek – downstream. Buoyant sediment trap full of debris.



18. Shrimpton Creek – upstream.





19. Temporary laydown area for inert bridge construction material south of Shrimptons Creek – facing southwest towards Lyonpark Road.



20. Covered stockpile in area southeast of Shrimpton Creek.



21. Area for storage of equipment and chemicals.



22. Unlocked storage for flammable liquid.





23. Unlocked cage storage for chemicals. Empty containers outside of cage.



24. Containers inside and outside unlocked cage.



25. Spill response kit.



26. Secure storage for flammable liquid.





**27.** Access Road (Road No. 1) from Stage 1B work site to Herring Road – facing northwest towards Herring Road.



**28.** Silt bags and fabric filter installed around stormwater drain along Road 1.



**29.** Sedimentation basin – facing south south south west.



30. Secondary sedimentation basin with overrun into third basin and eventually grass.

## APPENDIX E: DAILY AND WEEKLY SITE CHECKLISTS



# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate Stage 1B Civil Works			
<b>For Week Commencing (Date):</b> 02/05/2022			
<b>Person completed by:</b>	Dani Belani	<b>Date:</b>	6/05/22

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	N/A	N/A	N/A	N/A	N/A	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	✓	✓	✓	✓	✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per EMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** (issue NCRs as required):

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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):	<i>DMS</i>	<b>DATE:</b>	6/05/22
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# DAILY SITE CHECKLIST



<b>Project:</b>	Ivanhoe		
<b>For Week Commencing (Date):</b>	9/05/22		
<b>Completed by:</b>	Dani	<b>Date:</b>	13/05/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	Dig <input checked="" type="checkbox"/>	Dig <input checked="" type="checkbox"/>	Dig <input checked="" type="checkbox"/>	Dig <input checked="" type="checkbox"/>	Dig <input checked="" type="checkbox"/>	<input type="checkbox"/>
Service search complete, all workers aware of service locations	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	<input type="checkbox"/>
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Review and update ITPs as required	Site Engineer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>





# DAILY SITE CHECKLIST

Drawing revisions checked and Register updated	Site Engineer	Completed	WEEKLY <input checked="" type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman		WEEKLY <input checked="" type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE		WEEKLY <input checked="" type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE		WEEKLY <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE		WEEKLY <input checked="" type="checkbox"/>

**COMMENTS:**

**ACTION ARISING** (issue NCRs as required):

**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman):

**DATE:**

13/05/22

# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate Stage 1B Civil Works			
<b>For Week Commencing (Date):</b> 16/05/2022			
<b>Person completed by:</b>	Dani Belani	<b>Date:</b>	20/05/22

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	N/A	N/A	N/A	N/A	N/A	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	N/A	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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**VERIFIED CLOSED-OUT**  
**(Site Engineer / Foreman):**

**DATE:**

20/05/22

# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate Stage 1B Civil Works			
<b>For Week Commencing (Date):</b> 23/05/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	23/05/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	✓	N/A	N/A	✓	N/A	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per EMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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**VERIFIED CLOSED-OUT**  
**(Site Engineer / Foreman):**

*J. Heath*

**DATE:**

27/05/2022



# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate Stage 1B Civil Works			
<b>For Week Commencing (Date):</b> 30/05/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	30/05/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	✓	N/A	N/A	N/A	N/A	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible <i>NEED TO CHECK</i>	<i>INSPECTION DUE JUNE 2022</i> Foreman/SE <i>x 2 MORE REQUIRED</i>	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	<i>FROM REVIEW BY</i> Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** (issue NCRs as required):

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**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman):

*goketh*

**DATE:**

*03/06/2022*



# DAILY SITE CHECKLIST

**Project:** Ivanhoe Estate Stage 1B Civil Works

**For Week Commencing (Date):** 30/05/2022

**Person completed by:** Dani Belani

**Date:**

3/06/22

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	Dig	Dig	Dig	Dig	Dig	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	1ST <del>1ST</del>	N/A	N/A	1BT ✓	N/A ✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** (*issue NCRs as required*):

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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman): Dani B 	<b>DATE:</b> 03/06/22
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# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate Stage 1B Civil Works			
<b>For Week Commencing (Date):</b> 06/06/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	06/06/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	✓	N/A	N/A	N/A	✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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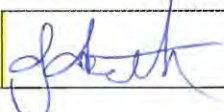
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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):		<b>DATE:</b>	10/06/2022
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# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 13/06/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	14/06/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	No	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	W	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	Q	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	R	✓	✓	✓	N/A	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	K	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	(PH)	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE		✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE		✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer		✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE		✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE		✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

First Aid Incident 002

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**ACTION ARISING (issue NCRs as required):**

NCR-002 From First Aid / Incident 02

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**VERIFIED CLOSED-OUT (Site Engineer / Foreman):**  **DATE:** 17/06/2022

# DAILY SITE CHECKLIST



<b>Project:</b> Ivanhoe Estate 1B Civil Works	
<b>For Week Commencing (Date):</b> 27/06/2022	
<b>Person completed by:</b> James Seaton	<b>Date:</b> 27/06/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):		<b>DATE:</b>	01/07/2022
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# DAILY SITE CHECKLIST



<b>Project:</b> Ivanhoe Estate 1B Civil Works	
<b>For Week Commencing (Date):</b> 27/06/2022	
<b>Person completed by:</b> James Seaton	<b>Date:</b> 27/06/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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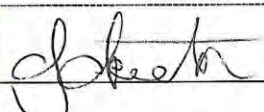
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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):		<b>DATE:</b>	01/07/2022
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# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 27/06/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	27/06/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	✓	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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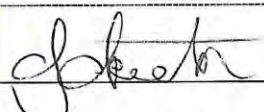
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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):		<b>DATE:</b>	01/07/2022
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# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 04/07/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	04/07/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	No		✓			✓
Service search complete, all workers aware of service locations	Foreman/SE	W					✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	O					✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	R	N/A	N/A	N/A	N/A	✓
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	K					✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	R					✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	A					✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	I					✓
Review and update ITPs as required	Site Engineer	N					✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE						✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓					✓



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

HEAVY RAINFALL DURING THE WEEK, FLOODING THE SITE. ONCE WATER IN THE SEDIMENT BASIN LOWERED REVEALING HEAVY MUD / DEBRIS AROUND THE DRAINAGE PIPES. ADVISED TO DREDGE THE SEDIMENT BASIN TO REMOVE MUD & DEBRIS TO ACHIEVE A BETTER WATERFLOW IN THE EVENT OF MORE RAIN.

**ACTION ARISING** (issue NCRs as required):

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**VERIFIED CLOSED-OUT** (Site Engineer / Foreman): *g. j. [signature]* **DATE:** 08/07/2022



# DAILY SITE CHECKLIST

**Project:** Ivanhoe Estate 1B Civil Works

**For Week Commencing (Date):** 11/07/2022

**Person completed by:** James Seaton

**Date:** 11/07/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	✓	N/A
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** (issue NCRs as required):

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**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman):

*[Handwritten Signature]*

**DATE:**

15/07/2022



# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 18/07/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	18/07/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	N/A	
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

PRETTY MUCH RAINED ALL WEEK. TURNED THE SITE TO MUD.

**ACTION ARISING** (issue NCRs as required):

**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman): *cfabeta* **DATE:** 22/07/2022



# DAILY SITE CHECKLIST



<b>Project:</b> Ivanhoe Estate 1B Civil Works	
<b>For Week Commencing (Date):</b> 25/07/2022	
<b>Person completed by:</b> James Seaton	<b>Date:</b> 25/07/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	✓	✓	N/A	✓	✓
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman):

**DATE:**

30/7/22



# DAILY SITE CHECKLIST



<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 01/08/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	01/08/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	N/A	✓	✓
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

TOOLBOX FOR UNDERGROUND SERVICES. 05/06/2022

**ACTION ARISING** (issue NCRs as required):

**VERIFIED CLOSED-OUT**  
 (Site Engineer / Foreman):

*Jabot*

**DATE:**

06/08/2022

# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 08/08/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	08/08/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	✓ cc	N/A	N/A	N/A	N/A	N/A
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** (*issue NCRs as required*):

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**VERIFIED CLOSED-OUT** (Site Engineer / Foreman):  **DATE:** 13/08/2022



# DAILY SITE CHECKLIST

<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 15/08/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	15/08/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	✓	N/A	N/A
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓

# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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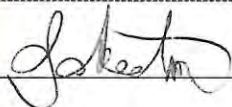
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**VERIFIED CLOSED-OUT**  
**(Site Engineer / Foreman):**  **DATE:** 20/08/2022



# DAILY SITE CHECKLIST



<b>Project:</b> Ivanhoe Estate 1B Civil Works			
<b>For Week Commencing (Date):</b> 22/08/2022			
<b>Person completed by:</b>	James Seaton	<b>Date:</b>	22/08/2022

- Site Inspection to be conducted by Foreman
- All high-risk non-complying items to be isolated and rectified immediately
- Lower-risk items to be rectified within 48 hours
- NCRs to be issued for high-risk non-compliances

ACTIVITY	RESPONSIBLE	MON	TUE	WED	THU	FRI	SAT
Permit to Dig, Hot Works, Confined Spaces or other required Permits completed and in place	Foreman/SE	✓	✓	✓	✓	✓	✓
Service search complete, all workers aware of service locations	Foreman/SE	✓	✓	✓	✓	✓	✓
Safety fences in place around excavations and bar caps on protruding reinforcement and other sharp objects	Foreman/SE	✓	✓	✓	✓	✓	✓
Plant Onboarding check conducted and Operator competency verified for new plant on site today	Foreman/SE	N/A	N/A	N/A	✓	N/A	N/A
Christie Civil and all Subcontractors have conducted machine/plant Daily Pre-start checks	Foreman/SE	✓	✓	✓	✓	✓	✓
Visually check all environmental controls around site are in good condition and as per CEMP or other plans	Foreman/SE	✓	✓	✓	✓	✓	✓
All fire extinguishers are tagged, in date, charged and easily accessible	Foreman/SE	✓	✓	✓	✓	✓	✓
Review controls nominated in SWMS's for effectiveness and update if required	Foreman/SE	✓	✓	✓	✓	✓	✓
Review and update ITPs as required	Site Engineer	✓	✓	✓	✓	✓	✓
All workers onsite have been inducted into site and the relevant SWMS	Foreman/SE	✓	✓	✓	✓	✓	✓
Prestart Meetings have been occurring prior to works commencing each morning	Foreman/SE	✓	✓	✓	✓	✓	✓



# DAILY SITE CHECKLIST



Drawing revisions checked and Register updated	Site Engineer	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Container is clean and tidy, tools stored correctly and no hazardous chemicals stored inside	Foreman	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
PPE being worn, PPE Register is available and is being completed	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Safety + Environmental Inspection Checklist is being completed and all non-conforming aspects resolved	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>
Weekly Toolbox Talk conducted - consultation taking place with all staff	Foreman/SE	<b>WEEKLY</b> Completed <input checked="" type="checkbox"/> Not Completed <input type="checkbox"/>

**COMMENTS:**

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**ACTION ARISING** *(issue NCRs as required):*

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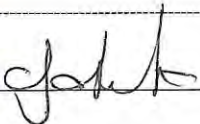
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<b>VERIFIED CLOSED-OUT</b> (Site Engineer / Foreman):		<b>DATE:</b>	27/08/2022
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# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	10am 6/05/22
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Christie Civil staff conducting:			
<b>Name:</b>	Dani Belani	<b>Position:</b>	Site engineer
<b>Signed:</b>			<i>[Signature]</i>
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>			

Subcontractors participating:			
<b>Name:</b>	Mark	<b>Company:</b>	Bromberg
<b>Signed:</b>			<i>[Signature]</i>
<b>Name:</b>	Derek	<b>Company:</b>	Christies People
<b>Signed:</b>			<i>[Signature]</i>
<b>Name:</b>		<b>Company:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Company:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Company:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Company:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Company:</b>	
<b>Signed:</b>			

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	N/A	
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>	
Are hivi vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✓
<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓
	<i>Booked</i>



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	✓	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	✓	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	Shane Gardner 4/05 Lochlan Burdett 4/05 Nathan Papa 4/05 Dereck Stevenson 6/05
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
<b>SAFETY ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	N/A	
<b>ENVIRONMENTAL ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	N/A	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	Dani Belani	Position:	Site engineer
Signed:		Date:	6/05/22



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	13/05/2022 13.40 Hrs
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Christie Civil staff conducting:			
<b>Name:</b>	JAMES SEATON	<b>Position:</b>	SAFETY OFFICER
<b>Signed:</b>			
<b>Name:</b>	Dani Belam	<b>Position:</b>	site engineer
<b>Signed:</b>			
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>			
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>			

Subcontractors participating:			
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	N/A	
For excavations >1.5m deep - is there shoring or benching?	N/A	
Falls <1.5m - do they pose a risk and have these risks been controlled?	N/A	
Falls >1.5m are fences supplied?	N/A	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	N/A	
Are fences maintained?	N/A	
Are all penetrations covered with secured covers?	✓	ROAD PLATES OVER ELECTRICAL TRENCHING LYON PARK RD
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	FLECK
Operators have verification of competency on them?	✓	ANDREW LYNCHAMON
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	N/A	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>		
Are hivi vests being worn by all workers on site?	✓	SIGHTED
Are hard hats being worn by all workers on site?	✓	" "
Are safety boots being worn by all workers on site?	✓	" "
Is ear protection being worn when needed?	✓	AS REQUIRED
Is eye protection being worn when required?	✓	AS REQUIRED
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓	AVAILABLE
Are records kept of PPE issue to workers?	N/A	
<b>4) Electrical Safety:</b>		
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	x	NO ELECTRICAL EQUIPMENT ON-SITE
Are all leads up off the ground and hanging off insulated hangers or supports?	N/A	BATTERIES ONLY
Are leads no longer than 30m and not joined together?	N/A	
Do any multiple outlets include an earth leakage device?	N/A	



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	BAILEY CHRISTOFFEL, SAXON LUKE, JASMINE WILLIAMS  11  TRAFFIC CONTROL/EXCAVATION  ANDREW LYNCHAMON
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	N/A	
Is there danger from falling objects?	No	
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	SILT FENCING INSTALLED 134 HINDSITE         NO FEEDBACK TO STATE
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	MECHANICAL AIDS/CHRISTIE CIVIL SHINCS  SIGHTED NO ISSUES TO DATE
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	REAR OF CONTAINER/FLAME CABINET
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	N/A	
Is there a fire extinguisher with each oxy set?	N/A	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	N/A	PEDESTRIAN CONTROL ONLY. TC ENGAGED  NO ROAD CLOSURE
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	✓	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	N/A	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	PIT WORKS
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	James Seaton	Position:	SAFETY OFFICER
Signed:		Date:	13/05/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	10am 20/05/22
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Christie Civil staff conducting:				
Name:	Dani Belani	Position:	Site Engineer	Signed:
Name:		Position:		Signed:
Name:		Position:		Signed:
Name:		Position:		Signed:

Subcontractors participating:				
Name:	Mackin	Company:	Barrington	Signed:
Name:	Derech	Company:	Christies People.	Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	Bunting fence /fencing
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	




## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



<b>3) Personal Protective Equipment:</b>	
Are hivi vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✓
<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓

Booked

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	N/A	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	✓	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	✓	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	<i>Jackson Smith 16/05          Max Labinsky 16/05          Richard Muller 16/05          Clive Dochery 18/05          Philip Hyden 18/05          Mathew Green 18/05</i>
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
	✓	
<b>SAFETY ISSUES</b>		<b>Tick OK</b>
<b>CORRECTIVE ACTION/ COMMENTS</b>		
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	✓	
<b>ENVIRONMENTAL ISSUES</b>		
<b>Tick OK</b>		
<b>CORRECTIVE ACTION/ COMMENTS</b>		
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	<i>N/A</i> ✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	<i>N/A</i> ✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	<i>N/A</i>	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	Dani Belani	Position:	site engineer
Signed:	20/05/22	Date:	20/05/22

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs [SOPF4.04.1 - NCR PAR](#) to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	03/06/2022 12:30
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Christie Civil staff conducting:			
<b>Name:</b>	James Seaton	<b>Position:</b>	WHS officer
<b>Signed:</b>		<b>Position:</b>	Site Engineer
<b>Name:</b>	Dani Belani	<b>Position:</b>	
<b>Signed:</b>		<b>Position:</b>	
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>		<b>Position:</b>	

Subcontractors participating:			
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	SPI sewer trenching  Bunting  Road Plates Lyon Park Rd
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>	
Are hivis vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✓
<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓
	<i>Monday/Tuesday Banned</i>



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	N/A	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	✓	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	N/A	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	<div style="border: 1px solid black; padding: 5px; display: inline-block;">           Iain Ackerley            Terah Stevenson            Matthew Green.         </div> Andrew Lynchburn Iain Ackerley
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	N/A	
Is there danger from falling objects?	N/A	No
ENVIRONMENTAL ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	N/A ✓	
Is noise controlled as per CEMP?	N/A ✓	Noise Regulation 2012
Is vibration controlled as per CEMP?	N/A ✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	<i>Dani Belani</i>	Position:	<i>Site Eng. need</i>
Signed:	<i>[Signature]</i>	Date:	<i>03/06/22</i>



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	10.6.22 12:30pm
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Christie Civil staff conducting:			
<b>Name:</b>	James Seaton	<b>Position:</b>	SAFETY OFFICER
<b>Signed:</b>		<b>Position:</b>	Site Engineer
<b>Name:</b>	Dani Belani	<b>Position:</b>	Truck driver
<b>Signed:</b>		<b>Position:</b>	
<b>Name:</b>	Mark Sewak	<b>Position:</b>	
<b>Signed:</b>		<b>Position:</b>	
<b>Name:</b>		<b>Position:</b>	
<b>Signed:</b>		<b>Position:</b>	

Subcontractors participating:			
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	JC Ex MGI 38T, 15T exc
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



<b>3) Personal Protective Equipment:</b>	
Are hivi vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✓

<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓

6/06/22



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	10/06/22
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	✓	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	N/A	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	✓	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>10) Ladder Safety/ Access:</b>					
Are ladders inclined at a 4 in 1 slope?		N/A			
Does the ladder extend more than 1m above the egress?		N/A			
Is ladder secured at the top?		N/A			
Is the ladder industrial rated and in good condition?		N/A			
<b>11) Inductions + Competency:</b>					
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>		✓			
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>		✓			
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>		✓			
Do plant and machinery operators have valid VOCs on them?		✓			
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>		✓			
<table style="width: 100%; border: none;"> <tr> <td style="width: 45%;"><b>SAFETY ISSUES</b></td> <td style="width: 10%; text-align: center;">Tick OK</td> <td style="width: 45%;"><b>CORRECTIVE ACTION/ COMMENTS</b></td> </tr> </table>			<b>SAFETY ISSUES</b>	Tick OK	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>SAFETY ISSUES</b>	Tick OK	<b>CORRECTIVE ACTION/ COMMENTS</b>			
<b>12) Strike Injuries:</b>					
Is all exposed reo bar protected with bar caps?		Yes			
Is there danger from falling objects?		No			
<table style="width: 100%; border: none;"> <tr> <td style="width: 45%;"><b>ENVIRONMENTAL ISSUES</b></td> <td style="width: 10%; text-align: center;">Tick OK</td> <td style="width: 45%;"><b>CORRECTIVE ACTION/ COMMENTS</b></td> </tr> </table>			<b>ENVIRONMENTAL ISSUES</b>	Tick OK	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>ENVIRONMENTAL ISSUES</b>	Tick OK	<b>CORRECTIVE ACTION/ COMMENTS</b>			
<b>13) Environmental:</b>					
Are silt control devices installed around stormwater pits?		✓			
Are silt controls installed correctly?		✓			
Are silt controls maintained and effective?		✓			
Is dust controlled as per CEMP?		✓			
Is noise controlled as per CEMP?		✓			
Is vibration controlled as per CEMP?		✓			
Does the site egress have environmental controls, are they effective?		✓			
Is Community Feedback managed and recorded?		✓			

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	Dani Belani	Position:	Site Engineer
Signed:	<i>[Signature]</i>	Date:	10/06/22



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	11:50 17/6/22
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:	Dani Belani	Position:	Site Engineer
Name:	Vincent Chiem	Position:	Site Engineer
Name:		Position:	

Subcontractors participating:			
Name:	Eric Hitchcock	Company:	MGI Piling
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	<input type="checkbox"/>	
For excavations >1.5m deep - is there shoring or benching?	<input checked="" type="checkbox"/>	Shoring, ladder for entry
Falls <1.5m - do they pose a risk and have these risks been controlled?	<input checked="" type="checkbox"/>	No risk, slopes height <1.5m
Falls >1.5m are fences supplied?	<input checked="" type="checkbox"/>	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	<input checked="" type="checkbox"/>	
Are fences maintained?	<input checked="" type="checkbox"/>	
Are all penetrations covered with secured covers?	<input checked="" type="checkbox"/>	Road plates on Youpark rd (electrical works)
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	<input checked="" type="checkbox"/>	Concrete pump, Drilling Rig, All pavements solutions
Operators have verification of competency on them?	<input checked="" type="checkbox"/>	Vijay Sawak LE, Andrew, Steve, Erica LE
Plant certification/ Logbooks being filled out?	<input checked="" type="checkbox"/>	
Flashing lights and reversing buzzer operating on mobile plant?	<input checked="" type="checkbox"/>	
Chains and slings checked and records kept?	<input checked="" type="checkbox"/>	Due <del>at</del> end of month (Jul 22)



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>	
Are hives vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✗
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✗

Steve needs to wear ear plugs

<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	

Tested last week

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	<i>Loads are fine</i>
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	<i>Welding of cages No oxy on site</i>
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	N/A	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	<i>N/A N/A</i>
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	<i>not</i>	
Is the TCP followed?	<i>not</i>	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	


## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

	Tick OK	
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	N/A
Does the ladder extend more than 1m above the egress?	✓	N/A
Is ladder secured at the top?	✓	N/A
Is the ladder industrial rated and in good condition?	✓	N/A
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	Vjay, Eric, Andrew
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	Vjay, Eric, Andrew
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	Bulk excavation, drilling
Do plant and machinery operators have valid VOCs on them?	✓	Vjay, Eric, Andrew
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
<b>SAFETY ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	No	
<b>ENVIRONMENTAL ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	Richard (rooks washout concrete tools onto our site
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	Stock piles higher than fence (uncovered)
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	Silt fencing around creek and sandbags around pits Currently, no feedback from project.
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			NCR-002

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	17/06/2022

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs [SOPF4.04.1 - NCR PAR](#) to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	01/07/2022 10:45am
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Christie Civil staff conducting:			
<b>Name:</b>	JAMES SEATON	<b>Position:</b>	SAFETY OFFICER
<b>Name:</b>	Dani Belani	<b>Position:</b>	Site engineer
<b>Name:</b>		<b>Position:</b>	
<b>Name:</b>		<b>Position:</b>	

Subcontractors participating:			
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>
<b>Name:</b>		<b>Company:</b>	<b>Signed:</b>

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	BENCHING
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	CARRICKSHOCK ROAD SAW
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	INSPECTION TODAY 01/07/2022

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



<b>3) Personal Protective Equipment:</b>	
Are hives vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✗

FERNFERN MATT!!!

<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓

INSPECTION 07/06/2022



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	MECH AIDS SIGHTED NO CONCERNS
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	BACK OF CONTAINER / FLAME CABINETS / BUNDLS LOCATED IN FIRST AID ROOM.  CONTAINER LK2
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	✓	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	PAVI BELARI / IVANTHOE PL ONLY
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	ON THE DAY OF INSPECTION RAINING. VERY WET UNDER FOOT & SLIPPERY
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

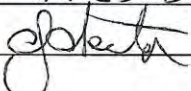
## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	CONNOR STRAIN/MICHAEL BLAKE/MATTHEW GREEN
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	BULK EXCAVATION/STORMWATER
Do plant and machinery operators have valid VOCs on them?	✓	COLIN AKERLEY/MAL JORDAN/CONNOR STRAIN
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	ANDREW LYNCH/HION
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	NO	
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	
Are silt controls installed correctly?	✓	EXTRA CONTROLS INSTALL
Are silt controls maintained and effective?	✓	SEDIMENT BASIN DREDGED
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	01/07/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	
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Christie Civil staff conducting:			
Name:	JAMUS SEARON	Position:	SAFETY OFFICER
Name:	Liam Bell	Position:	Site Engineer
Name:	Dani Belani	Position:	intern engineer
Name:	MATT MORE	Position:	SITE ENGINEER

Subcontractors participating:			
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	SMOULING & BENCHING
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	FENCING / BURTINE
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	LIGN BARRI RD
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	N/A	NO NEW PLANT
Operators have verification of competency on them?	✓	A CHERNEY / FERRY / DAN MARRI / CC
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	TESTED JUNE 2022.

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

### 3) Personal Protective Equipment:

Are hives vests being worn by all workers on site?	✓	SICHUOED KEAN FORM???  AS REQUIRED 1. AVAILABLE/WINTER?
Are hard hats being worn by all workers on site?	✓	
Are safety boots being worn by all workers on site?	✓	
Is ear protection being worn when needed?	✓	
Is eye protection being worn when required?	✓	
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓	
Are records kept of PPE issue to workers?	✗	

### 4) Electrical Safety:

Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	MESH AIDS  SIGHTED NO ISSUES
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	REAR OF CONTAINER  CONTAINER x2 FIRST AID ROOM
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	✓	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	N/A	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	RAIN MON - THUR
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	<input checked="" type="checkbox"/>	
Does the ladder extend more than 1m above the egress?	<input checked="" type="checkbox"/>	
Is ladder secured at the top?	<input checked="" type="checkbox"/>	
Is the ladder industrial rated and in good condition?	<input checked="" type="checkbox"/>	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	<input checked="" type="checkbox"/>	KYLE DONOVAN, RICO PEREZ, LARRY WHITE MATT PAUL, LEWIS PASIANOS, MATT GREEN BOB B. EARTHWORKS & CO BRIDGE STUCK 2/24/2023 ANDREW LYN CHAPMAN, RICO PEREZ. STEVO ACEVSKI
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	<input type="checkbox"/>	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	<input type="checkbox"/>	
Do plant and machinery operators have valid VOCs on them?	<input type="checkbox"/>	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	<input type="checkbox"/>	
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	<input checked="" type="checkbox"/>	
Is there danger from falling objects?	<input type="checkbox"/> No	
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	<input checked="" type="checkbox"/>	NEED TO PREPARE THE SEDIMENT BASIN NO DUST RAIN ALL WEEK
Are silt controls installed correctly?	<input checked="" type="checkbox"/>	
Are silt controls maintained and effective?	<input type="checkbox"/> X	
Is dust controlled as per CEMP?	<input checked="" type="checkbox"/>	
Is noise controlled as per CEMP?	<input checked="" type="checkbox"/>	
Is vibration controlled as per CEMP?	<input checked="" type="checkbox"/>	
Does the site egress have environmental controls, are they effective?	<input checked="" type="checkbox"/>	
Is Community Feedback managed and recorded?	<input checked="" type="checkbox"/>	
ENVIRONMENTAL ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	08/07/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs [SOPF4.04.1 - NCR PAR](#) to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe	<b>Date + Time Conducted:</b>	15/7/22 + 3:45PM
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Christie Civil staff conducting:				
Name:	Vincent Chiem	Position:	Site Engineer	Signed: <i>Vincent</i>
Name:	James Searon	Position:	SAFETY OFFICER	Signed: <i>James</i>
Name:	Dani Belani	Position:	Intern Engineer	Signed: <i>Dani</i>
Name:	Louis Ileski	Position:	Site Foreman	Signed: <i>Louis</i>

Subcontractors participating:				
Name:	Mark Sewak	Company:	Danmark	Signed: <i>Mark</i>
Name:	Sean Murray	Company:	CONAMARK	Signed: <i>Sean</i>
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:
Name:		Company:		Signed:

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	<i>Benching and shoring for trenches &gt; 1.5m</i>
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	<i>Bunting used</i>
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	<i>Plates bolted wrong trench</i>
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
Other:		
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	<i>Instyle Concrete Design</i>
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	<i>M&amp;I, Conomarra -&gt; etc. 4/1/22 ref</i>
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	<i>CC checked July</i>
Other:		



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>	
Are hivi vests being worn by all workers on site?	✓
Are hard hats being worn by all workers on site?	✓
Are safety boots being worn by all workers on site?	✓
Is ear protection being worn when needed?	✓
Is eye protection being worn when required?	✓
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓
Are records kept of PPE issue to workers?	✗
<i>Other:</i>	
<i>Stavo</i>	
<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓
Are all leads up off the ground and hanging off insulated hangers or supports?	✓
Are leads no longer than 30m and not joined together?	✓
Do any multiple outlets include an earth leakage device?	✓
<i>Other:</i>	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	<i>Lifting gear used where manual handling is too heavy</i>
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	✓	
Other		
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	✓	
Are there flashback arrestors on each oxy set?	✓	
Other		
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
Other		
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
Other		
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	N/A	
Other		
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	Sean Murray, Chad Noto, Lewis Pasianot Stormwater, drilling Shane Carroll, Mal Jordan, Vjay Sewak
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
<b>SAFETY ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	✓	
<b>ENVIRONMENTAL ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	Sediment basin needs to be serviced and maintained
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✗	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is de-watering conducted as per procedure?	✓	
Are elements outside site boundaries inspected e.g., check traffic management signs, no contamination occurred at de-watering site outside site boundary, sediment controls outside site boundary	✓	
Is Community Feedback managed and recorded?	✗ N/A	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	15/07/2022

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs **SOPF4.04.1 - NCR PAR** to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	22/07/2022 12.20 PM
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:		Position:	
Name:		Position:	
Name:		Position:	

*No SUBCONTRACTOR PARTICIPATION DUE TO WET CONDITIONS.*

Subcontractors participating:			
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	BENCHING
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	LYON PARK RD + IVANHOE PLATE ROAD PLATES
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	N/A	NO NEW PLANT.
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CC CHECKED JULY 2022

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

3) Personal Protective Equipment:	
Are hivi vests being worn by all workers on site?	<input checked="" type="checkbox"/>
Are hard hats being worn by all workers on site?	<input checked="" type="checkbox"/>
Are safety boots being worn by all workers on site?	<input checked="" type="checkbox"/>
Is ear protection being worn when needed?	<input checked="" type="checkbox"/>
Is eye protection being worn when required?	<input checked="" type="checkbox"/>
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	<input checked="" type="checkbox"/> AVAILABLE
Are records kept of PPE issue to workers?	<input checked="" type="checkbox"/>

4) Electrical Safety:	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	<input checked="" type="checkbox"/>
Are all leads up off the ground and hanging off insulated hangers or supports?	<input checked="" type="checkbox"/>
Are leads no longer than 30m and not joined together?	<input checked="" type="checkbox"/>
Do any multiple outlets include an earth leakage device?	<input checked="" type="checkbox"/>



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	AS REQUIRED
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	SIGHTED
Are correct manual lifting procedures used?	✓	"
Are manual handling concerns addressed properly?	N/A	NO ISSUES TO DATE.
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	HAZMAT AREA BEHIND CONTAINER/FLAME
Is an SDS in SDS folder for every hazardous material?	✓	CABINETS & BUNDS
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	AVAILABLE FIRST AID ROOM & 2 CONTAINERS
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	WHEN REQUIRED
Is there a fire extinguisher with each oxy set?	N/A	NO OXY ON-SITE
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	TC ESTABLISHED FOR PEDESTRIAN MOVEMENT
Is the Traffic Controller authorised?	✓	ONLY LYON PARK RD.
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	NO	HAS BEEN RAINING ALL WEEK & SITE IS VERY MUDDY & SLIPPERY.
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	MAL JORDAN, LINO PAROUS, MATT PAUL - ANTHONY VASSILIS
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	h
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	STORMWATER & ELECTRICAL WORKS
Do plant and machinery operators have valid VOCs on them?	✓	MAL JORDAN, JOHN COX, ANDREW LYNCHAMON
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	i
<b>SAFETY ISSUES</b>		
<b>Tick OK</b>		
<b>CORRECTIVE ACTION/ COMMENTS</b>		
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	No	
<b>ENVIRONMENTAL ISSUES</b>		
<b>Tick OK</b>		
<b>CORRECTIVE ACTION/ COMMENTS</b>		
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	
Are silt controls installed correctly?	No	
Are silt controls maintained and effective?	No	SEDIMENT BASIN NEEDS TO BE CLEANED & MAINTAINED
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	No	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	22/07/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	28/07/2022
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:	DAVID ILEKSI	Position:	SITE FOREMAN
Name:	TRANS MURPHY	Position:	PROJECT MANAGER
Name:		Position:	

Subcontractors participating:			
Name:	Matthew Green	Company:	APS
Name:	Comor Stron	Company:	Concession
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Excavations cut at correct slope for material?	N/A	
Excavations >1.5m deep - is there shoring or benching?	✓	BENCHING
Excavations <1.5m - do they pose a risk and have these risks been controlled?	✓	
Excavations >1.5m are fences supplied?	✓	
Excavations >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	ROAD PLATES LYON PARK RD + IVANHOE PL.
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CC (CHECKED) JULY 22

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



<b>3) Personal Protective Equipment:</b>	
Are hives vests being worn by all workers on site?	<input checked="" type="checkbox"/>
Are hard hats being worn by all workers on site?	<input checked="" type="checkbox"/>
Are safety boots being worn by all workers on site?	<input checked="" type="checkbox"/>
Is ear protection being worn when needed?	<input checked="" type="checkbox"/>
Is eye protection being worn when required?	<input checked="" type="checkbox"/>
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	<input checked="" type="checkbox"/>
Are records kept of PPE issue to workers?	<input checked="" type="checkbox"/>

*COLIN FROM REVERLEY?*

<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	<input checked="" type="checkbox"/>
Are all leads up off the ground and hanging off insulated hangers or supports?	<input checked="" type="checkbox"/>
Are leads no longer than 30m and not joined together?	<input checked="" type="checkbox"/>
Do any multiple outlets include an earth leakage device?	<input checked="" type="checkbox"/>

*NOT REQUIRED FOR MONTHLY. 3 MONTHLY.*

*LEAD STANDS PROVIDED BY CC.*



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	MECH AIDS SIGHTED NO ISSUES.
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	FLAME CABINETS / BUNDS BEHIND CONTAINER
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	FIRST AID ROOM & 2 CONTAINERS.
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	N/A	NO OXY ON-SITE
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	NO ROADWORKS / PEDESTRIAN MANAGEMENT ONLY
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	✗	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	PHILLIP WALTON, CONNOR STRAIN, LEWIS PASLANDT
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	" " "
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	SEWER/STORMWATER
Do plant and machinery operators have valid VOCs on them?	✓	ANDREW LYNCHAMON, UJAY SEWAK, COLIN ACKERLEY
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	" "
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	No	
<b>ENVIRONMENTAL ISSUES</b>		
ENVIRONMENTAL ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	No	SEEDIMENT BASINS NEEDS DREDGING NEW SILT CONTROL AROUND EXISTING STORMWATER REQUIRED ↑ NEW LINE INSTALLED
Are silt controls installed correctly?	No	
Are silt controls maintained and effective?	No	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	28/07/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs [SOPF4.04.1 - NCR PAR](#) to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	05/08/2022 3pm
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:	Liam Bell	Position:	Site Engineer
Name:		Position:	
Name:		Position:	

Subcontractors participating:					
Name:	Mark Sewak	Company:	Danmark	Signed:	M.S
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	
Name:		Company:		Signed:	

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	N/A	
For excavations >1.5m deep - is there shoring or benching?	✓	BENCHED
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	LYON PARK RD. / IVANHOE PLACE.
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	FRANNA CRANE
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CHECKED JULY 2022 NEXT INSPECTION OCT 2022



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>		
Are hives vests being worn by all workers on site?	✓	SIGNED COLIN ACKERLEY / MATT FERNFORTH?
Are hard hats being worn by all workers on site?	✓	
Are safety boots being worn by all workers on site?	✓	
Is ear protection being worn when needed?	✓	
Is eye protection being worn when required?	✓	
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	✓	
Are records kept of PPE issue to workers?	No	
		AS REQUIRED "
<b>4) Electrical Safety:</b>		
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	✓	DUE SEPT.
Are all leads up off the ground and hanging off insulated hangers or supports?	✓	
Are leads no longer than 30m and not joined together?	✓	
Do any multiple outlets include an earth leakage device?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	MECH AIDS  SIGHTED NO ISSUES
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	STORED BUND / FLAME CABINETS    AS REQUIRED  ENO OXY ON-SITE?
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	
Is there a fire extinguisher with each oxy set?	N/A	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	TC ENGAGED FOR LYON PARK ROAD 05/08/22       TC TO KEEP.
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A ✓	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	✓	
Are records (pre-start and close checklists) completed and stored	✓	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	GOOD HOUSEKEEPING
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	N/A	
Does the ladder extend more than 1m above the egress?	N/A	
Is ladder secured at the top?	N/A	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	ERROY BLAINE, MATT PAUL, MARZ SEWAK.
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	TRAFFIC CONTROL / FRANNA CRANE
Do plant and machinery operators have valid VOCs on them?	✓	TOM BLET - FRANNA CRANE
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>		VJAM SEWAK - EXCAVATOR MAL JORDAN - EXCAVATOR DEREK STEVENSON - ROLLER
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	NO	
<b>ENVIRONMENTAL ISSUES</b>		
ENVIRONMENTAL ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	SEDIMENT BASIN NEEDS DREDGING.
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <i>(list NCR numbers)</i>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	05/08/2022

# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	12/08/2022 11:40 am
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:		Position:	
Name:		Position:	
Name:		Position:	

Subcontractors participating:			
Name:	Sean Murray	Company:	CONTRACTOR
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	CC EXCAVATOR 38T
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CHECKED JULY 2022.

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>	
Are hives vests being worn by all workers on site?	<input checked="" type="checkbox"/>
Are hard hats being worn by all workers on site?	<input checked="" type="checkbox"/>
Are safety boots being worn by all workers on site?	<input checked="" type="checkbox"/>
Is ear protection being worn when needed?	<input checked="" type="checkbox"/>
Is eye protection being worn when required?	<input checked="" type="checkbox"/>
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	<input checked="" type="checkbox"/>
Are records kept of PPE issue to workers?	<input checked="" type="checkbox"/>

SIGHTED  
 m  
 n  
 AS REQUIRED

<b>4) Electrical Safety:</b>	
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	<input checked="" type="checkbox"/>
Are all leads up off the ground and hanging off insulated hangers or supports?	<input checked="" type="checkbox"/>
Are leads no longer than 30m and not joined together?	<input checked="" type="checkbox"/>
Do any multiple outlets include an earth leakage device?	<input checked="" type="checkbox"/>

NEED TO CHECK SEPT 2022



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	SIGHTED NO ISSUES.
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	AS REQUIRED
Is there a fire extinguisher with each oxy set?	N/A	NO OXY ON-SITE
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	N/A	NO TRAFFIC CONTROL
Is the Traffic Controller authorised?	N/A	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	N/A	
For roadworks, is a TCP issued?	✓	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workface?	✓	
Are bins provided and not overflowing?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

	Tick OK	
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	GPT Work Area.
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	MICHAEL BLANCE, LIAM BELL, TRAVIS McLEOD ADRIAN AZUENO EXCAVATION + BACKFILL / SEWER INSTALL VIAVI / CONN ACHERLES / MAJ AORRAN ANDREW LYNCH HUN / BEN PEARSE
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?	✓	
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
<b>SAFETY ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	NO	
<b>ENVIRONMENTAL ISSUES</b>		
<b>ENVIRONMENTAL ISSUES</b>	<b>Tick OK</b>	<b>CORRECTIVE ACTION/ COMMENTS</b>
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	SEDIMENT BASIN NEEDS PREDIGING
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	James Seaton	Position:	SAFETY OFFICER
Signed:		Date:	12/08/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	19/08/2022 13:30 hrs
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:	Dani Belani	Position:	Site Engineer
Name:	Liam Bell	Position:	Site Engineer
Name:		Position:	

Subcontractors participating:			
Name:	Matthew Green	Company:	APS
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	
Name:		Company:	

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	NEED TO FENCE AROUND SEWER TRENCH.
For excavations >1.5m deep - is there shoring or benching?	✓	
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	FRANOWA CRANE + BOOM PUMP.
Operators have verification of competency on them?	✓	CHECKED DURING INDUCTION/ON FILE
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CHECKED JULY 2022

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

<b>3) Personal Protective Equipment:</b>		
Are hives vests being worn by all workers on site?	<input checked="" type="checkbox"/>	SITED
Are hard hats being worn by all workers on site?	<input checked="" type="checkbox"/>	FERNFURN?
Are safety boots being worn by all workers on site?	<input checked="" type="checkbox"/>	
Is ear protection being worn when needed?	<input checked="" type="checkbox"/>	AS REQUIRED
Is eye protection being worn when required?	<input checked="" type="checkbox"/>	
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	<input checked="" type="checkbox"/>	AS REQUIRED
Are records kept of PPE issue to workers?	NO	
<b>4) Electrical Safety:</b>		
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	<input checked="" type="checkbox"/>	CHECKED 17/08/2022
Are all leads up off the ground and hanging off insulated hangers or supports?	<input checked="" type="checkbox"/>	
Are leads no longer than 30m and not joined together?	<input checked="" type="checkbox"/>	
Do any multiple outlets include an earth leakage device?	<input checked="" type="checkbox"/>	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	MECH AIDS USED  SIGHTED. NO ISSUES
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	BEHIND CONTAINER
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	AS REQUIRED. NO OXY ON-SITE
Is there a fire extinguisher with each oxy set?	N/A	
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	USED FOR LIFT DRIVEWAY GPT INSTALL
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	✓	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	N/A	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	




## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	ACCESS FOR GPT INSTALL
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	KEVIN MCCOY / THOMAS BALRADO / RYAN HOWE DEREK STEVENSON
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	STORMWATER / EXCAVATION & BACKFILL
Do plant and machinery operators have valid VOCs on them?	✓	BEN PEARSE / MAL JORDAN / UJAY SENAR
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>	✓	
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	NO	
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	SEDIMENT BASIN NEEDS PREDCING
Are silt controls installed correctly?	✓	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Signed:		Date:	19/08/2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



- Inspection to be carried out weekly on site
- Subcontractor representatives required to participate to ensure consultation and active involvement in WHSE matters
- High-risk non-conformances to be isolated and closed out on the spot, lower-risk items within 48 hours
- NCRs/PARs SOPF4.04.1 - NCR PAR to be raised for high-risk or repeated issues and followed through to verified close-out. NCRs allow tracking of issues, compilation and communication of company-wide WHSE data

<b>Project:</b>	Ivanhoe Estate Stage 1B Civil Works	<b>Date + Time Conducted:</b>	26/08/2022 2:15pm
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Christie Civil staff conducting:			
Name:	JAMES SEATON	Position:	SAFETY OFFICER
Name:	Louie Ilieski	Position:	Site Foreman
Name:	MITCHELL BUTLER	Position:	Formwork Supervisor
Name:		Position:	

Subcontractors participating:			
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:
Name:		Company:	Signed:

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>1) Excavations, Fencing and Slope Stability:</b>		
Batters cut at correct slope for material?	✓	
For excavations >1.5m deep - is there shoring or benching?	✓	BENCH, BATTER & SHORING USED.
Falls <1.5m - do they pose a risk and have these risks been controlled?	✓	HAND RAILS SHORING
Falls >1.5m are fences supplied?	✓	
Falls >1.5m - do fences provide a physical barrier to prevent persons falling? (e.g. handrail)	✓	
Are fences maintained?	✓	
Are all penetrations covered with secured covers?	✓	IVANHOE + LYON PARK RD.
<b>2) Plant and Machinery:</b>		
Plant Onboarding checks being completed? Check new plant on site this week	✓	WESTERN SYDNEY EASTHOVING EXCAVATOR 13T
Operators have verification of competency on them?	✓	
Plant certification/ Logbooks being filled out?	✓	
Flashing lights and reversing buzzer operating on mobile plant?	✓	
Chains and slings checked and records kept?	✓	CHECK JULY 2022 RECHECK 3 OCT 2022



# SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST



<b>3) Personal Protective Equipment:</b>		
Are hives vests being worn by all workers on site?	<input checked="" type="checkbox"/>	SIGHTED SAME AS ALWAYS / (E-PA) FORM + RECALLS?
Are hard hats being worn by all workers on site?	<input checked="" type="checkbox"/>	
Are safety boots being worn by all workers on site?	<input checked="" type="checkbox"/>	
Is ear protection being worn when needed?	<input checked="" type="checkbox"/>	
Is eye protection being worn when required?	<input checked="" type="checkbox"/>	
Is sun protection being used – long sleeves, long pants, hat flaps, sunscreen?	<input checked="" type="checkbox"/>	
Are records kept of PPE issue to workers?	NO	
<b>4) Electrical Safety:</b>		
Is all electrical equipment tagged for the current month and 3-monthly for items in site shed?	<input checked="" type="checkbox"/>	CHECKED 17/08/2022 RE-CHECK 17/11/2022
Are all leads up off the ground and hanging off insulated hangers or supports?	<input checked="" type="checkbox"/>	
Are leads no longer than 30m and not joined together?	<input checked="" type="checkbox"/>	
Do any multiple outlets include an earth leakage device?	<input checked="" type="checkbox"/>	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>5) Manual Handling:</b>		
Are machines used where possible to handle loads?	✓	MECH AIDS 11 h SIGHTED NO ISSUES.
Are loads considered to be too heavy for one man, handled by machine or team lifting?	✓	
Are correct manual lifting procedures used?	✓	
Are manual handling concerns addressed properly?	N/A	
<b>6) Hazardous Substances:</b>		
Are all fuels stored in a fuel storage facility?	✓	BEHIND CONTAINER
Is an SDS in SDS folder for every hazardous material?	✓	
Are workers inducted into the hazards of working with that material?	✓	
Is appropriate PPE supplied for that material?	✓	
Are spill kits available for use?	✓	
Is a Hot Works Permit required? If Yes, is it issued, signed off and stored as a record?	✓	AS REQUIRED [NOT THIS WEEK]
Is there a fire extinguisher with each oxy set?	N/A	NO OXY ON-SITE
Are there flashback arrestors on each oxy set?	N/A	
<b>7) Traffic Management:</b>		
Is traffic ingress/egress controlled?	✓	USED FOR LIF DRIVEWAY. GPT INSTALL
Is access to site delineated to allow safe passage for both persons and machines?	✓	
Does the Traffic Controller have a stop and slow bat?	✓	
Is the Traffic Controller authorised?	✓	
Does each TC have a distinguishing mark on their person stating that they are a qualified Traffic Controller?	✓	
For roadworks, is a TCP issued?	N/A	
Is the TCP followed?	N/A	
Are records (pre-start and close checklists) completed and stored	N/A	
<b>8) Service Search/ Permit to Dig:</b>		
Has a Permit to Excavate been completed and issued to all plant operators	✓	
Is hand excavation occurring within 1m of services?	✓	
Has a Dial Before U Dig enquiry been conducted on this project?	✓	
<b>9) Housekeeping, Lighting and Ventilation:</b>		
Is the worksite clean and tidy with good housekeeping to prevent slips, trips and falls?	✓	
If used, is formwork de-nailed after use?	✓	
Is adequate lighting provided at the workplace?	✓	
Are bins provided and not overflowing?	✓	

## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>10) Ladder Safety/ Access:</b>		
Are ladders inclined at a 4 in 1 slope?	✓	ACCESS FOR CPT WORK AREA.
Does the ladder extend more than 1m above the egress?	✓	
Is ladder secured at the top?	✓	
Is the ladder industrial rated and in good condition?	✓	
<b>11) Inductions + Competency:</b>		
Have all workers completed the Site-specific Induction? <i>Spot check 3-4 workers on site</i>	✓	TARA HARMAN, YADIV NARON, THOMAS BARRELO " " " STORMWATER/BULL EXCAVATION MAL JORDAN / UTAY SEWAL / BEN PEARSE SEAN MURRAY
Are all personnel inducted into Construction safety (White Card)? <i>Spot check 3-4 workers on site</i>	✓	
Are all personnel inducted into Specific activity safety + environmental? <i>Spot check 1-2 activities</i>	✓	
Do plant and machinery operators have valid VOCs on them?		
Are Tickets/Certifications current/not expired? <i>Spot check 3-4 workers on site</i>		
SAFETY ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>12) Strike Injuries:</b>		
Is all exposed reo bar protected with bar caps?	✓	
Is there danger from falling objects?	No	
<b>ENVIRONMENTAL ISSUES</b>		
ENVIRONMENTAL ISSUES	Tick OK	CORRECTIVE ACTION/ COMMENTS
<b>13) Environmental:</b>		
Are silt control devices installed around stormwater pits?	✓	SEDIMENT BASIN NEEDS PREGGING, NEED TO REPAIR/BEHIND CONTAINER
Are silt controls installed correctly?	X	
Are silt controls maintained and effective?	✓	
Is dust controlled as per CEMP?	✓	
Is noise controlled as per CEMP?	✓	
Is vibration controlled as per CEMP?	✓	
Does the site egress have environmental controls, are they effective?	✓	
Is Community Feedback managed and recorded?	✓	



## SAFETY + ENVIRONMENTAL INSPECTION CHECKLIST

RISK AREA OR PROCEDURE	Closed out on the spot	Closed out within 48 hours	NCR/PAR(S) issued <small>(list NCR numbers)</small>
1) Excavations, Fencing and Slope Stability			
2) Plant and Machinery			
3) Personal Protective Equipment			
4) Electrical Safety			
5) Manual Handling			
6) Hazardous Substances			
7) Traffic Management			
8) Services Search/ Permit to Dig			
9) Housekeeping, Lighting and Ventilation			
10) Ladder Safety			
11) Inductions			
12) Strike Injuries			
13) Environmental			
14) Other			

ACTION VERIFIED CLOSED-OUT:			
Name:	<i>JAMES SEATON</i>	Position:	<i>SAFETY OFFICER</i>
Signed:	<i>[Signature]</i>	Date:	<i>26/08/2022</i>

## APPENDIX F: WASTE MANAGEMENT SUMMARY

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**Table C: Waste Management Register**

Type of Waste	Waste Management*	Location Taken	Date	Transporter**	Quantity (t)
Concrete	Recycled	City of Ryde	4/05/2022	Chris PYM	1.58
Concrete	Recycled	City of Ryde	12/05/2022	Danmark	9.42
Concrete	Recycled	City of Ryde	12/05/2022	Danmark	8.92
Concrete	Recycled	City of Ryde	12/05/2022	Danmark	9.54
Concrete	Recycled	City of Ryde	12/05/2022	Danmark	7.58
Concrete	Recycled	City of Ryde	12/05/2022	Danmark	7.66
Concrete	Recycled	City of Ryde	16/05/2022	Danmark	8.6
Concrete	Recycled	City of Ryde	16/05/2022	Danmark	8.4
Concrete	Recycled	City of Ryde	16/05/2022	Danmark	8.04
Concrete	Recycled	City of Ryde	17/05/2022	Danmark	7.72
Concrete	Recycled	City of Ryde	17/05/2022	Danmark	8.98
Asphalt	Recycled	City of Ryde	17/05/2022	Danmark	10.84
Concrete	Recycled	Wicks Road	3/06/2022	Danmark	9.86
Concrete	Recycled	Wicks Road	6/06/2022	Danmark	7.66
Concrete	Recycled	Wicks Road	6/06/2022	Danmark	7.8
GSW	Disposed	Sydney Recycling Park	6/06/2022	Chris PYM	25.68
GSW	Disposed	Sydney Recycling Park	6/06/2022	Meale Haulage	23.14
GSW	Disposed	Sydney Recycling Park	6/06/2022	Chris PYM	23.66
GSW	Disposed	Sydney Recycling Park	6/06/2022	Meale Haulage	22.8
GSW	Disposed	Sydney Recycling Park	6/06/2022	Chris PYM	22.26
GSW	Disposed	Sydney Recycling Park	6/06/2022	Meale Haulage	24.52
GSW	Disposed	Sydney Recycling Park	7/06/2022	Chris PYM	27.12
GSW	Disposed	Sydney Recycling Park	7/06/2022	Meale Haulage	22.9
GSW	Disposed	Sydney Recycling Park	7/06/2022	SB Tuckwell	26.58
GSW	Disposed	Sydney Recycling Park	7/06/2022	Chris PYM	26.82
GSW	Disposed	Sydney Recycling Park	7/06/2022	Meale Haulage	21.94
GSW	Disposed	Sydney Recycling Park	7/06/2022	SB Tuckwell	26.12
GSW	Disposed	Sydney Recycling Park	7/06/2022	Chris PYM	31.3
GSW	Disposed	Sydney Recycling Park	7/06/2022	Meale Haulage	26.04
GSW	Disposed	Sydney Recycling Park	7/06/2022	SB Tuckwell	26.22
GSW	Disposed	Sydney Recycling Park	8/06/2022	Chris PYM	27.6
GSW	Disposed	Sydney Recycling Park	8/06/2022	Meale Haulage	23.74
GSW	Disposed	Sydney Recycling Park	8/06/2022	SB Tuckwell	24.1
GSW	Disposed	Sydney Recycling Park	8/06/2022	Chris PYM	23.4
GSW	Disposed	Sydney Recycling Park	8/06/2022	Meale Haulage	25
GSW	Disposed	Sydney Recycling Park	8/06/2022	SB Tuckwell	22.54
GSW	Disposed	Sydney Recycling Park	8/06/2022	Chris PYM	28.92
GSW	Disposed	Sydney Recycling Park	8/06/2022	Meale Haulage	29.06
GSW	Disposed	Sydney Recycling Park	8/06/2022	SB Tuckwell	27.04
GSW	Recycled	Bulk Transport Solutions (BTS)	9/06/2022	BTS	31.44
GSW	Recycled	BTS	9/06/2022	BTS	29.74
GSW	Recycled	BTS	9/06/2022	BTS	24.92
GSW	Recycled	BTS	9/06/2022	BTS	30.86
GSW	Recycled	BTS	9/06/2022	BTS	28.82
GSW	Recycled	BTS	9/06/2022	BTS	29.06
GSW	Recycled	BTS	9/06/2022	BTS	30.22
GSW	Recycled	BTS	9/06/2022	BTS	32.04
GSW	Recycled	BTS	9/06/2022	BTS	27.98
GSW	Recycled	BTS	9/06/2022	BTS	27.92
GSW	Recycled	BTS	9/06/2022	BTS	29.8
GSW	Recycled	BTS	9/06/2022	BTS	27.72
Concrete	Recycled	Wicks Road	9/06/2022	Danmark	9.54
Concrete	Recycled	Wicks Road	9/06/2022	CC	1.52
Concrete	Recycled	Wicks Road	9/06/2022	CC	1.42
Concrete	Recycled	Wicks Road	9/06/2022	CC	2.2
GSW	Recycled	BTS	14/06/2022	BTS	32.88
GSW	Recycled	BTS	14/06/2022	BTS	30.84
GSW	Recycled	BTS	14/06/2022	BTS	27.46
GSW	Recycled	BTS	14/06/2022	BTS	32.86
GSW	Recycled	BTS	14/06/2022	BTS	27.64
GSW	Recycled	BTS	14/06/2022	BTS	38.06
GSW	Recycled	BTS	14/06/2022	BTS	30.6
GSW	Recycled	BTS	14/06/2022	BTS	31.9
GSW	Recycled	BTS	14/06/2022	BTS	32.5
GSW	Recycled	BTS	14/06/2022	BTS	29.66
GSW	Recycled	BTS	14/06/2022	BTS	35.14
GSW	Recycled	BTS	14/06/2022	BTS	36.34
GSW	Recycled	BTS	14/06/2022	BTS	31.76
GSW	Recycled	BTS	14/06/2022	BTS	31.18



**Table C: Waste Management Register**

Type of Waste	Waste Management*	Location Taken	Date	Transporter**	Quantity (t)
GSW	Recycled	BTS	14/06/2022	BTS	34.6
GSW	Recycled	BTS	14/06/2022	BTS	30.26
GSW	Recycled	BTS	14/06/2022	BTS	36.92
GSW	Recycled	BTS	14/06/2022	BTS	38.28
GSW	Recycled	BTS	14/06/2022	BTS	31.82
GSW	Recycled	BTS	14/06/2022	BTS	30.72
GSW	Recycled	BTS	14/06/2022	BTS	35.04
GSW	Recycled	BTS	14/06/2022	BTS	30.28
GSW	Recycled	BTS	14/06/2022	BTS	34.66
GSW	Recycled	BTS	14/06/2022	BTS	38.12
Asphalt	Recycled	Wicks Road	14/06/2022	Danmark	9.32
Asphalt	Recycled	Wicks Road	14/06/2022	Danmark	9.54
Asphalt	Recycled	Wicks Road	15/06/2022	Danmark	9.2
Asphalt	Recycled	Wicks Road	15/06/2022	Danmark	11.42
Asphalt	Recycled	Wicks Road	15/06/2022	Danmark	3.74
Concrete	recycled	Wicks Road	16/06/2022	Danmark	8.98
Concrete	recycled	Wicks Road	16/06/2022	Danmark	6.32
Brick	Recycled	Concrete Recyclers	20/06/2022	Danmark	10
Concrete	Recycled	Concrete Recyclers	20/06/2022	Danmark	10
Concrete	Recycled	Concrete Recyclers	20/06/2022	Danmark	10
Brick	Recycled	Concrete Recyclers	20/06/2022	Danmark	10
Asphalt	Recycled	Wicks Road	21/06/2022	CC	1.86
Asphalt	Recycled	Wicks Road	21/06/2022	CC	2.84
Brick	Recycled	Concrete Recyclers	22/06/2022	Danmark	10
Brick	Recycled	Concrete Recyclers	22/06/2022	Danmark	10
Brick	Recycled	Concrete Recyclers	23/06/2022	Danmark	10
Brick	Recycled	Concrete Recyclers	23/06/2022	Danmark	10
Concrete	Recycled	Wicks Road	27/06/2022	CC	1.56
Concrete	Recycled	Wicks Road	27/06/2022	CC	1.86
Concrete	Recycled	Wicks Road	27/06/2022	CC	2.14
Concrete	Recycled	Wicks Road	27/06/2022	CC	0.66
asphalt	Recycled	Wicks Road	27/06/2022	CC	0.86
Concrete	Recycled	Wicks Road	28/06/2022	Danmark	7.24
Concrete	Recycled	Wicks Road	28/06/2022	Danmark	7.36
concrete	Recycled	Wicks Road	28/06/2022	CC	0.46
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	10.24
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	9.64
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	9.22
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	9.4
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	10.12
concrete	Recycled	Wicks Road	28/06/2022	EKR Resources	7.6
Asphalt	Recycled	Wicks Road	28/06/2022	CC	0.54
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	36.3
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	37.46
GSW-R	Recycled	MET Recycling	19/07/2022	SB Tuckwell	26
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	34.14
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	36.72
GSW-R	Recycled	MET Recycling	19/07/2022	SB Tuckwell	29.54
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	33.32
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	38.22
GSW-R	Recycled	MET Recycling	19/07/2022	SB Tuckwell	26.54
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	35.28
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	38.36
GSW-R	Recycled	MET Recycling	19/07/2022	SB Tuckwell	24.96
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	37.16
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	36.76
GSW-R	Recycled	MET Recycling	19/07/2022	SB Tuckwell	25.45
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	34.66
GSW-R	Recycled	MET Recycling	19/07/2022	BTS	36.54
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	35.18
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	38.82
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	36.96
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	36.06
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	34.76
GSW-R	Recycled	MET Recycling	20/07/2022	BTS	36.52
GSW-R	Recycled	MET Recycling	21/07/2022	BTS	35.04
GSW-R	Recycled	MET Recycling	21/07/2022	BTS	29.72
GSW-R	Recycled	MET Recycling	21/07/2022	BTS	37.04







**Table C: Waste Management Register**

Type of Waste	Waste Management*	Location Taken	Date	Transporter**	Quantity (t)
VENM	Recycled	Bakers	31/08/2022	Bakers	38.5
VENM	Recycled	Bakers	31/08/2022	Bakers	36.8
VENM	Recycled	Bakers	31/08/2022	Bakers	38
VENM	Recycled	Bakers	31/08/2022	Bakers	37
VENM	Recycled	Bakers	1/09/2022	Bakers	36.2
VENM	Recycled	Bakers	1/09/2022	Bakers	36.55
VENM	Recycled	Bakers	1/09/2022	Bakers	37
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
GSW-R	Recycled	BTS	2/09/2022	BTS	40
VENM	Recycled	Bakers	2/09/2022	Bakers	40
VENM	Recycled	Bakers	2/09/2022	Bakers	40
VENM	Recycled	Bakers	2/09/2022	Bakers	40
VENM	Recycled	Bakers	6/09/2022	Bakers	40
VENM	Recycled	Bakers	6/09/2022	Bakers	40
VENM	Recycled	Bakers	6/09/2022	Bakers	40

\*Either reused, recycled, stockpiled or disposed.

\*\*Name and waste transport licence if applicable

## APPENDIX G: ASBESTOS WASTE DOCUMENTATION

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## Waste Classification and Virgin Excavated Natural Material Report

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Ùæ^ Áãá: ^•• Á	GŠ [ ] æ ÁÜ [ ãÈÁ æ ~ æá ÁÚæ\ ÁÙY ÁÇFFHÁ		
Š  óá áÁÜÁ	Š  ó€ÁÜÜÁFG HÍ G Á		
Ö^ á áá } Á Áá* á Á ^ç&ææ^ áÁ æ   çÁ æ   çÁ ÇÓPT DA	<p>V@ÁÜ: [ ç&amp;ç ] Á Á@ÁÓ) çá [ } { ^ } óÜ   ^   æá } • ÁÇÓFJJÍ ÁÇÓPT Áæ ÁÁ</p> <p>‡ æ   çÁ æ   çÁ Ç^ &amp; Çæ Áæ ÈÁ   æ^   ÈÁ æ á ÈÁ [ áÁ   Á [ &amp; Áá • DÁ</p> <p>æÁ çæÁæ Á^ ) Á ç&amp;ææ^ áÁ   Á ~ æ   á á Á [ { Áæ æ Á çæÁ^ Á [ óá ] çæ á æ^ á Á</p> <p>áá æ ~ æç   ^ á Á @ { ææ ÈÁ   Á áá   [ &amp; • Á • á ~ Á • Èæ Áæ Á •   óÁ Á</p> <p>á á • d áá ÈÁ [ { ^   áá ÈÁ á á * Á Áæ   æ   ç   çÁ Áæ çá áá • Èá } á Á</p> <p>á DÁ çæÁ [ ^ Á [ óá ] çæ Áá ^ Á ~   çá Á   ^ Á   Á [ á Á   Áá ^ Á ç   Á æ ç ÈÁ</p> <p>æ á Áá &amp; ^ Á ç&amp;ææ^ á Á æ   çÁ æ   çÁ çæÁ çæÁ ^ Á • Á • &amp; Çæ   çá   Áá* á Á</p> <p>^ç&amp;ææ^ á Á æ   çÁ æ   çÁ Á æ Á^ Áá ] [ ç^ á Á   Á@ Áá ^ Áá* Á ~   • çá óá Áá Á</p> <p>ÓÜÇÓæ^ çæÁ [ çÁ çÁ</p>		
Š  &æá } ÈÁ ~ æ çá Áá Ç ç   Á Á æ   çÁ	<p>Ç ÈÜQWÁQ È ç Á æ   çÁ Áæ [ •• Áá ]   [ çá æ   Á €€ [ ÈÁ Ááá^ ] çÁ Áá ç ^ ) Á</p> <p>FÈ [ Á ÁÇÈ [ Áá* ÁÇ æá ~ { DÈÁ [ &amp;æ^ á Á Á@ Á [   ç   } Á [   ç ] Á Á@ Á æ ÈÁ Á Á</p> <p>^ç&amp;ææ^ á Á   á * Á   áá^ Áá d ^ } óá ] • d^ &amp; ç ] Á [   • ÈÁ</p> <p>V [ çá á * Áá ]   [ çá æ   Á €€ ÈÁ</p> <p>Ü^!^ Á ÁÇ [ ^ ] á á ÁÁ   Áá æ Áá æ [ ~ ó   ç ] ÈÁ</p>		
Ö^   [ ^ Á	<p>V@ÁÜ^ æ ç ^ } óÁ Á á   çÁ Á • [ ~   &amp; • ÁÜ [   [ * çáÜ^   ç^ Á ÁÙY ÁÜ á ] ^ Á</p> <p>FÍ €€€€€Á [   [ * çáÜ^   á • ÁÜ @ ^ Á FHEÁ Çááá } Á D F J I ÈÁ ááæ^ á Á çæÁ Á á Á</p> <p>á Áá   Á Á Á } á   çá Á Á ç ^ Á • á   Áá á á d } ^ ÁÜ ÇÈÁ [ ]   á á * Á á á d } ^ ÈÁ</p> <p>~ æç Áá á Á [ { ^ Á çÁ ÈÁ</p>		



<p>ÓÚÓÁÚ` à áÁÚ^* á c!•Á</p>	<p>ÓÁ^æ&amp;@Á-Á@ÁÚY ÁÓÚÓÁ } á^Á&amp; } cæ ð æ^áÁæ áÁ^Á!áÁ-Á } cæ^Á/Á ááæ^áÁ          cæ^Á@Á ááÁæ áÁæ áÁæ { ^ááæ^Á Ááááá } cæ Á@Á ááÁæ æ Á[ cæ^Á          •~ áá&amp;@Á-Á</p> <p>•Á [!á!•Á áá^Á} á!ÁÚæcÁÁ-Á@ÁÓ } cæ ð æ^áÁæ áÁæ æ^Á{ ^ } ÁÓÖST ÁÓBcÁ          FJJÍ LÁ</p> <p>•Á }  cæ^Á/Áæ^Ááá^ÁÁ Á@Á` à áÁ } á!Á^Á&amp;ç } ÁÍ Á-Á@ ÁÖST ÁÓBcÁ</p> <p>•Á æ Áæ }  ç^áÁ[ ] cæ^Á æ æ^Á{ ^ } cæ }  [ ] [ •æÁ } á!Á@ ÁÖST ÁÓBcÁæ^Á          }  cæ^Á } Á^ Áæ^Á áÁ^ cæ áÁ @^ÁÚY ÁÓÚÓÁ }  çæ^Á Á[ cæ^Á } Á          !^ç\^áLÁ</p> <p>•Á •æ^Á áá^Á cæ^Á{ ^ } •Á }  çæ^ÁÁÁ Á@ÁÚY ÁÓÚÓÁ } á!Á^Á&amp;ç } Á HÓÁ-Á@ Á          ÖST ÁÓBcÁæ^Á Áæ^Á Áá } ááæ ç^Á&amp; } cæ ð æ^áÁæ áLÁ</p> <p>•Á @^Á!ááááá^Á } á•Á-Áæ^Á cæ^Á{ ^ } Á^ Á^ á^áÁ Á^ÁæcÁ-Á@Á          ]` à áÁ&amp;ç!áLÁ!Á</p> <p>•Á æç } •Áæ^Á Á^ ÁÚY ÁÓÚÓÁ!Á@Á!^ç } •ÁÚæ^ÁÚ }  ç } ÁÓ } d[!Á          Ó{ { á•á } DÁ } á!Á^Á&amp;ç } ÁÍ Á!ÁÍ Á-Á@ÁÓ } çá } { ^ } cæ^Á æ^Áá[ •Á          Ó@{ æ^Á ÁÓBcÁ FJJÍ LÁ</p> <p>ÓÁ^æ&amp;@Á-Á@ÁÚY ÁÓÚÓÁ } á^ÁÚÓÚÁ` à áÁÚ^* á c!Á/Á ááæ^ÁÁ@Á ááÁ          çæ áÁæ áÁæ áÁæ { ^ááæ^Á Ááááá } cæ Á@Á ááÁæ æ Á[ cæ^Á ~ áá&amp;@Á-Á           á^ } &amp; Áæ }  Áæ }  Á[ cæ^Á ááÁ [ ] ç } Á c á^ Á!Á^Á&amp;ç } Á!^*!æ Á</p> <p>ÓÁ^æ&amp;@Á-Á@ÁÚY ÁÓÚÓÁ } á^ÁæcÁ-ÁÚY Á&amp; } cæ ð æ^áÁæ áÁ[ cæ^ÁÁÁ ÚY Á          ÓÚÓÁ ááæ^ÁÁ@Á ááÁæ áÁæ áÁæ { ^ááæ^Á Ááááá } cæ Á@Á ááÁæ          , æ Á[ cæ^Á Á@Á ááÁ</p> <p>ÓÁ } ^ Á-Á@Á^æ&amp;@Á&amp;ç!á!Á^Á!Á^Á } cæ^Á ÁÚ } ^ } ááÁÖÁ</p>
<p>Pá ç!ááÁÚ^ááÁÚ æ^Á^Á</p>	<p>ÓÁ^Á&amp;ç } Á-Áæ^Á Áæ^Ááá^Á } á^ÁÚ ç!ááÁÚ æ^Á^Á }  { ÁGEEJÁ Á          GEGDÁ æ Á^çá , ^áÉV@Á^çá , Á ááæ^ÁÁ@Áæ^Á áÁ•Á Áá@Á ááÁ } á^*Á@Á          ]!á ááÁ@Á^Á }  Á{ { ^!áááÁ</p>
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<p>ÓÉ^Á^ ááÁ!Á^Á!Á[ áÁ          ]!Á^Á} cæ</p>	<p>ÓÁ^çá , Á-Á@Á^Á , É } çá } { ^ } çé , É   çæ^Á Ú! áá^GY^áæ }  Á ááæ^ÁÁ@Á          @Á ááÁ Á Á ááæ^Á Á ááæ^Á }  ^áÁÁ</p> <p>•Á PÁ[ Á ] , } Á &amp;^Á } &amp;^Á</p> <p>Ø   c@!Áæ•••{ ^ } cæ^Á ÁÚÚÁÚÚÁ!Á^ ááÁ!Á^Á }  Áá^Á } , æ!æ ç^ÁÉ</p>
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**FIELDWORK**

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REFERENCES

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U&ç à^ ÁGEFI ÉÁ^ ÁÚOÁGEFI ÉI JI Á  
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Ô áæÁ  &æá }•Á Áæ ] ä * Á ä Áæ ] ^áÁ	ÿ^•Á	ÿ^•Á Á	Úæ•Á Á
Ô áæÁæ ] ^•Á Áæ ] ä * Á ä Áæ   ^&çáÁ	ÿ^•Á	ÿ^•Á Á	Úæ•Á Á
Ô[ { ] ^çáÁ á  * Áæ&@áÁ	Þ[ óá ] áá ^Á	Á	Úæ•Á Ô[ { { ^} ó^Á•&á ç } Á-Á •[ á•Á } & ~ } ç\^áÁ  ä * Á •æ ] ä * Á ä ^\^} çáÁ Á æ•^•{ ^} ó^    áÁ Ù^ {  { á } &Áæ æ } •ó@ ÁÜÁ á &  } •á^ áÁá~ æ^Á
Ô[ { ] ^çáÁ&çá Á ^• ç á^ Áæ&@áÁ	ÿ^•Á	ÿ^•Á Á	Úæ•Á Á
Laboratory	Target Criterion	Result	Pass / Fail / Comment
Ô[ { ] ^çáÁæ ] ^Á^&á çáçá^ Áæ áÁ&çá Á-Á &• ç á^ Áæ&@áÁ	ÿ^•Á	ÿ^•Á Á	Úæ•Á Á
Ô áæÁæ ] ^•Á^} çá áÁ Áæ ] ä * Á ä Áæ æ æ^•^áÁ	ÿ^•Á	ÿ^•Á Á	Úæ•Á Á Á
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Field Considerations	Target Criterion	Result	Pass / Fail / Comment
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ÜÜÖÄ ä ä Ä Ä Ä Ä @ ^Ä^&c^äÄ & } & } d ä ä } • Ä Ä Ä Ä Ä Ä Ä Ä Ä Ä  ^     ä * Ä	{ [ öä ]  äæ ^Ä	} ÄÄ	Üæ•Ä ÄÄ
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Laboratory Considerations	Target Criterion	Result	Pass / Fail / Comment
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Bias (Accuracy)Ä			
Field Considerations	Target Criterion	Result	Pass / Fail / Comment
V   ä Ä   ä   ä ä ä ^ •  ö Ä • • Ä ä ä ä ä Ä  ^     ä * Ä	{ [ öä ]  äæ ^Ä	} ÄÄ	Üæ•Ä Ö[ { { ^ } öÄ Ä   ä   ä } \ Ä ä Ä } [ öÄ ^ ä Ä   ä Ä     b & c^ ä Ä ä^&c^äÄ } & } d ä ä } • Ä Ä Ö V Ö Y Ä Ä Ä }  ^ • Ä ä ä • ä Ä ^ ^Ä • • Ä ä Ä Ä  ä  ä  ^ Ä ä ä     ä * Ä V @ Ä ä \ Ä - Ä   ä ä  ^ • Ä &   ä ä ä } Ä Ä }  ^ • Ä ä   ä * Ä   ä ä ä ä }     ä ä Ä @ ^  ^ } • ä ^ ^ Ä Ä Ä } ^   ä   ä  ^     ä & Ä ä ä • ö Ö ÄÜ Ö Ä } • ä ^ ^ ä Ä ä ä ~ ä Ä

<p>Via Á] ã^Áæ æ' c'Á^~  c'Á^..Á^c' ^} Á €Á Á æ' áÁÉ €Á ÉÁ</p>	<p>} [ óæ ]   ææ  ^Á</p>	<p>} ÉÁ</p>	<p>Úæ•Á Ó[ { { ^ } c'Á^..Á^c' } ã^Á æ' Á } [ c'Á^..Á^c'   Á^c' }   b&amp;dÁ [ Á ^c'æ' ^} &amp; Á^ Á á   ^ Á   Á æ' á * Á , æ' Á à^ Á c'Á^ á Á @ Á æ' ]   ^ Á &amp;     ^ &amp; c'Á^ Á V @ Á æ' ]   ^ Á ^   ^ Á ]   æ' ^ á Á Á æ'   : æ'   ^ Á   ^ } æ' á Á &amp; } æ' ^   ^ Á æ'   á á æ' Á @ æ' • } æ' ^ Á æ' á Á c'   ^ á Á Á á ~   æ' á Á } æ' ^   ^ Á æ' ^ ÉÁ V @ Á æ'   Á Á   ^ Á Á     æ' ^ Á á   á * Á c'   æ' ^ Á æ' á Á æ' }     óæ Á &amp; } • æ' ^   ^ á Á Á ^ Á ^ *   æ'   Á ÉÁ Ú ^   :   { æ' &amp; Á æ' æ' • óæ Á ÖÜÇÁ æ' Á } • æ' ^   ^ á Á æ' ^ ~ æ' ÉÁ</p>
<p>Üá • æ' Á   æ' \ Á æ' c'Á^~  c'Á^..Á^c' Á æ' æ' Á   ^ ]     ç * ÉÁ</p>	<p>} [ óæ ]   ææ  ^Á</p>	<p>} ÉÁ</p>	<p>Úæ•Á Ó[ { { ^ } c'Á^..Á^c' } æ' Á   æ' \ Á æ' Á   c'Á^..Á^c'   Á^c' }   b&amp;dÁ Ü ^ É • ææ   ^ Á æ' ]   á * Á ^ ~ á { ^ } c' Á æ' Á   c'Á^..Á^c'   Á c' Á     b&amp;dÁ V @ Á æ' ]   ^ Á ^   ^ Á &amp;     ^ &amp; c'Á^ Á æ'   Á á ^ c' Á   { Á c' @ Á æ' ^ c' æ'   Á @ Á • c' á ÉÁ   Á   { Á @ Á } c' Á Á @ Á   á * Á á Á @ Á c' &amp; æ' æ'   Á ^ &amp; ^ c' Á á * Á æ' ^ • @ Á ææ   Á æ' á Á   c' ^ Á   Á ^ æ' @ Á æ' ]   ^ V @ Á æ'   Á   ^ Á   ^ Á &amp; } æ' á ææ } Á   á * Á æ' ]   á * Á æ' Á } • æ' ^   ^ á Á Á ^ Á ^ *   æ'   Á ÉÁ Ú ^   :   { æ' &amp; Á æ' æ' • óæ Á ÖÜÇÁ æ' Á } • æ' ^   ^ á Á æ' ^ ~ æ' ÉÁ</p>
<p><i>Laboratory Considerations</i></p>	<p><i>Target Criterion</i></p>	<p><i>Result</i></p>	<p><i>Pass / Fail / Comment</i></p>
<p>Šææ   : æ'   ^ Á ^ c'   á Á   æ' \ Á^~  c'Á^ æ' Á   ææ   : æ'   ^ Á^c' } æ' &amp; Á æ' æ' ÉÁ</p>	<p>Ÿ ^ • Á</p>	<p>Ÿ ^ • Á Á</p>	<p>Úæ•Á Á</p>
<p>Šææ   : æ'   ^ Á } c'     Á æ' ]   ^ Á^~  c'Á^ æ' Á   ææ   : æ'   ^ Á^c' } æ' &amp; Á æ' æ' ÉÁ</p>	<p>Ÿ ^ • Á</p>	<p>Ÿ ^ • Á Á</p>	<p>Úæ•Á Á</p>
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## Appendix B – Site and Sampling Point Layout Plan

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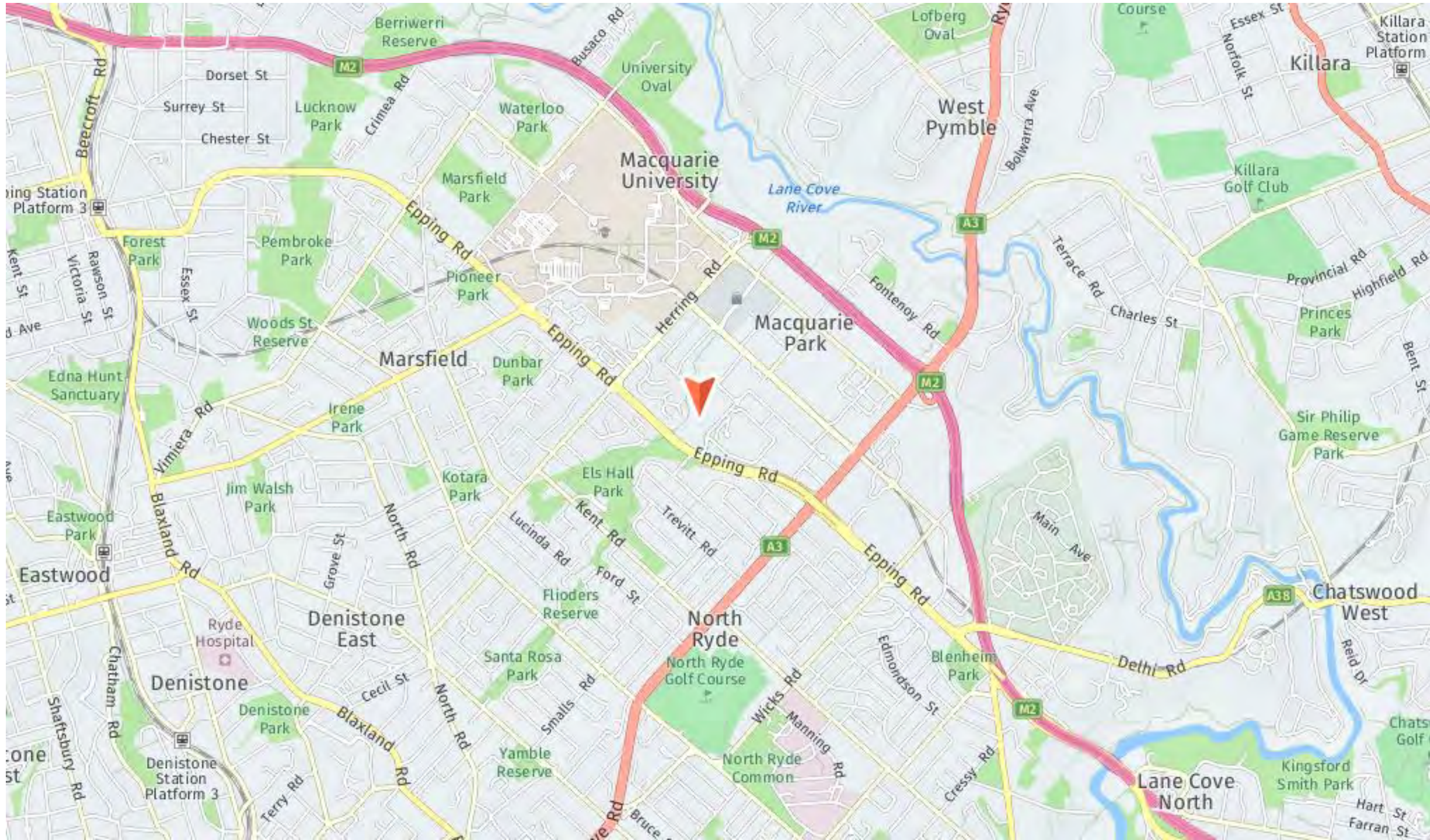


Image Source: [www.nearmap.com](http://www.nearmap.com)

Site Locality



1. 2024年12月31日  
 2. 2025年12月31日  
 3. 2026年12月31日

1. 2024年12月31日  
 2. 2025年12月31日  
 3. 2026年12月31日









Image Source: [www.nearmap.com](http://www.nearmap.com)

Sample Locations

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## Appendix C – Chain of Custody, Sample Receipt and Certificates of Analysis

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**CHAIN OF CUSTODY RECORD**

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory  
Unit F3 Bld E 37 Mars Road Lane Cove West NSW 2066  
02 9500 9400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory  
Unit 1 21 Smallwood Place Murarie QLD 4172  
07 3902 4600 EnviroSampleQLD@eurofins.com

Perth Laboratory  
Unit 2 51 Leach Highway Kewdale WA 6105  
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory  
6 Monterey Road Dandenong South VIC 3175  
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Alliance Ges		Project No		Project Manager	Mr Duregky	Sampler(s)			
Address			Project Name	Macq Park	EDD Format	ESdel, EOutS etc	Handed over by			
Contact Name			Analyses <small>Where matrix are requested, please specify "Toxic" or "Filtered" SUITE code must be used to attract SUITE pricing</small>	Alliance WAC Site 2	Hold		Email for Invoice	Michael.palges.com.au		
Phone No							Email for Results			
Special Directions							Containers <small>Change container type &amp; size if necessary</small>		Required Turnaround Time (TAT) <small>Default will be 5 days if not ticked.</small>	
Purchase Order							500mL Plastic	<input type="checkbox"/>	*Surcharge will apply	
Quote ID No			250mL Plastic	<input type="checkbox"/>	<input type="checkbox"/> Overnight (reporting by 9am)*					
			125mL Plastic	<input type="checkbox"/>	<input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 3 days					
			200mL Amber Glass	<input type="checkbox"/>	<input type="checkbox"/> 2 days <input type="checkbox"/> 3 days					
			40mL VOA vial	<input type="checkbox"/>	<input checked="" type="checkbox"/> 3 days (Standard)					
			500mL PFAS Bottle	<input type="checkbox"/>	<input type="checkbox"/> Other ( )					
			Jar (Glass or HDPE)	<input type="checkbox"/>						
			Other (Asbestos AS4684, WA Guidelines)	<input type="checkbox"/>						

No	Client Sample ID	Sampled Date/Time <small>dd/mm/yy hh:mm</small>	Matrix <small>Soil (S) Water (W)</small>	Analysis	Hold	Containers	Required Turnaround Time (TAT)	Sample Comments <small>/ Dangerous Goods Hazard Warning</small>
1	TP1-0.0-0.3	5.4.22	S	/				
2	TP1-0.7-1.0			/				
3	TP2-0.0-0.3			/				
4	TP2-0.7-1.0			/				
5	TP3-0.0-0.3			/				
6	TP3-0.7-1.0			/				
7	TP3-1.5-1.6			/				
8	TP3-1.8-2.0			/				
9	TP4-0.0-0.3			/				
10	TP4-0.7-1.0			/				

Method of Shipment  Courier (# )  Hand Delivered  Postal

Eurofins   mgt Laboratory Use Only	Received By	SYD   BNE   MEL   PER   AQL   NTL   DRW	Signature	Date	Time	Temperature	Report No
	Received By	SYD   BNE   MEL   PER   AQL   NTL   DRW	Signature	Date	Time	Temperature	Report No

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

877420



# CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

Sydney Laboratory  
Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066  
02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory  
Unit 1 21 Smallwood Place Murrumbidgee QLD 4172  
07 3902 4500 EnviroSampleQLD@eurofins.com

Perth Laboratory  
Unit 2 91 Leach Highway Kewdale WA 6105  
08 9251 9600 EnviroSampleWA@eurofins.com

Melbourne Laboratory  
6 Monterey Road Dandenong South VIC 3175  
03 8564 5000 EnviroSampleVIC@eurofins.com

Page 2 of 2

Company: <b>Alliance Geo</b>		Project No:		Project Manager:		Sampler(s):			
Address:		Project Name: <b>Macy Park</b>		EDD Format: ESdat, EQuIS etc		Handed over by:			
Contact Name:		Analyses: <b>Alliance WAC Site 2</b> <b>Asbestos ID</b> <small>Where metals are requested, please specify "Total" or "Filterable". SUITE code must be used to attract SUITE pricing.</small>		Email for Invoice:		Email for Results:			
Phone No:				Containers: <small>Change container type &amp; size if necessary.</small>		Required Turnaround Time (TAT): <small>Default will be 5 days if not noted.</small>			
Special Directions:				500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle
Purchase Order:				Jar (Glass or HDPE)		Other (Asbestos AS4684, WA Guidelines)		<input type="checkbox"/> Overnight (reporting by 9am)* <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 2 days <input type="checkbox"/> 3 days <input type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other( )	
Quote ID No:				Sample Comments / Dangerous Goods Hazard Warning					
No	Client Sample ID	Sampled Date/Time <small>dd/mm/yyyy hh:mm</small>	Matrix <small>Solid (S) Water (W)</small>						
1	<del>TP4-1.8-2.2</del>								
2	<del>TP5-0.2-0.3</del>								
3	TP4-1.5-1.6								
4	TP5-0.2-0.3								
5	TP4-Frag			Fragment					
6									
7									
8									
9									
10									
		Total Counts							
Method of Shipment: <input type="checkbox"/> Courier (#) <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Postal		Name:		Signature:		Date:			
Eurofins   mgt Laboratory Use Only		Received By:		Signature:		Date: 5/4			
		Received By:		Signature:		Time: 11:30am			
		SYD   BNE   MEL   PER   ADL   NTL   DRW		Signature:		Temperature: 14.9			
		SYD   BNE   MEL   PER   ADL   NTL   DRW		Signature:		Report No:			

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877420



**RE: Eurofins Test Results, Invoice - Report 877420 : Site MACQUARIE PARK**

Michael Dunesky &lt;michael@allgeo.com.au&gt;

Tue 2022-04-12 10:05 PM

To: Hannah Mawbey &lt;HannahMawbey@eurofins.com&gt;

Cc: #AU04\_Enviro\_Sample\_NSW &lt;EnviroSampleNSW@eurofins.com&gt;; Andrew Black &lt;AndrewBlack@eurofins.com&gt;

**CAUTION: EXTERNAL EMAIL** - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Thanks Hannah can we please request additional TCLP on sample:

TP2-0-0.3 – lead

24 hr TAT

Regards,

**Michael Dunesky**

Senior Environmental Consultant

**Mobile:** [0450 836 300](tel:0450836300) | **Email:** [michael@allgeo.com.au](mailto:michael@allgeo.com.au)**Office Phone:** 1800 288 188**Admin Email:** [admin@allgeo.com.au](mailto:admin@allgeo.com.au)**Website:** [allgeo.com.au](http://allgeo.com.au)**Office & Lab:** 8-10 Welder Road, Seven Hills NSW 2147**Postal Address:** PO Box 275, Seven Hills NSW 1730

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**From:** HannahMawbey@eurofins.com <HannahMawbey@eurofins.com>**Sent:** Tuesday, 12 April 2022 8:47 PM**To:** Michael Dunesky <michael@allgeo.com.au>**Subject:** Eurofins Test Results, Invoice - Report 877420 : Site MACQUARIE PARK

Please find attached report and invoice as per header.

Kind Regards,  
Hannah Mawbey

**Eurofins | Environment Testing**

Unit 16/7 Investigator Dr

Unanderra NSW 2526

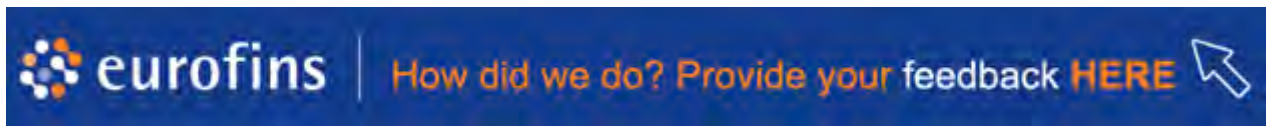
AUSTRALIA

Phone : +61 2 9900 8492

Mobile : +61 447 584 487

[View our latest EnviroNotes](#)

[How did we do? Provide your feedback here](#)



## Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

**Melbourne**

6 Monterey Road  
Dandenong South VIC 3175  
Phone : +61 3 8564 5000  
NATA # 1261 Site # 1254

**Sydney**

179 Magowar Road  
Girraween NSW 2066  
Phone : +61 2 9900 8400  
NATA # 1261 Site # 18217

**Brisbane**

1/21 Smallwood Place  
Murarrie QLD 4172  
Phone : +61 7 3902 4600  
NATA # 1261 Site # 20794

**Newcastle**

4/52 Industrial Drive  
Mayfield East NSW 2304  
PO Box 60 Wickham 2293  
Phone : +61 2 4968 8448  
NATA # 1261 Site # 25079

## Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

**Perth**

46-48 Banksia Road  
Welshpool WA 6106  
Phone : +61 8 6253 4444  
NATA # 2377 Site # 2370

## Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

**Auckland**

35 O'Rorke Road  
Penrose, Auckland 1061  
Phone : +64 9 526 45 51  
IANZ # 1327

**Christchurch**

43 Detroit Drive  
Rolleston, Christchurch 7675  
Phone : 0800 856 450  
IANZ # 1290

## Sample Receipt Advice

**Company name:** Alliance Geotechnical  
**Contact name:** Michael Dunesky  
**Project name:** MACCURIE PARK  
**Project ID:** Not provided  
**Turnaround time:** 5 Day  
**Date/Time received:** Apr 5, 2022 11:30 AM  
**Eurofins reference:** 877420

## Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

## Notes

## Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

**Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com**

Results will be delivered electronically via email to Michael Dunesky - michael@allgeo.com.au.

*Note: A copy of these results will also be delivered to the general Alliance Geotechnical email address.*



**Alliance Geotechnical**  
**10 Welder Road**  
**Seven Hills**  
**NSW 2147**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** **Michael Dunesky**

**Report** **877420-S**  
 Project name **MACQUARIE PARK**  
 Received Date **Apr 05, 2022**

Client Sample ID			TP1-0-0.3	TP1-0.7-1.0	TP2-0-0.3	TP2-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009173	S22- Ap0009174	S22- Ap0009175	S22- Ap0009176
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	76	230	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	76	230	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	200	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	200	< 100	< 100
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	130	144	142	131
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP1-0-0.3	TP1-0.7-1.0	TP2-0-0.3	TP2-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009173	S22- Ap0009174	S22- Ap0009175	S22- Ap0009176
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	108	93	94	69
p-Terphenyl-d14 (surr.)	1	%	130	110	114	88
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	0.08	0.17	0.13
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	0.08	0.17	0.13
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.17	0.13
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	71	72	68	74
Tetrachloro-m-xylene (surr.)	1	%	131	133	88	78
<b>Polychlorinated Biphenyls</b>						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	71	72	68	74
Tetrachloro-m-xylene (surr.)	1	%	131	133	88	78

Client Sample ID			TP1-0-0.3	TP1-0.7-1.0	TP2-0-0.3	TP2-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009173	S22- Ap0009174	S22- Ap0009175	S22- Ap0009176
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	12	16	7.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.5	< 0.4
Chromium	5	mg/kg	6.4	21	39	12
Copper	5	mg/kg	11	5.4	59	< 5
Lead	5	mg/kg	16	65	140	61
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	14	< 5
Zinc	5	mg/kg	33	39	470	21
% Moisture	1	%	23	11	18	10

Client Sample ID			TP3-0-0.3	TP3-1.5-1.6	TP4-0-0.3	TP4-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009177	S22- Ap0009178	S22- Ap0009179	S22- Ap0009180
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	65
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	130
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	195
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	190
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	120
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	310
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	62	136	133	123
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			TP3-0-0.3	TP3-1.5-1.6	TP4-0-0.3	TP4-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009177	S22- Ap0009178	S22- Ap0009179	S22- Ap0009180
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	72	94	72	116
p-Terphenyl-d14 (surr.)	1	%	98	99	88	96
<b>Organochlorine Pesticides</b>						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	0.07	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	0.07	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	78	67	75	75
Tetrachloro-m-xylene (surr.)	1	%	102	98	88	63
<b>Polychlorinated Biphenyls</b>						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP3-0-0.3	TP3-1.5-1.6	TP4-0-0.3	TP4-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009177	S22- Ap0009178	S22- Ap0009179	S22- Ap0009180
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	78	67	75	75
Tetrachloro-m-xylene (surr.)	1	%	102	98	88	63
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	5.3	5.4	11	7.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	29	24	21
Copper	5	mg/kg	7.2	13	12	7.8
Lead	5	mg/kg	22	11	24	34
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	6.7
Zinc	5	mg/kg	29	16	13	17
<b>% Moisture</b>						
	1	%	10	15	16	16

Client Sample ID			TP4-1.5-1.7	TP5-0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S22- Ap0009181	S22- Ap0009182
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Total Recoverable Hydrocarbons</b>				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
<b>BTEX</b>				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	121	132

Client Sample ID			TP4-1.5-1.7	TP5-0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S22- Ap0009181	S22- Ap0009182
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Polycyclic Aromatic Hydrocarbons</b>				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	72	122
p-Terphenyl-d14 (surr.)	1	%	78	110
<b>Organochlorine Pesticides</b>				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	60	105
Tetrachloro-m-xylene (surr.)	1	%	88	133



Client Sample ID			TP4-1.5-1.7	TP5-0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S22- Ap0009181	S22- Ap0009182
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Polychlorinated Biphenyls</b>				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	60	105
Tetrachloro-m-xylene (surr.)	1	%	88	133
<b>Heavy Metals</b>				
Arsenic	2	mg/kg	3.1	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	22	21
Copper	5	mg/kg	8.3	5.3
Lead	5	mg/kg	5.7	16
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5
Zinc	5	mg/kg	8.1	16
<b>% Moisture</b>				
	1	%	12	10

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Apr 08, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Apr 08, 2022	14 Days
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	Apr 08, 2022	14 Days
BTEX - Method: LTM-ORG-2010 BTEX and Volatile TRH	Sydney	Apr 08, 2022	14 Days
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	Apr 08, 2022	14 Days
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Apr 08, 2022	14 Days
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Sydney	Apr 08, 2022	28 Days
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Apr 08, 2022	28 Days
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Apr 05, 2022	14 Days

<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 11:30 AM
<b>Address:</b>	10 Welder Road Seven Hills NSW 2147	<b>Report #:</b>	877420	<b>Due:</b>	Apr 11, 2022
<b>Project Name:</b>	MACQUARIE PARK	<b>Phone:</b>	1800 288 188	<b>Priority:</b>	3 Day
		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail						Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCCP/PCB/Asb
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>									
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>						X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	TP1-0-0.3	Apr 05, 2022		Soil	S22-Ap0009173			X	X
2	TP1-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009174			X	X
3	TP2-0-0.3	Apr 05, 2022		Soil	S22-Ap0009175			X	X
4	TP2-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009176			X	X
5	TP3-0-0.3	Apr 05, 2022		Soil	S22-Ap0009177			X	X
6	TP3-1.5-1.6	Apr 05, 2022		Soil	S22-Ap0009178			X	X



**Company Name:** Alliance Geotechnical  
**Address:** 10 Welder Road  
Seven Hills  
NSW 2147  
**Project Name:** MACQUARIE PARK

**Order No.:**  
**Report #:** 877420  
**Phone:** 1800 288 188  
**Fax:** 02 9675 1888

**Received:** Apr 5, 2022 11:30 AM  
**Due:** Apr 11, 2022  
**Priority:** 3 Day  
**Contact Name:** Michael Dunesky

**Eurofins Analytical Services Manager : Andrew Black**

Sample Detail						Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCC/PCB/Asb
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>									
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>						X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
7	TP4-0-0.3	Apr 05, 2022		Soil	S22-Ap0009179			X	X
8	TP4-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009180			X	X
9	TP4-1.5-1.7	Apr 05, 2022		Soil	S22-Ap0009181			X	X
10	TP5-0.2-0.3	Apr 05, 2022		Soil	S22-Ap0009182			X	X
11	TP3-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009183		X		
12	TP3-1.8-2.0	Apr 05, 2022		Soil	S22-Ap0009184		X		
13	TP4-FRAG	Apr 05, 2022		Building Materials	S22-Ap0009185	X			

ABN: 50 005 085 521

ABN: 91 05 0159 898

NZBN: 9429046024954

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NATA # 1261 Site # 1254

**Sydney**  
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**Brisbane**  
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NATA # 1261 Site # 20794

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NATA # 2377 Site # 2370

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<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 11:30 AM
<b>Address:</b>	10 Welder Road Seven Hills NSW 2147	<b>Report #:</b>	877420	<b>Due:</b>	Apr 11, 2022
<b>Project Name:</b>	MACQUARIE PARK	<b>Phone:</b>	1800 288 188	<b>Priority:</b>	3 Day
		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail	Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254				
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794				
Mayfield Laboratory - NATA # 1261 Site # 25079				
Perth Laboratory - NATA # 2377 Site # 2370				
External Laboratory				
<b>Test Counts</b>	1	2	10	10

## Internal Quality Control Review and Glossary

### General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

### Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.



**Quality Control Results**

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
<b>Method Blank</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
<b>Method Blank</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
<b>Method Blank</b>							
<b>Heavy Metals</b>							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
<b>LCS - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>							
TRH C10-C14	%	86			70-130	Pass	
TRH >C10-C16	%	83			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>							
Acenaphthene	%	100			70-130	Pass	
Acenaphthylene	%	96			70-130	Pass	
Anthracene	%	79			70-130	Pass	
Benz(a)anthracene	%	102			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	126			70-130	Pass	
Benzo(g,h,i)perylene	%	98			70-130	Pass	
Benzo(k)fluoranthene	%	113			70-130	Pass	
Chrysene	%	72			70-130	Pass	
Dibenz(a,h)anthracene	%	98			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	104			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	96			70-130	Pass	
Naphthalene	%	96			70-130	Pass	
Phenanthrene	%	120			70-130	Pass	
Pyrene	%	98			70-130	Pass	
<b>LCS - % Recovery</b>							
<b>Organochlorine Pesticides</b>							
Chlordanes - Total	%	84			70-130	Pass	
4,4'-DDD	%	111			70-130	Pass	
4,4'-DDE	%	91			70-130	Pass	
4,4'-DDT	%	93			70-130	Pass	
a-HCH	%	85			70-130	Pass	
Aldrin	%	90			70-130	Pass	
b-HCH	%	90			70-130	Pass	
d-HCH	%	102			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	90			70-130	Pass	
Endosulfan II	%	77			70-130	Pass	
Endosulfan sulphate	%	81			70-130	Pass	
Endrin	%	98			70-130	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Endrin aldehyde	%	84	70-130	Pass			
Endrin ketone	%	80	70-130	Pass			
g-HCH (Lindane)	%	83	70-130	Pass			
Heptachlor	%	102	70-130	Pass			
Heptachlor epoxide	%	88	70-130	Pass			
Hexachlorobenzene	%	93	70-130	Pass			
Methoxychlor	%	72	70-130	Pass			
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1016	%	83	70-130	Pass			
Aroclor-1260	%	84	70-130	Pass			
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic	%	97	80-120	Pass			
Cadmium	%	100	80-120	Pass			
Chromium	%	99	80-120	Pass			
Copper	%	98	80-120	Pass			
Lead	%	98	80-120	Pass			
Mercury	%	102	80-120	Pass			
Nickel	%	101	80-120	Pass			
Zinc	%	99	80-120	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>				Result 1			
TRH C6-C9	S22-Ap0019946	NCP	%	91	70-130	Pass	
TRH C10-C14	S22-Ap0009176	CP	%	86	70-130	Pass	
Naphthalene	S22-Ap0019946	NCP	%	105	70-130	Pass	
TRH C6-C10	S22-Ap0019946	NCP	%	89	70-130	Pass	
TRH >C10-C16	S22-Ap0009176	CP	%	83	70-130	Pass	
<b>Spike - % Recovery</b>							
<b>BTEX</b>				Result 1			
Benzene	S22-Ap0019946	NCP	%	100	70-130	Pass	
Toluene	S22-Ap0019946	NCP	%	80	70-130	Pass	
Ethylbenzene	S22-Ap0019946	NCP	%	75	70-130	Pass	
m&p-Xylenes	S22-Ap0019946	NCP	%	82	70-130	Pass	
o-Xylene	S22-Ap0019946	NCP	%	83	70-130	Pass	
Xylenes - Total*	S22-Ap0019946	NCP	%	82	70-130	Pass	
<b>Spike - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1			
Acenaphthene	S22-Ap0015368	NCP	%	106	70-130	Pass	
Acenaphthylene	S22-Ap0015368	NCP	%	123	70-130	Pass	
Anthracene	S22-Ap0015368	NCP	%	110	70-130	Pass	
Benz(a)anthracene	S22-Ap0001091	NCP	%	125	70-130	Pass	
Benzo(a)pyrene	S22-Ap0015368	NCP	%	129	70-130	Pass	
Benzo(b&j)fluoranthene	S22-Ap0015368	NCP	%	130	70-130	Pass	
Benzo(g,h,i)perylene	S22-Ap0015368	NCP	%	129	70-130	Pass	
Benzo(k)fluoranthene	S22-Ap0015368	NCP	%	114	70-130	Pass	
Chrysene	S22-Ap0015368	NCP	%	116	70-130	Pass	
Dibenz(a,h)anthracene	S22-Ap0015368	NCP	%	128	70-130	Pass	
Fluoranthene	S22-Ap0015368	NCP	%	119	70-130	Pass	
Fluorene	S22-Ap0015368	NCP	%	128	70-130	Pass	
Indeno(1,2,3-cd)pyrene	S22-Ap0015368	NCP	%	124	70-130	Pass	
Naphthalene	S22-Ap0015368	NCP	%	122	70-130	Pass	
Phenanthrene	S22-Ap0001091	NCP	%	119	70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	S22-Ap0015368	NCP	%	121			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Organochlorine Pesticides</b>				Result 1					
Chlordanes - Total	S22-Ap0015368	NCP	%	103			70-130	Pass	
4.4'-DDD	S22-Ap0015368	NCP	%	109			70-130	Pass	
4.4'-DDE	S22-Ap0015368	NCP	%	108			70-130	Pass	
4.4'-DDT	S22-Ap0015368	NCP	%	115			70-130	Pass	
a-HCH	S22-Ap0015368	NCP	%	102			70-130	Pass	
Aldrin	S22-Ap0015368	NCP	%	109			70-130	Pass	
b-HCH	S22-Ap0015368	NCP	%	104			70-130	Pass	
d-HCH	S22-Ap0015368	NCP	%	108			70-130	Pass	
Dieldrin	S22-Ap0015368	NCP	%	104			70-130	Pass	
Endosulfan I	S22-Ap0015368	NCP	%	105			70-130	Pass	
Endosulfan II	S22-Ap0015368	NCP	%	102			70-130	Pass	
Endosulfan sulphate	S22-Ap0015368	NCP	%	100			70-130	Pass	
Endrin	S22-Ap0015368	NCP	%	116			70-130	Pass	
Endrin aldehyde	S22-Ap0015368	NCP	%	97			70-130	Pass	
Endrin ketone	S22-Ap0015368	NCP	%	101			70-130	Pass	
g-HCH (Lindane)	S22-Ap0015368	NCP	%	107			70-130	Pass	
Heptachlor	S22-Ap0015368	NCP	%	122			70-130	Pass	
Heptachlor epoxide	S22-Ap0015368	NCP	%	106			70-130	Pass	
Hexachlorobenzene	S22-Ap0015368	NCP	%	111			70-130	Pass	
Methoxychlor	S22-Ap0015368	NCP	%	94			70-130	Pass	
<b>Spike - % Recovery</b>									
<b>Polychlorinated Biphenyls</b>				Result 1					
Aroclor-1016	S22-Ap0015368	NCP	%	96			70-130	Pass	
Aroclor-1260	S22-Ap0015368	NCP	%	103			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C6-C9	S22-Ap0009174	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S22-Ap0009174	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S22-Ap0009174	CP	mg/kg	< 20	< 20	<1	30%	Pass	
<b>Duplicate</b>									
<b>BTEX</b>				Result 1	Result 2	RPD			
Benzene	S22-Ap0009174	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S22-Ap0009174	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S22-Ap0009174	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S22-Ap0009174	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S22-Ap0009174	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S22-Ap0009174	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
<b>Duplicate</b>									
<b>Total Recoverable Hydrocarbons</b>				Result 1	Result 2	RPD			
TRH C10-C14	S22-Ap0009175	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S22-Ap0009175	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S22-Ap0009175	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S22-Ap0009175	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S22-Ap0009175	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S22-Ap0009175	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

<b>Duplicate</b>									
<b>Heavy Metals</b>				Result 1	Result 2	RPD			
Arsenic	S22-Ap0009182	CP	mg/kg	5.4	3.2	52	30%	Fail	Q15
Cadmium	S22-Ap0009182	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S22-Ap0009182	CP	mg/kg	21	17	21	30%	Pass	
Copper	S22-Ap0009182	CP	mg/kg	5.3	< 5	10	30%	Pass	
Lead	S22-Ap0009182	CP	mg/kg	16	9.4	50	30%	Fail	Q15
Mercury	S22-Ap0009182	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S22-Ap0009182	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S22-Ap0009182	CP	mg/kg	16	12	33	30%	Fail	Q15
<b>Duplicate</b>									
				Result 1	Result 2	RPD			
% Moisture	S22-Ap0009182	CP	%	10	10	1.0	30%	Pass	



**Comments**
**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Qualifier Codes/Comments**

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

**Authorised by:**

Hannah Mawbey	Analytical Services Manager
Gabriele Cordero	Senior Analyst (NSW)
Chamath JHM Annakkage	Senior Analyst (NSW)



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**Alliance Geotechnical**  
**10 Welder Road**  
**Seven Hills**  
**NSW 2147**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025—Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of  
 the equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** Michael Dunesky  
**Report** 877420-AID  
**Project Name** **MACQUARIE PARK**  
**Received Date** Apr 05, 2022  
**Date Reported** Apr 12, 2022

**Methodology:**

Asbestos Fibre  
 Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.  
**NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.**

Unknown Mineral  
 Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.  
**NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.**

Subsampling Soil  
 Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.  
**NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.**

Bonded asbestos-  
 containing material  
 (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.  
**NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.**

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).  
 The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).  
**NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.**

**Project Name**                   MACQUARIE PARK  
**Project ID**  
**Date Sampled**                Apr 05, 2022  
**Report**                         877420-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP1-0-0.3	22-Ap0009173	Apr 05, 2022	Approximate Sample 337g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP1-0.7-1.0	22-Ap0009174	Apr 05, 2022	Approximate Sample 459g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP2-0-0.3	22-Ap0009175	Apr 05, 2022	Approximate Sample 484g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP2-0.7-1.0	22-Ap0009176	Apr 05, 2022	Approximate Sample 380g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP3-0-0.3	22-Ap0009177	Apr 05, 2022	Approximate Sample 498g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP3-1.5-1.6	22-Ap0009178	Apr 05, 2022	Approximate Sample 481g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP4-0-0.3	22-Ap0009179	Apr 05, 2022	Approximate Sample 391g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP4-0.7-1.0	22-Ap0009180	Apr 05, 2022	Approximate Sample 516g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.



Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP4-1.5-1.7	22-Ap0009181	Apr 05, 2022	Approximate Sample 392g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP5-0.2-0.3	22-Ap0009182	Apr 05, 2022	Approximate Sample 469g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP4-FRAG	22-Ap0009185	Apr 05, 2022	Approximate Sample 19g / 65x30x4mm Sample consisted of: Grey compressed fibre cement material	Chrysotile asbestos detected.

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Asbestos - LTM-ASB-8020	Sydney	Apr 05, 2022	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 05, 2022	Indefinite

<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 11:30 AM
<b>Address:</b>	10 Welder Road Seven Hills NSW 2147	<b>Report #:</b>	877420	<b>Due:</b>	Apr 11, 2022
<b>Project Name:</b>	MACQUARIE PARK	<b>Phone:</b>	1800 288 188	<b>Priority:</b>	3 Day
		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail						Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCC/PCB/Asb
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>									
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>						X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	TP1-0-0.3	Apr 05, 2022		Soil	S22-Ap0009173			X	X
2	TP1-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009174			X	X
3	TP2-0-0.3	Apr 05, 2022		Soil	S22-Ap0009175			X	X
4	TP2-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009176			X	X
5	TP3-0-0.3	Apr 05, 2022		Soil	S22-Ap0009177			X	X
6	TP3-1.5-1.6	Apr 05, 2022		Soil	S22-Ap0009178			X	X



<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 11:30 AM
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		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail						Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCC/PCB/Asb
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>									
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>						X	X	X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>									
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>									
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>									
<b>External Laboratory</b>									
7	TP4-0-0.3	Apr 05, 2022		Soil	S22-Ap0009179			X	X
8	TP4-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009180			X	X
9	TP4-1.5-1.7	Apr 05, 2022		Soil	S22-Ap0009181			X	X
10	TP5-0.2-0.3	Apr 05, 2022		Soil	S22-Ap0009182			X	X
11	TP3-0.7-1.0	Apr 05, 2022		Soil	S22-Ap0009183		X		
12	TP3-1.8-2.0	Apr 05, 2022		Soil	S22-Ap0009184		X		
13	TP4-FRAG	Apr 05, 2022		Building Materials	S22-Ap0009185	X			

<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 5, 2022 11:30 AM
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		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail	Asbestos Absence / Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254				
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794				
Mayfield Laboratory - NATA # 1261 Site # 25079				
Perth Laboratory - NATA # 2377 Site # 2370				
External Laboratory				
<b>Test Counts</b>	1	2	10	10

## Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

## Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

## Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples ( <b>% w/w</b> )
F/fld	Airborne fibre filter loading as Fibres ( <b>N</b> ) per Fields counted ( <b>n</b> )
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane ( <b>C</b> )
g, kg	Mass, e.g. of whole sample ( <b>M</b> ) or asbestos-containing find within the sample ( <b>m</b> )
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM ( <b>V = r x t</b> )
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane ( <b>r</b> )
min	Time ( <b>t</b> ), e.g. of air sample collection period

## Calculations

Airborne Fibre Concentration: 
$$C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{Vr}\right)$$

Asbestos Content (as asbestos): 
$$\% w/w = \frac{(m \times P_A)}{M}$$

Weighted Average (of asbestos): 
$$\%_{WA} = \frac{\sum (m \times P_A) \times x}{x}$$

## Terms

<b>%asbestos</b>	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (PA)</i> .
<b>ACM</b>	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
<b>AF</b>	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
<b>AFM</b>	Airborne Fibre Monitoring, e.g. by the MFM.
<b>Amosite</b>	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
<b>AS</b>	Australian Standard.
<b>Asbestos Content (as asbestos)</b>	Total % w/w asbestos content in asbestos-containing finds in a soil sample ( <b>% w/w</b> ).
<b>Chrysotile</b>	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
<b>COC</b>	Chain of Custody.
<b>Crocidolite</b>	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
<b>Dry</b>	Sample is dried by heating prior to analysis.
<b>DS</b>	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
<b>FA</b>	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
<b>Fibre Count</b>	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
<b>Fibre ID</b>	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
<b>Friable</b>	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
<b>HSG248</b>	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
<b>HSG264</b>	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
<b>ISO (also ISO/IEC)</b>	International Organization for Standardization / International Electrotechnical Commission.
<b>K Factor</b>	Microscope constant ( <b>K</b> ) as derived from the effective filter area of the given AFM membrane used for collecting the sample ( <b>A</b> ) and the projected eyepiece graticule area of the specific microscope used for the analysis ( <b>a</b> ).
<b>LOR</b>	Limit of Reporting.
<b>MFM (also NOHSC:3003)</b>	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
<b>NEPM (also ASC NEPM)</b>	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
<b>Organic</b>	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
<b>PCM</b>	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
<b>PLM</b>	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
<b>SMF</b>	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
<b>SRA</b>	Sample Receipt Advice.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
<b>UK HSE HSG</b>	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
<b>UMF</b>	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
<b>WA DOH</b>	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
<b>Weighted Average</b>	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample ( <b>%<sub>WA</sub></b> ).



**Comments****Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Asbestos Counter/Identifier:**

Sayeed Abu Senior Analyst-Asbestos (NSW)

**Authorised by:**

Chamath JHM Annakkage Senior Analyst-Asbestos (NSW)



**Glenn Jackson**  
**General Manager**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**Alliance Geotechnical**  
**10 Welder Road**  
**Seven Hills**  
**NSW 2147**



**NATA Accredited**  
**Accreditation Number 1261**  
**Site Number 18217**

Accredited for compliance with ISO/IEC 17025 – Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

**Attention:** **Michael Dunesky**

**Report** **879642-L**  
 Project name **ADDITIONAL- MACQUARIE PARK**  
 Received Date **Apr 12, 2022**

<b>Client Sample ID</b>			<b>TP2-0-0.3</b>
<b>Sample Matrix</b>			<b>US Leachate</b>
<b>Eurofins Sample No.</b>			<b>S22- Ap0026860</b>
<b>Date Sampled</b>			<b>Apr 05, 2022</b>
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Lead	0.01	mg/L	< 0.01
<b>USA Leaching Procedure</b>			
Leachate Fluid <sup>C01</sup>		comment	1.0
pH (initial)	0.1	pH Units	5.4
pH (off)	0.1	pH Units	5.1
pH (USA HCl addition)	0.1	pH Units	2.3

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

<b>Description</b>	<b>Testing Site</b>	<b>Extracted</b>	<b>Holding Time</b>
Heavy Metals - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	Apr 12, 2022	28 Days
USA Leaching Procedure - Method: LTM-GEN-7010 Leaching Procedure for Soils & Solid Wastes	Sydney	Apr 12, 2022	14 Days



<b>Company Name:</b>	Alliance Geotechnical	<b>Order No.:</b>		<b>Received:</b>	Apr 12, 2022 10:05 PM
<b>Address:</b>	10 Welder Road Seven Hills NSW 2147	<b>Report #:</b>	879642	<b>Due:</b>	Apr 13, 2022
<b>Project Name:</b>	ADDITIONAL- MACQUARIE PARK	<b>Phone:</b>	1800 288 188	<b>Priority:</b>	1 Day
		<b>Fax:</b>	02 9675 1888	<b>Contact Name:</b>	Michael Dunesky
<b>Eurofins Analytical Services Manager : Andrew Black</b>					

Sample Detail						Lead	USA Leaching Procedure
<b>Melbourne Laboratory - NATA # 1261 Site # 1254</b>							
<b>Sydney Laboratory - NATA # 1261 Site # 18217</b>						X	X
<b>Brisbane Laboratory - NATA # 1261 Site # 20794</b>							
<b>Mayfield Laboratory - NATA # 1261 Site # 25079</b>							
<b>Perth Laboratory - NATA # 2377 Site # 2370</b>							
<b>External Laboratory</b>							
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	TP2-0-0.3	Apr 05, 2022		US Leachate	S22-Ap0026860	X	X
<b>Test Counts</b>						1	1

## Internal Quality Control Review and Glossary

### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
- All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
- All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
- Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
- Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
- SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
- Samples were analysed on an 'as received' basis.
- Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
- This report replaces any interim results previously issued.

### Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

### Units

<b>mg/kg:</b> milligrams per kilogram	<b>mg/L:</b> milligrams per litre	<b>µg/L:</b> micrograms per litre
<b>ppm:</b> parts per million	<b>ppb:</b> parts per billion	<b>%:</b> Percentage
<b>org/100 mL:</b> Organisms per 100 millilitres	<b>NTU:</b> Nephelometric Turbidity Units	<b>MPN/100 mL:</b> Most Probable Number of organisms per 100 millilitres

### Terms

<b>APHA</b>	American Public Health Association
<b>COC</b>	Chain of Custody
<b>CP</b>	Client Parent - QC was performed on samples pertaining to this report
<b>CRM</b>	Certified Reference Material (ISO17034) - reported as percent recovery.
<b>Dry</b>	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
<b>Duplicate</b>	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
<b>LOR</b>	Limit of Reporting.
<b>LCS</b>	Laboratory Control Sample - reported as percent recovery.
<b>Method Blank</b>	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
<b>NCP</b>	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
<b>RPD</b>	Relative Percent Difference between two Duplicate pieces of analysis.
<b>SPIKE</b>	Addition of the analyte to the sample and reported as percentage recovery.
<b>SRA</b>	Sample Receipt Advice
<b>Surr - Surrogate</b>	The addition of a like compound to the analyte target and reported as percentage recovery.
<b>TBTO</b>	Tributyltin oxide ( <i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
<b>TCLP</b>	Toxicity Characteristic Leaching Procedure
<b>TEQ</b>	Toxic Equivalency Quotient or Total Equivalence
<b>QSM</b>	US Department of Defense Quality Systems Manual Version 5.4
<b>US EPA</b>	United States Environmental Protection Agency
<b>WA DWER</b>	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

### QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

### QC Data General Comments

- Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
- Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
- pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
- Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
- For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
- Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

**Quality Control Results**

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Method Blank</b>											
<b>Heavy Metals</b>											
Lead				mg/L	< 0.01			0.01	Pass		
<b>LCS - % Recovery</b>											
<b>Heavy Metals</b>											
Lead				%	114			80-120	Pass		
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
<b>Spike - % Recovery</b>											
<b>Heavy Metals</b>											
Lead				S22-Ap0023805	NCP	%	101		75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
<b>Duplicate</b>											
<b>Heavy Metals</b>											
Lead				S22-Ap0026637	NCP	mg/L	0.16	0.18	7.0	30%	Pass



**Comments****Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

**Qualifier Codes/Comments**

Code	Description
C01	Leachate Fluid Key: 1 - pH 5.0; 2 - pH 2.9; 3 - pH 9.2; 4 - Reagent (DI) water; 5 - Client sample, 6 - other

**Authorised by:**

Andrew Black                      Analytical Services Manager  
Gabriele Cordero                Senior Analyst (NSW)



**Glenn Jackson**  
**General Manager**

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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**Appendix D – Sample Data and Analytical Results Summary Table**





## Appendix E – NSW EPA Online Public Register Search Records

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MACQUARIE FIELDS	Caltex Service Station	68 Harold STREET	Service Station	Regulation under CLM Act not required	-33.96557276	150.8993681
MACQUARIE PARK	Caltex North Ryde Service Station	41-43 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.79136236	151.1312248
MACQUARIE PARK	1-7 Waterloo Road, Macquarie Park	1-7 Waterloo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76806877	151.1332148
MACQUARIE PARK	Porters Creek Depot - Proposed Operations Centre Site	180 Wicks ROAD	Landfill	Regulation under CLM Act not required	-33.78581579	151.1367075
MACQUARIE PARK	De Burghs Cycleway - Lane Cove National Park	Riverside DRIVE	Other Petroleum	Regulation under CLM Act not required	-33.77668985	151.136542
MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act	-32.73603658	151.5578926
MAITLAND	Hannan and High Street	Hannan Street and High STREET	Service Station	Regulation under CLM Act not required	-32.72731602	151.5515673
MAITLAND	Coles Express Service Station	235 High STREET	Service Station	Regulation under CLM Act not required	-32.73923607	151.5620999
MALABAR	ANZAC Rifle Range former landfill	Franklin STREET	Landfill	Regulation being finalised	-33.95792671	151.2566373
MANDALONG	Mandalong Mine	Mandalong ROAD	Other Industry	Regulation under CLM Act not required	-33.11725583	151.4616452
MANGROVE MOUNTAIN	Poultry Litter Containment Pit site	256 Waratah ROAD	Unclassified	Regulation under CLM Act not required	-33.28917947	151.1672284
MANILLA	Tamworth Regional Council Works Depot - Manilla	73 River STREET	Other Petroleum	Regulation under CLM Act not required	-30.74879943	150.7181011
MANLY	Caltex Service Station	86 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.79306689	151.2858636
MANLY	Open Space at end of Stuart Street (Lot 1 DP584297)	End of Stuart STREET	Gasworks	Regulation under CLM Act not required	-33.80780693	151.2898273
MANLY	St Patrick's Estate	151 Darley ROAD	Unclassified	Regulation under CLM Act not required	-33.8044568	151.2935955

List current as at 8 March 2022

69 of 129

## Search results

Your search for: Suburb: MACQUARIE PARK

[Search Again](#) [Refine Search](#)

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register. [POEO public register](#)

### Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... [more search tips](#)



## Search results

Your search for: **General Search** with the following criteria

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Number	Name	Location	Type	Status	Issued date
<a href="#">13044</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	POEO licence	Issued	08 May 2009
<a href="#">1113906</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Aug 2010
<a href="#">1118584</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 Nov 2010
<a href="#">1504092</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Feb 2012
<a href="#">1508075</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	29 Aug 2012
<a href="#">1532458</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Sep 2015
<a href="#">1614037</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	Compliance Audit	Complete	01 Nov 2021
<a href="#">1606383</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Dec 2021
<a href="#">11735</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	POEO licence	Surrendered	04 Sep 2002
<a href="#">1021136</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Oct 2002
<a href="#">1022236</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	19 Nov 2002
<a href="#">1024227</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Jan 2003
<a href="#">1024695</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	05 Feb 2003
<a href="#">1025435</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	07 Mar 2003
<a href="#">1025609</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 Mar 2003
<a href="#">1026362</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 May 2003
<a href="#">1027792</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	13 Jun 2003
<a href="#">1028574</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	27 Jun 2003
<a href="#">1028809</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	04 Jul 2003
<a href="#">1028972</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	11 Jul 2003

[12345](#)

08 April 2022

## Search results

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**Suburb - macquarie park**

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2 of 5 Pages

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Number	Name	Location	Type	Status	Issued date
<a href="#">1029217</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 Jul 2003
<a href="#">1029538</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	28 Jul 2003
<a href="#">1029710</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	31 Jul 2003
<a href="#">1030029</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	02 Sep 2003
<a href="#">1030565</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	08 Sep 2003
<a href="#">1031211</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	02 Oct 2003
<a href="#">1031750</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	17 Oct 2003
<a href="#">1032244</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	06 Nov 2003
<a href="#">1032398</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	13 Nov 2003
<a href="#">1032667</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	25 Nov 2003
<a href="#">1032983</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	12 Dec 2003
<a href="#">1033322</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	17 Dec 2003
<a href="#">1033893</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 Jan 2004
<a href="#">1034029</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	23 Jan 2004
<a href="#">1034350</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	02 Feb 2004
<a href="#">1034426</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	05 Feb 2004
<a href="#">1034494</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	20 Feb 2004
<a href="#">1034911</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	27 Feb 2004
<a href="#">1035201</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 Mar 2004
<a href="#">1035471</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	23 Mar 2004

[12345](#)

06 April 2022

## Search results

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Number	Name	Location	Type	Status	Issued date
<a href="#">1035772</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	30 Mar 2004
<a href="#">1036202</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Apr 2004
<a href="#">1036587</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	30 Apr 2004
<a href="#">1037117</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	20 May 2004
<a href="#">1038510</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Aug 2004
<a href="#">1039737</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	10 Aug 2004
<a href="#">1039827</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	13 Aug 2004
<a href="#">1040010</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	25 Aug 2004
<a href="#">1040389</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Sep 2004
<a href="#">1041466</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	14 Oct 2004
<a href="#">1041576</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Oct 2004
<a href="#">1042053</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	05 Nov 2004
<a href="#">1042245</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	12 Nov 2004
<a href="#">1042739</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	08 Dec 2004
<a href="#">1044133</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	07 Feb 2005
<a href="#">1044838</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	25 Feb 2005
<a href="#">1046135</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	01 Apr 2005
<a href="#">1047127</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	29 Apr 2005
<a href="#">1048083</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	02 Jun 2005
<a href="#">1048777</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 Jun 2005

[12345](#)

06 April 2022



## Search results

Your search for: **General Search** with the following criteria

**Suburb - macquarie park**

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>	<u>Issued date</u>
<a href="#">1048922</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Jun 2005
<a href="#">1049730</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	14 Jul 2005
<a href="#">1050117</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	09 Aug 2005
<a href="#">1050982</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	30 Aug 2005
<a href="#">1052885</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	17 Oct 2005
<a href="#">1053152</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	31 Oct 2005
<a href="#">1053660</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	14 Nov 2005
<a href="#">1053839</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Nov 2005
<a href="#">1054327</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	08 Dec 2005
<a href="#">1054429</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	14 Dec 2005
<a href="#">1061388</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	06 Jun 2006
<a href="#">1062906</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	10 Jul 2006
<a href="#">1063710</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Aug 2006
<a href="#">1064215</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	22 Aug 2006
<a href="#">1066985</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	08 Nov 2006
<a href="#">1072124</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 May 2007
<a href="#">1074662</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Jun 2007
<a href="#">1075064</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	29 Jun 2007
<a href="#">1078102</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	19 Sep 2007
<a href="#">1083305</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	09 May 2008

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06 April 2022

## Search results

Your search for: **General Search** with the following criteria

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returned 85 results

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>	<u>Issued date</u>
<a href="#">1087564</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	22 May 2008
<a href="#">1104864</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.80 Surrender of a Licence	Issued	14 Aug 2009
<a href="#">11916</a>	MAN DIESEL AUSTRALIA PTY LTD	36-42 WATERLOO ROAD, MACQUARIE PARK, NSW 2113	POEO licence	No longer in force	29 May 2003
<a href="#">1050941</a>	MAN DIESEL AUSTRALIA PTY LTD	36-42 WATERLOO ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	11 Sep 2005
<a href="#">1565069</a>	Zinfra Pty Ltd	1A Talavera Road, MACQUARIE PARK, NSW 2113	s.55 Licence Refusal	Issued	24 May 2018

[12345](#)

06 April 2022

## Appendix F – ProUCL Output



	A	B	C	D	E	F	G	H	I	J	K	L		
1	<b>UCL Statistics for Uncensored Full Data Sets</b>													
2														
3	User Selected Options													
4	Date/Time of Computation		ProUCL 5.114/04/2022 10:43:34 AM											
5	From File		WorkSheet.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	<b>C0</b>													
12														
13	<b>General Statistics</b>													
14	Total Number of Observations				8		Number of Distinct Observations				7			
15									Number of Missing Observations				0	
16	Minimum				16		Mean				47.25			
17	Maximum				140		Median				29			
18	SD				42.11		Std. Error of Mean				14.89			
19	Coefficient of Variation				0.891		Skewness				1.821			
20														
21	<b>Note: Sample size is small (e.g., &lt;10), if data are collected using ISM approach, you should use</b>													
22	<b>guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.</b>													
23	<b>For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).</b>													
24	<b>Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1</b>													
25														
26	<b>Normal GOF Test</b>													
27	Shapiro Wilk Test Statistic				0.772		<b>Shapiro Wilk GOF Test</b>							
28	5% Shapiro Wilk Critical Value				0.818		Data Not Normal at 5% Significance Level							
29	Lilliefors Test Statistic				0.248		<b>Lilliefors GOF Test</b>							
30	5% Lilliefors Critical Value				0.283		Data appear Normal at 5% Significance Level							
31	<b>Data appear Approximate Normal at 5% Significance Level</b>													
32														
33	<b>Assuming Normal Distribution</b>													
34	<b>95% Normal UCL</b>						<b>95% UCLs (Adjusted for Skewness)</b>							
35	95% Student's-t UCL				75.46		95% Adjusted-CLT UCL (Chen-1995)				81.98			
36							95% Modified-t UCL (Johnson-1978)				77.06			
37														
38	<b>Gamma GOF Test</b>													
39	A-D Test Statistic				0.473		<b>Anderson-Darling Gamma GOF Test</b>							
40	5% A-D Critical Value				0.725		Detected data appear Gamma Distributed at 5% Significance Level							
41	K-S Test Statistic				0.221		<b>Kolmogorov-Smirnov Gamma GOF Test</b>							
42	5% K-S Critical Value				0.298		Detected data appear Gamma Distributed at 5% Significance Level							
43	<b>Detected data appear Gamma Distributed at 5% Significance Level</b>													
44														
45	<b>Gamma Statistics</b>													
46	k hat (MLE)				1.907		k star (bias corrected MLE)				1.275			
47	Theta hat (MLE)				24.77		Theta star (bias corrected MLE)				37.05			
48	nu hat (MLE)				30.52		nu star (bias corrected)				20.41			
49	MLE Mean (bias corrected)				47.25		MLE Sd (bias corrected)				41.84			
50							Approximate Chi Square Value (0.05)				11.15			
51	Adjusted Level of Significance				0.0195		Adjusted Chi Square Value				9.469			
52														
53	<b>Assuming Gamma Distribution</b>													
54	95% Approximate Gamma UCL (use when n>=50))				86.47		95% Adjusted Gamma UCL (use when n<50)				101.8			

	A	B	C	D	E	F	G	H	I	J	K	L
55												
56	<b>Lognormal GOF Test</b>											
57	Shapiro Wilk Test Statistic				0.91		<b>Shapiro Wilk Lognormal GOF Test</b>					
58	5% Shapiro Wilk Critical Value				0.818		Data appear Lognormal at 5% Significance Level					
59	Lilliefors Test Statistic				0.194		<b>Lilliefors Lognormal GOF Test</b>					
60	5% Lilliefors Critical Value				0.283		Data appear Lognormal at 5% Significance Level					
61	<b>Data appear Lognormal at 5% Significance Level</b>											
62												
63	<b>Lognormal Statistics</b>											
64	Minimum of Logged Data				2.773		Mean of logged Data				3.571	
65	Maximum of Logged Data				4.942		SD of logged Data				0.774	
66												
67	<b>Assuming Lognormal Distribution</b>											
68	95% H-UCL			111.9			90% Chebyshev (MVUE) UCL			84.23		
69	95% Chebyshev (MVUE) UCL			101.6			97.5% Chebyshev (MVUE) UCL			125.7		
70	99% Chebyshev (MVUE) UCL			173.1								
71												
72	<b>Nonparametric Distribution Free UCL Statistics</b>											
73	<b>Data appear to follow a Discernible Distribution at 5% Significance Level</b>											
74												
75	<b>Nonparametric Distribution Free UCLs</b>											
76	95% CLT UCL			71.74			95% Jackknife UCL			75.46		
77	95% Standard Bootstrap UCL			70.13			95% Bootstrap-t UCL			100.3		
78	95% Hall's Bootstrap UCL			151.1			95% Percentile Bootstrap UCL			72.88		
79	95% BCA Bootstrap UCL			83.13								
80	90% Chebyshev(Mean, Sd) UCL			91.92			95% Chebyshev(Mean, Sd) UCL			112.1		
81	97.5% Chebyshev(Mean, Sd) UCL			140.2			99% Chebyshev(Mean, Sd) UCL			195.4		
82												
83	<b>Suggested UCL to Use</b>											
84	95% Student's-t UCL			75.46								
85												
86	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test											
87	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL											
88												
89	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
90	Recommendations are based upon data size, data distribution, and skewness.											
91	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
92	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
93												

## Asbestos Clearance Certificate

Certificate Reference	15030-ER-2-1	Certificate Date	16/05/2022
Definition of Clearance Inspection (Work Health and Safety Regulation 2017, Reg 473, Part (5) (a) and (b))	An inspection of an asbestos removal area after asbestos removal work has been completed to verify that the area is safe for normal use, that: <ul style="list-style-type: none"> <li>- includes a visual inspection; and</li> <li>- may include air monitoring.</li> </ul>		

CLIENT DETAILS	
Client	Christie Civil Pty Ltd
Client project name	Road Bridge Construction

CLEARANCE INSPECTION DETAILS			
Site address	2 Lyonpark Road, Macquarie Park NSW 2113		
Lot and DP	Lot 101 in DP 1263727		
Nature of asbestos removal work	Bonded Excavation 200m <sup>2</sup> area inspected		
Details of specific asbestos removal work area(s)	Refer to site plan in Appendix A		
Date of removal works	Start	06/05/2022	Finish: 06/05/2022
Contact details of Licensed Class A/B Asbestos Removalist	Company Name:	Christie Civil Pty Ltd	
	Company License No.:	AD211094	
	Supervisor Contact No.:	0412004164	
Date and time of clearance inspection	07/05/2022 at 07:00		
Name of LAA or Competent Person doing inspection	Ayodeji Awopetu		

ASBESTOS REMOVAL DOCUMENTATION			
Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Was a copy of the asbestos removal works notification form provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the removal work (e.g. use of enclosures, decontamination facilities, waste facilities) consistent with the ARCP and the notification form?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

ASBESTOS REMOVAL WORK AREA			
Was visible asbestos residue found on exposed surfaces, in the asbestos removal work area or in the vicinity of the area where the removal work was carried out?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
Was visible asbestos residue found on the surface of the transit route and/or waste route?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>



Was air monitoring undertaken as part of the removal works and the results were less than 0.01 fibres/mL?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Were the air monitoring samples been analysed by a NATA-accredited laboratory or a laboratory approved by the WHS regulator?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Where air monitoring was part of the clearance inspection, Is the air monitoring report attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Were validation samples collected from within the removal area? If yes, how many?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, how many?
Was asbestos detected, using NATA accredited methods, in the samples collected?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Is the Laboratory Certificate of Analysis attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

<b>ENCLOSURES</b>			
<i>Prior to dismantling the enclosure</i>			
Was the exposed surfaces of, the area within the enclosure and the area immediately surrounding the enclosure, inspected and no visible asbestos residue observed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Was air monitoring undertaken as part of the clearance inspection and the results was less than 0.01 fibres/mL?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Has the air monitoring sample been analysed by a NATA-accredited laboratory or a laboratory approved by the WHS regulator?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Is the air monitoring report attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
How many validation samples were collected?	X		N/A <input checked="" type="checkbox"/>
Was asbestos detected, using NATA accredited methods, in the samples collected?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Can the enclosure be dismantled?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
<i>After the enclosure is dismantled and removed</i>			
Was the exposed surfaces of, area where the enclosure was erected and the area immediately surrounding where the enclosure was erected, inspected and no visible asbestos residue observed.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

<b>ASBESTOS CLEARANCE DECLARATION</b>			
In the context of asbestos risk, Alliance Geotechnical declares that, as at the date and time of the inspection:			
- The asbestos removal work area inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
- The former enclosure area inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
- The transit route and waste route inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
This declaration must be read in conjunction with the Limitations set out below, and the attached "Important Information About This Report" statement.			

**LIMITATIONS**

This clearance inspection was undertaken with reference to industry accepted practice and was limited to exposed surfaces within the areas nominated in this report that were accessible at the date and time of the inspection. Areas below those surfaces, or adjacent to the nominated areas are not addressed in this certificate and may contain asbestos.

No inspection can be regarded as absolute. Alliance does not warrant or guarantee that all visible asbestos material has been removed, and subsequently, Alliance does not accept liability or responsibility for the completeness of asbestos removal works.

If material suspected of containing asbestos is identified after the date and time of the inspection reported in this clearance certificate, activities should be stopped immediately, access to the area where the material was observed should be restricted, and Alliance contacted for further advice.

**REFERENCES**

NSW Government 2019, 'Code of Practice: How to manage and control asbestos in the workplace', dated August 2019

NSW Government 2019, 'Code of Practice: How to safely remove asbestos', dated August 2019

SafeWork NSW, 'Non-Friable Asbestos Clearance Certificate – No Air Monitoring', Catalogue No. SW08272

Work Health and Safety Act 2011

Work Health and Safety Regulation 2017

For and on behalf of Alliance Geotechnical Pty Ltd



Ayodeji Awopetu  
Graduate Environmental Consultant

**Attached**

Important Information About This Report

Appendix A – Asbestos Removal Work Area Figure

Appendix B – Photographs of Asbestos Removal Work Areas

## Important Information About This Report

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This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to Alliance's engagement. The report must not be used for any purpose other than the purpose specified at the time Alliance was engaged to prepare the report.

The findings presented in this report are based on specific data and information made available during the course of this project. To the best of Alliance's knowledge, these findings represent a reasonable interpretation of the general condition of the site at the time of report completion.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Alliance.

Logs, figures, and drawings are generated for this report based on individual Alliance consultant interpretations of nominated data, as well as observations made at the time fieldwork was undertaken.

Data and/or information presented in this report must not be redrawn for its inclusion in other reports, plans or documents, nor should that data and/or information be separated from this report in any way.

Should additional information that may impact on the findings of this report be encountered or site conditions change, Alliance reserves the right to review and amend this report.



**Appendix A – Asbestos Removal Work Area Figure**

### Appendix B – Photographs of Asbestos Removal Work Areas

Photographs of asbestos removal work area prior to inspection/removal



Photographs of asbestos removal work area post inspection/removal







Photographs of transit route and waste route



## Waste Classification and Virgin Excavated Natural Material Report

Report Reference	15030-ER-1-1 Rev 1	Report Date	3/05/2022
Client	Christie Civil Pty Ltd		
Client project name	Road Bridge Construction		
Site address	2 Lyonpark Road, Macquarie Park NSW 2113		
Lot and DP	Lot 101 DP 1263727		
Definition of virgin excavated natural material (VENM)	<p>The Protection of the Environment Operations Act 1997 VENM as:</p> <p>'natural material (such as clay, gravel, sand, soil or rock fines):</p> <p>a) that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities, and</p> <p>b) that does not contain any sulfidic ores or soils or any other waste, and includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved for the time being pursuant to an EPA Gazettal notice'.</p>		
Location, quantity and history of material	<p>IN-SITU - In-situ materials across approximately 400m<sup>2</sup>, to a depth of between 1.0m to 2.0m (bgs (maximum)), located in the northern portion of the site, to be excavated during bridge abutment construction works.</p> <p>Totalling approximately 500m<sup>3</sup>.</p> <p>Refer to Appendix B for a site layout plan.</p>		
Geology	<p>The Department of Mineral Resources Geological Survey of NSW Sydney 1:100,000 Geological Series Sheet 9130 (Edition 1) 1983, indicated that the site is likely to be underlain by Hawkesbury Sandstone (Rh), comprising sandstone, quartz and some shale.</p>		



FIELDWORK	
Description of the material	<p>Fill: 0.0~1.5m (bgs) – Silty Gravelly CLAY, pale brown, some minor glass fragments, potential asbestos containing material (PACM) observed, no visual evidence of staining or olfactory evidence of odours detected in the samples collected.</p> <p>Natural: &gt;1.5m (bgs) Sandy CLAY brown/orange/grey, no PACM observed, no visual evidence of staining or olfactory evidence of odours detected in the samples collected.</p> <p>Test pits terminated at 2.0m (bgs).</p>
Photographs of the area of excavation and fill material being assessed at TP1	
	
Photographs of fill material assessment fieldwork and samples of fill material being assessed at TP3	
	

SIX STEP WASTE CLASSIFICATION PROCESS <sup>2</sup>	
Step 1	The fill material is considered to be special waste due to the presence of asbestos.
Step 2	The fill material is not considered to be a liquid waste.
Step 3	The fill material is not considered to be pre-classified.
Step 4	The fill material is not considered to possess hazardous characteristics.
Step 5	<p>The detected concentrations of analytes in the fill material samples analysed, were less than the relevant CT1 values in Table 1 of NSW EPA (2014a) and the relevant TCLP1 and SCC1 values in Table 2 of NSW EPA (2016), with the exception of:</p> <ul style="list-style-type: none"> <li>• lead in sample TP2-0.0-0.3 (140mg/kg, CT1 value of 100mg/kg);</li> </ul> <p>Sample TP2-0.0-0.3 was subjected to nickel TCLP<sup>3</sup> analysis and the detected concentration was less than the relevant TCLP1 value in Table 2 of NSW EPA (2014a).</p> <p>The observations of the fill material being assessed, indicated that the material was reasonably homogenous. On that basis, a statistical analysis a statistical analysis of the detected lead concentration dataset was undertaken using ProUCL<sup>4</sup>. The output of the statistical analysis indicated that:</p> <ul style="list-style-type: none"> <li>• the maximum detected lead concentration value in the data set was 140mg/kg, which is less than 250% of the relevant CT1 value (100mg/kg);</li> <li>• the standard deviation of the detected lead concentrations in the data set was 42.1mg/kg, which is less than 50% of the relevant CT1 value (100mg/kg);</li> <li>• there is a 95% probability that the arithmetic average concentration of lead in the material assessed, will not exceed 75.4mg/kg, which is less than the relevant CT1 value (100mg/kg).</li> </ul> <p>A copy of the ProUCL statistical analysis output is presented in Appendix F.</p>
Step 6	The material is not considered to be putrescible.

<sup>2</sup> NSW EPA (2014a)

<sup>3</sup> Toxicity Characteristic Leaching Procedure

<sup>4</sup> In order for the statistical analysis output to be considered reliable, the maximum value in any one analyte dataset cannot be greater than 250% of the relevant adopted screening criterion value, and the standard deviation of any one analyte dataset, cannot be greater than 50% of the relevant adopted screening criterion value.

**REFERENCES**

- AS 4482.1-2005 'Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds' dated November 2005.
- AS 4482.2-1999 'Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile substances' dated September 1999.
- Berkman D A 1989, 'Field Geologist's Manual, Third Edition' published by The Australasian Institute of Mining and Metallurgy.
- DUAP 1998, 'Managing Land Contamination Planning Guidelines SEPP55 – Remediation of Land', dated April 1999, ref: 98/65.
- EPA VIC 2009 'Industrial Waste Resource Guidelines' dated June 2009, ref: IWRG702.
- National Environment Protection Council (NEPC) 2013, 'Schedule B(2) Guideline on Site Characterisation', National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013.
- NSW DPIE 2021, 'State Environmental Planning Policy (Resilience and Hazards) 2021'
- NSW EPA 1995, 'Contaminated Sites: Sampling Design Guidelines' dated September 1995, ref: EPA 95/59
- NSW EPA 2014a, 'Waste Classification Guidelines – Part 1: Classification of waste' dated November 2014, ref: EPA 2014/0796
- NSW EPA 2016, 'Addendum to the Wastes Classification Guidelines (2014) – Part 1: classifying waste' dated October 2016, ref: EPA 2016/0559
- SafeWork NSW 2019, 'Code of Practice, How To Safely Remove Asbestos' dated August 2019
- WorkCover NSW 2014, 'Managing asbestos in or on soil', dated March 2014

For and on behalf of Alliance Geotechnical Pty Ltd

Michael Dunesky  
Senior Environmental Consultant

Attached

Important Information About This Report  
Appendix A - Sampling Plan and Data Quality Indicator Assessment  
Appendix B – Site and Sampling Point Layout Plan  
Appendix C – Chain of Custody, Sample Receipt and Certificates of Analysis  
Appendix D – Sample Data and Analytical Results Summary Table  
Appendix E – NSW EPA Online Public Register Search Records  
Appendix F - ProUCL Output



## Appendix A - Sampling Plan and Data Quality Indicator Assessment

SAMPLING PLAN	
Fieldwork date	05/04/2022 and 22/04/2022
Fieldwork team	Michael Dunesky
Sampling point locations	Sampling point locations are presented in Appendix B.
Rationale for sampling pattern	IN_SITU AREA – The sampling pattern for the in-situ materials will be a systematic grid of sampling points across the area being assessed, taking into consideration the area, depth and volume of material being assessed, and guidance in Table A of NSW EPA (1995), and Table 1 and 3 in EPA VIC (2009).
Rationale for sample collection and analytical quantities	<p>IN-SITU AREA (Waste) – A minimum of 9 samples will be collected, based on guidance in Table 1 and Table 3 in EPA VIC (2009), for the volume and depth of waste being assessed. Additionally, a minimum 8 asbestos delineation samples will be collected, based on guidance in Table 1 and Table 3 in EPA VIC (2009), for the volume and depth of waste being assessed.</p> <p>IN-SITU AREA (VENM) – A minimum of 3 samples will be collected, based on guidance in Table 1 and Table 3 in EPA VIC (2009) / Table 1 of The excavated natural material order 2014, for the volume and depth of material being assessed.</p>
Material sampling method	<p>Samples will be collected from test pits using hydraulic excavation equipment.</p> <p>IN-SITU – Samples will be collected with reference to relevant guidance in Section 7.2 of NEPC (2013) and Section 6.7 of Sullivan et al (2018).</p> <p>A fresh pair of nitrile gloves will be used to collect each sample.</p> <p>Samples will be placed in laboratory prepared containers and bags, each labelled with the project number, date, sampling point identifier, and sample depth identifier. Samples for acid sulfate soils analysis will be placed in zip lock bags with the air removed. Samples will be stored in an insulated container with ice.</p> <p>Recommended holding times will be considered when arranging sample transport to the analytical laboratory.</p> <p>A rinsate blank will be collected when non disposable sampling equipment is used.</p>
Material sample collection depths	INSITU – The first sample will be collected at the surface, then at regular depths thereafter, targeting visual or olfactory signs of contamination, to the target depth of assessment.
Rationale for lab selection, analytical suite and analytical data quality	<p>NATA accredited laboratories will be used for sample analysis, adopting limits of reporting (LOR) that are less than adopted assessment criteria.</p> <p>Based on the potential land contaminating activities associated with the site and consideration being given to Appendix A in DUAP (1998) and Section 6.1 of HEPA (2020), the following range of analytes have been selected:</p> <p>TRH, BTEX, PAH, OCP, PCB, metals and asbestos (presence/absence).</p> <p>Laboratory data quality will be checked by assessing holding time compliance, and the results of analysis on method blanks, control samples, spike samples and duplicates.</p>

<b>Comparability</b>			
<i>Laboratory Considerations</i>	<i>Target Criterion</i>	<i>Result</i>	<i>Pass / Fail / Comment</i>
Same sampling team used for all work.	Yes	Yes	Pass
Weather conditions suitable for sampling.	Yes	Yes	Pass
Same sample types collected and preserved in same way.	Yes	Yes	Pass
Relevant samples stored in insulated containers and chilled.	Yes	Yes	Pass
<i>Laboratory Considerations</i>	<i>Target Criterion</i>	<i>Result</i>	<i>Pass / Fail / Comment</i>
Same laboratory used for all analysis.	Yes	Yes	Pass
Comparable methods if different laboratories used.	Not applicable	n/a	Pass
Comparable limits of reporting if different laboratories used.	Not applicable	n/a	Pass
Comparable units of measure if different laboratories have been used.	Not applicable	n/a	Pass

<b>Representativeness</b>			
<i>Field Considerations</i>	<i>Target Criterion</i>	<i>Result</i>	<i>Pass / Fail / Comment</i>
Media identified in sampling plan, sampled.	Yes	Yes	Pass
Samples required by sampling plan, collected.	Yes	Yes	Pass
<i>Laboratory Considerations</i>	<i>Target Criterion</i>	<i>Result</i>	<i>Pass / Fail / Comment</i>
Samples identified in sampling plan, analysed.	Yes	Yes	Pass

<p>Trip spike analyte results less between 60% and 140%.</p>	<p>not applicable</p>	<p>n/a</p>	<p>Pass                  Comment - A trip spike was not used for this project. No evidence of odour or staining was observed in the samples collected. The samples were placed in laboratory prepared containers with minimal headspace, and stored in an insulated container with ice, The risk of loss of volatiles during storage and transport is considered to be negligible. Performance against this DQI is considered adequate.</p>
<p>Rinsate blank analyte results less than limit of reporting.</p>	<p>not applicable</p>	<p>n/a</p>	<p>Pass                  Comment - A rinsate blank was not used for this project. Re-usable sampling equipment was not used for this project. The samples were collected either directly from the base/wall of the test pits, or from the centre of the soils in the excavator bucket, using a fresh pair of nitrile gloves for each sample. The risk of cross contamination during sampling is considered to be negligible. Performance against this DQI is considered adequate.</p>
<p><i>Laboratory Considerations</i></p>	<p><i>Target Criterion</i></p>	<p><i>Result</i></p>	<p><i>Pass / Fail / Comment</i></p>
<p>Laboratory method blank results within laboratory acceptance limits.</p>	<p>Yes</p>	<p>Yes</p>	<p>Pass</p>
<p>Laboratory control sample results within laboratory acceptance limits.</p>	<p>Yes</p>	<p>Yes</p>	<p>Pass</p>
<p>Laboratory spike sample results within laboratory acceptance limits.</p>	<p>Yes</p>	<p>Yes</p>	<p>Pass</p>



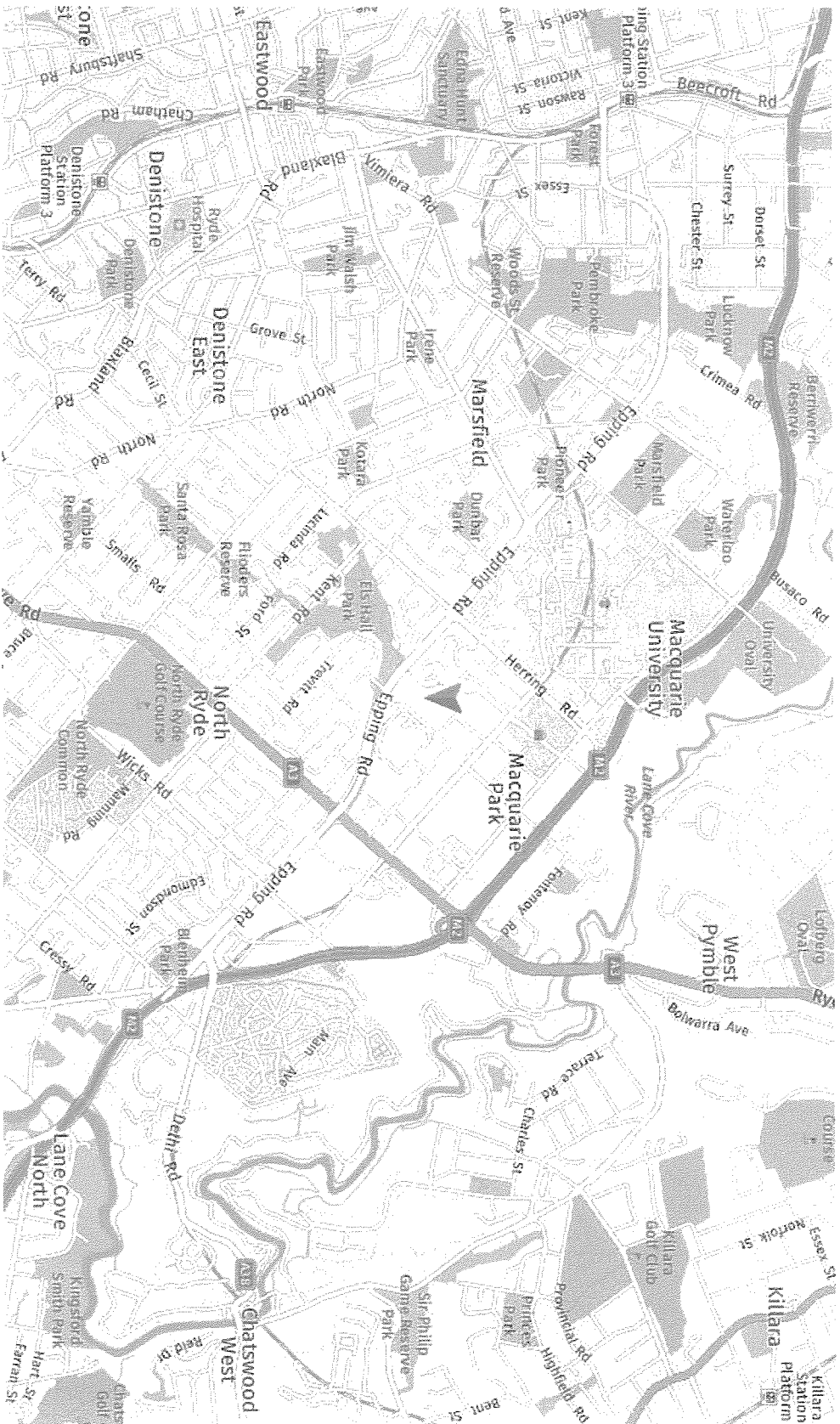


Image Source: [www.nearmap.com](http://www.nearmap.com)

**Site Locality**

Client Name:	Christie Civil Pty Ltd	Figure Number:	1
Project Name:	Road Bridge Construction	Figure Date:	06 April 2022
Project Location:	2 Lyonpark Road, Macquarie Park NSW 2113	Report Number:	15030-ER-1-1 Rev 1



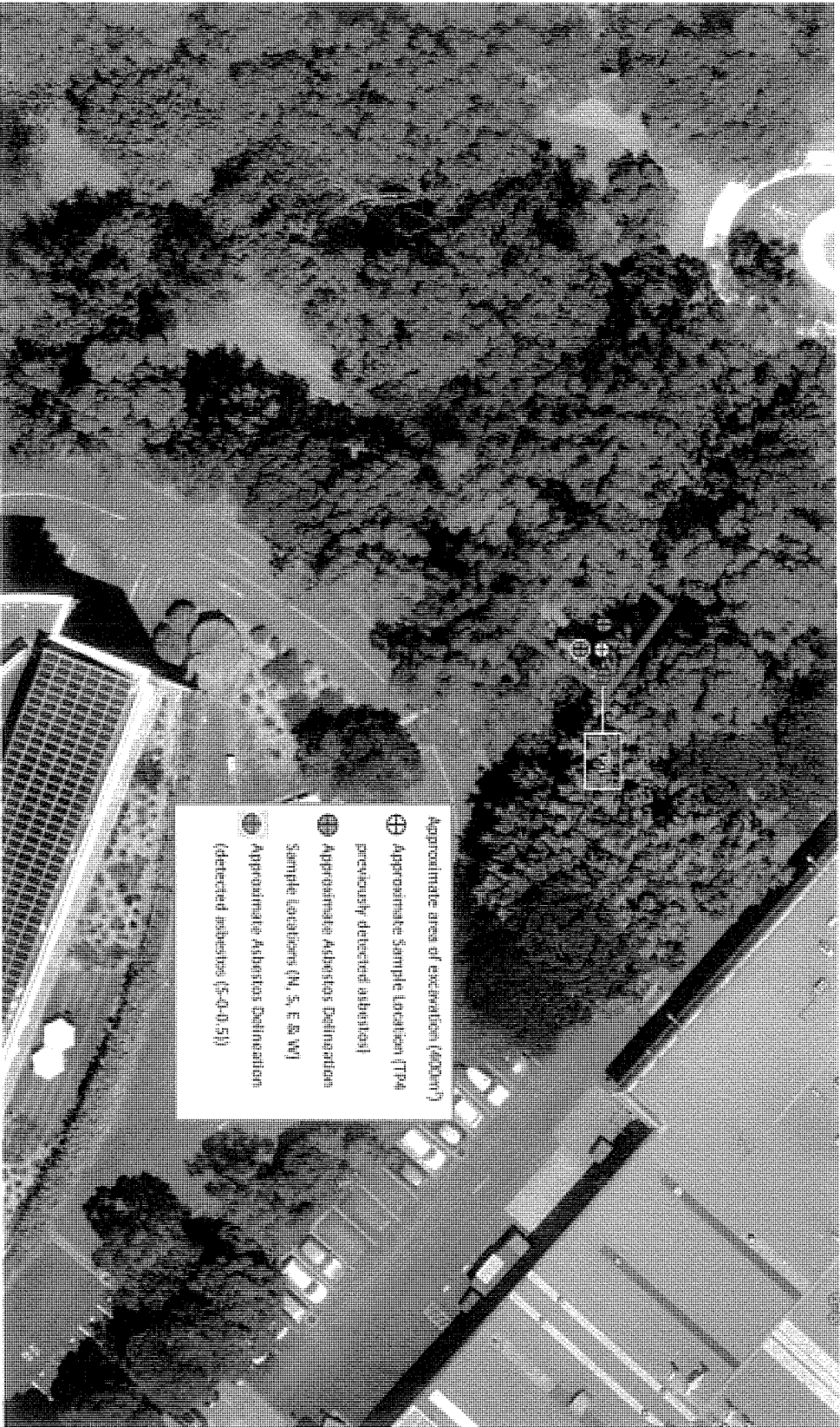


Image Source: [www.heatmap.com](http://www.heatmap.com)

Sample Locations

Client Name:	Christie Civil Pty Ltd	Figure Number:	3
Project Name:	Road Bridge Construction	Figure Date:	03 May 2022
Project Location:	2 Lyonpark Road, Macquarie Park NSW 2113	Report Number:	15030-ER-1-1 Rev 1



# CHAIN OF CUSTODY RECORD

Form 100 (Rev. 04/04/04)

Sydney Laboratory  
2725 Hwy 103  
301504081

Brisbane Laboratory  
Unit 1, 21 Endeavour Drive, Morningside QLD 4172  
71 5600 9277

Perth Laboratory  
Level 2, 1111 Kensington Road, Perth WA 6150  
91 923 9929

Melbourne Laboratory  
6 Gaffney Street, Dandenong VIC 3175  
81 964 9140

Company: **Alliance Res**

Address:

Contact Name:

Phone No.:

Special Instructions:

Purchase Order:

Quote ID No.:

Client Sample ID:

Sampled Date/Time:

Matrix:

Analysis:

Project Name:

Project No.:

No.	Client Sample ID	Sampled Date/Time	Matrix	Analysis	Project Name	Project No.	Handed over by	Signature	Date
1	TP1-03-03	5.4.22	S		Alliance W&E Site 2				
2	TP1-07-1.0				Hold				
3	TP2-02-0.3								
4	TP2-07-1.0								
5	TP3-02-0.3								
6	TP3-07-1.0								
7	TP3-1.5-1.6								
8	TP3-1.8-2.0								
9	TP4-02-0.3								
10	TP4-07-1.0								
Total Counts									

Project Manager: **Mr Dvorsky**

Signature: *[Signature]*

Containers:  
500mL Plastic  
250mL Plastic  
125mL Plastic  
200mL Amber Glass  
40mL VOA vial  
500mL PFAS Bottle  
Jar (Glass or HDPE)  
Other (Reference AS4966, WA Guideline)

Required Turnaround Time (TAT)  
Monday - Friday 09:00 - 17:00

Send my results by:  
 Overnight (reporting by 9am)  
 Same day \*  
 2 days \*  
 3 days (Standard)  
 Other

Sample Comments:  
/ Dangerous Goods / Hazard Warning

Handed over by: **Michael Dvorsky**  
Signature: *[Signature]*  
Date: **5.4.22**

Required for Invoice:  No  
Email for Results:  No

Signature: *[Signature]*  
Date: **5.4.22**

Method of Storage:  Cooler /  Hand Delivered /  Postal

Received by: *[Signature]* Date: **5.4.22** Time: **11:30**

Received by: *[Signature]* Date: **5.4.22** Time: **14:44**



**RE: Eurofins Test Results, Invoice - Report 877420 : Site MACQUARIE PARK**

Michael Dunesky <michael@allgeo.com.au>

Tue 2022-04-12 10:05 PM

To: Hannah Mawbey <HannahMawbey@eurofins.com>

Cc: #AU04\_Enviro\_Sample\_NSW <EnviroSampleNSW@eurofins.com>; Andrew Black <AndrewBlack@eurofins.com>

**CAUTION: EXTERNAL EMAIL** - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Thanks Hannah can we please request additional TCLP on sample:

TP2-0-0.3 – lead

24 hr TAT

Regards,

**Michael Dunesky**

Senior Environmental Consultant

**Mobile:** 0450 836 300 | **Email:** michael@allgeo.com.au



Office Phone: 1800 288 188

Admin Email: [admin@allgeo.com.au](mailto:admin@allgeo.com.au)

Website: [allgeo.com.au](http://allgeo.com.au)

Office & Lab: 8-10 Welder Road, Seven Hills NSW 2147

Postal Address: PO Box 275, Seven Hills NSW 1730

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**From:** HannahMawbey@eurofins.com <HannahMawbey@eurofins.com>

**Sent:** Tuesday, 12 April 2022 8:47 PM

**To:** Michael Dunesky <michael@allgeo.com.au>

**Subject:** Eurofins Test Results, Invoice - Report 877420 : Site MACQUARIE PARK

Please find attached report and invoice as per header.

Kind Regards,  
Hannah Mawbey

**Eurofins| Environment Testing**

Unit 16/7 Investigator Dr

Unanderra NSW 2526

AUSTRALIA

Phone : +61 2 9900 8492

**CHAIN OF CUSTODY RECORD**

Sydney Laboratory  
 Unit 11, 151 Macquarie Street, Sydney NSW 1500 (2000)  
 02 9439 8400 Email: Sample@eurofins.com.au

Brisbane Laboratory  
 Unit 11, 21 Staveley Place, Brisbane QLD 4000  
 07 5522 8001 Email: Sample@eurofins.com.au

Perth Laboratory  
 Unit 11, 111 Stirling Highway, Perth WA 6000  
 08 9425 1000 Email: Sample@eurofins.com.au

Melbourne Laboratory  
 21 Lygon Street East, Geelong VIC 3210  
 03 5251 2000 Email: Sample@eurofins.com.au

**Company** ALLIANCE GEOTECHNICAL  
**Address** 10 WELDER ROAD, SEVEN HILLS NSW  
**Contact Name** Ayodeji Awopetu  
**Phone No** 415519920  
**Special Directions**  
**Purchase Order**  
**Quote ID No**

**Project No** 15030  
**Project Name** 2 Lyonpark Rd.

**Project Manager** M. Dunne  
**EDD Format** (ESdat, EQuIS, Custom)

**Sampler(s)** Deji  
**Handed over by** Michael@allgeo.com  
**Email for Invoice** Ayodeji@allgeo.com.au  
**Email for Results** Enviro@allgeo.com.au

**Analyses**  
 (How this analysis is reported please specify "Cap" or "Filter" (DUST) - not to be used for impact (DUST) going)  
 Allione WAC Suite 2  
 Asbestos CD  
 H100d

**Containers**  
 1L Plastic  
 250ml Plastic  
 125ml Plastic  
 200ml Amber Glass  
 45ml VOA vial  
 200ml PFAS Boile  
 Jar (Gases of H2O)  
 Other (Addition: Asbestos WA Guidelines)

**Turnaround Time (TAT) Requirements**  
 Overnight (9am)\*  
 1 Day\* 2 Day\*  
 3 Day\* 4 Day\*  
 Other ( \* Surcharges apply)

**Sample Comments / Dangerous Goods Hazard Warning**

Client Sample ID	Sampled Date/Time (dd/mm/yyyy hh:mm)	Matrix (S) Water (W)						
TP1-0-0.1	22/04	S	X				X	X
TP1-0.1-0.3			X				X	X
TP2-0-0.4			X				X	X
TP2-0.7-1.0			X				X	X
TP3-0-0.4			X				X	X
TP3-0.7-1.0			X				X	X
TP4-0-0.1			X				X	X
TP4-0.1-0.3			X				X	X
TP5-0-0.2			X				X	X
TP5-0.4-0.5			X		X		X	X
TP5-0.7-1.0			X				X	X
N-0-0.5				X			X	
N-0.5-1.0				X			X	
S-0-0.5				X			X	
S-0.5-1.0				X			X	
E-0-0.5				X			X	
E-0.5-1.0				X			X	
W-0-0.5				X			X	
W-0.5-1.0				X			X	

**Total Counts** 10 8 1

**Method of Shipment** Courier (#) Hand Delivered Postal Name Ayodeji Awopetu Signature Date Time

**Eurofins | mgt** Received By *Ayodeji* Signature *A* Date *22/04* Time *5:45 PM* Temperature *4.5*

**Laboratory Use Only** Received By Signature Date Time Report No

Alliance Geotechnical  
10 Welder Road  
Seven Hills  
NSW 2147



NATA Accredited  
Accreditation Number 1261  
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing  
NATA is a signatory to the ILAC Mutual Recognition  
Arrangement for the mutual recognition of the  
equivalence of testing, medical testing, calibration,  
inspection, proficiency testing scheme providers and  
reference materials producers reports and certificates.

Attention: Michael Dunesky

Report 877420-S  
Project name MACQUARIE PARK  
Received Date Apr 05, 2022

Client Sample ID			TP1-0-0.3	TP1-0.7-1.0	TP2-0-0.3	TP2-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009173	S22- Ap0009174	S22- Ap0009175	S22- Ap0009176
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	76	230	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	76	230	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	200	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	200	< 100	< 100
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	130	144	142	131
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			TP1-0-0.3	TP1-0.7-1.0	TP2-0-0.3	TP2-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009173	S22- Ap0009174	S22- Ap0009175	S22- Ap0009176
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	< 2	12	16	7.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.5	< 0.4
Chromium	5	mg/kg	6.4	21	39	12
Copper	5	mg/kg	11	5.4	59	< 5
Lead	5	mg/kg	16	65	140	61
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	14	< 5
Zinc	5	mg/kg	33	39	470	21
<b>% Moisture</b>						
	1	%	23	11	18	10

Client Sample ID			TP3-0-0.3	TP3-1.5-1.6	TP4-0-0.3	TP4-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009177	S22- Ap0009178	S22- Ap0009179	S22- Ap0009180
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Total Recoverable Hydrocarbons</b>						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	65
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	130
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	195
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	190
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	120
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	310
<b>BTEX</b>						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	62	136	133	123
<b>Polycyclic Aromatic Hydrocarbons</b>						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP3-0-0.3	TP3-1.5-1.6	TP4-0-0.3	TP4-0.7-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S22- Ap0009177	S22- Ap0009178	S22- Ap0009179	S22- Ap0009180
Date Sampled			Apr 05, 2022	Apr 05, 2022	Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit				
<b>Polychlorinated Biphenyls</b>						
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	78	67	75	75
Tetrachloro-m-xylene (surr.)	1	%	102	98	88	63
<b>Heavy Metals</b>						
Arsenic	2	mg/kg	5.3	5.4	11	7.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	29	24	21
Copper	5	mg/kg	7.2	13	12	7.8
Lead	5	mg/kg	22	11	24	34
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	6.7
Zinc	5	mg/kg	29	16	13	17
<b>% Moisture</b>						
	1	%	10	15	16	16

Client Sample ID			TP4-1.5-1.7	TP5-0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S22- Ap0009181	S22- Ap0009182
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Total Recoverable Hydrocarbons</b>				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
<b>BTEX</b>				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	121	132

Client Sample ID			TP4-1.5-1.7	TP5-0.2-0.3
Sample Matrix			Soil	Soil
Eurofins Sample No.			S22- Ap0009181	S22- Ap0009182
Date Sampled			Apr 05, 2022	Apr 05, 2022
Test/Reference	LOR	Unit		
<b>Polychlorinated Biphenyls</b>				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorodate (surr.)	1	%	60	105
Tetrachloro-m-xylene (surr.)	1	%	88	133
<b>Heavy Metals</b>				
Arsenic	2	mg/kg	3.1	5.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	22	21
Copper	5	mg/kg	8.3	5.3
Lead	5	mg/kg	5.7	16
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5
Zinc	5	mg/kg	8.1	16
<b>% Moisture</b>				
% Moisture	1	%	12	10





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Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

**Company Name:** Alliance Geotechnical

**Address:** 10 Welder Road  
Seven Hills  
NSW 2147

**Project Name:** MACQUARIE PARK

**Order No.:**

**Report #:** 877420  
**Phone:** 1800 288 188  
**Fax:** 02 9675 1888

**Received:** Apr 5, 2022 11:30 AM

**Due:** Apr 11, 2022  
**Priority:** 3 Day  
**Contact Name:** Michael Dunesky

**Eurofins Analytical Services Manager : Andrew Black**

Sample Detail		Asbestos Absence /Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAHM/8/OCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254					X
Sydney Laboratory - NATA # 1261 Site # 18217		X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794					X
Mayfield Laboratory - NATA # 1261 Site # 25079					
Perth Laboratory - NATA # 2377 Site # 2370					
External Laboratory					

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID	Asbestos Absence /Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAHM/8/OCP/PCB/Asb
1	TP1-0-0.3	Apr 05, 2022		Soil	S22- Ap0009173			X	X
2	TP1-0.7-1.0	Apr 05, 2022		Soil	S22- Ap0009174			X	X
3	TP2-0-0.3	Apr 05, 2022		Soil	S22- Ap0009175			X	X
4	TP2-0.7-1.0	Apr 05, 2022		Soil	S22- Ap0009176			X	X
5	TP3-0-0.3	Apr 05, 2022		Soil	S22- Ap0009177			X	X
6	TP3-1.5-1.6	Apr 05, 2022		Soil	S22- Ap0009178			X	X



Environment Testing

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Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Company Name: Alliance Geotechnical

Address: 10 Welder Road  
Seven Hills  
NSW 2147

Project Name: MACQUARIE PARK

Order No.:

Report #: 877/420  
Phone: 1800 288 188  
Fax: 02 9675 1888

Received:

Apr 5, 2022 11:30 AM  
Due: Apr 11, 2022  
Priority: 3 Day  
Contact Name: Michael Dunesky

Eurofins Analytical Services Manager : Andrew Black

Sample Detail		Asbestos Absence /Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/B/TEXN/PAH/M8/OCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254					
Sydney Laboratory - NATA # 1261 Site # 18217		X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794					
Mayfield Laboratory - NATA # 1261 Site # 25079					
Perth Laboratory - NATA # 2377 Site # 2370					
External Laboratory					
Test Counts		1	2	10	10

## Quality Control Results

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>					
<b>Total Recoverable Hydrocarbons</b>					
TRH C10-C14	mg/kg	< 20	20	Pass	
TRH C15-C28	mg/kg	< 50	50	Pass	
TRH C29-C36	mg/kg	< 50	50	Pass	
TRH >C10-C16	mg/kg	< 50	50	Pass	
TRH >C16-C34	mg/kg	< 100	100	Pass	
TRH >C34-C40	mg/kg	< 100	100	Pass	
<b>Method Blank</b>					
<b>Polycyclic Aromatic Hydrocarbons</b>					
Acenaphthene	mg/kg	< 0.5	0.5	Pass	
Acenaphthylene	mg/kg	< 0.5	0.5	Pass	
Anthracene	mg/kg	< 0.5	0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5	0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5	0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5	0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5	0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5	0.5	Pass	
Chrysene	mg/kg	< 0.5	0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5	0.5	Pass	
Fluoranthene	mg/kg	< 0.5	0.5	Pass	
Fluorene	mg/kg	< 0.5	0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5	0.5	Pass	
Naphthalene	mg/kg	< 0.5	0.5	Pass	
Phenanthrene	mg/kg	< 0.5	0.5	Pass	
Pyrene	mg/kg	< 0.5	0.5	Pass	
<b>Method Blank</b>					
<b>Organochlorine Pesticides</b>					
Chlordanes - Total	mg/kg	< 0.1	0.1	Pass	
4,4'-DDD	mg/kg	< 0.05	0.05	Pass	
4,4'-DDE	mg/kg	< 0.05	0.05	Pass	
4,4'-DDT	mg/kg	< 0.05	0.05	Pass	
a-HCH	mg/kg	< 0.05	0.05	Pass	
Aldrin	mg/kg	< 0.05	0.05	Pass	
b-HCH	mg/kg	< 0.05	0.05	Pass	
d-HCH	mg/kg	< 0.05	0.05	Pass	
Dieldrin	mg/kg	< 0.05	0.05	Pass	
Endosulfan I	mg/kg	< 0.05	0.05	Pass	
Endosulfan II	mg/kg	< 0.05	0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05	0.05	Pass	
Endrin	mg/kg	< 0.05	0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05	0.05	Pass	
Endrin ketone	mg/kg	< 0.05	0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05	0.05	Pass	
Heptachlor	mg/kg	< 0.05	0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05	0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05	0.05	Pass	
Methoxychlor	mg/kg	< 0.05	0.05	Pass	
Toxaphene	mg/kg	< 0.5	0.5	Pass	
<b>Method Blank</b>					
<b>Polychlorinated Biphenyls</b>					
Aroclor-1016	mg/kg	< 0.1	0.1	Pass	

Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code		
Endrin aldehyde	%	84	70-130	Pass			
Endrin ketone	%	80	70-130	Pass			
g-HCH (Lindane)	%	83	70-130	Pass			
Heptachlor	%	102	70-130	Pass			
Heptachlor epoxide	%	88	70-130	Pass			
Hexachlorobenzene	%	93	70-130	Pass			
Methoxychlor	%	72	70-130	Pass			
<b>LCS - % Recovery</b>							
<b>Polychlorinated Biphenyls</b>							
Aroclor-1016	%	83	70-130	Pass			
Aroclor-1260	%	84	70-130	Pass			
<b>LCS - % Recovery</b>							
<b>Heavy Metals</b>							
Arsenic	%	97	80-120	Pass			
Cadmium	%	100	80-120	Pass			
Chromium	%	99	80-120	Pass			
Copper	%	98	80-120	Pass			
Lead	%	98	80-120	Pass			
Mercury	%	102	80-120	Pass			
Nickel	%	101	80-120	Pass			
Zinc	%	99	80-120	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
<b>Spike - % Recovery</b>							
<b>Total Recoverable Hydrocarbons</b>				Result 1			
TRH C6-C9	S22-Ap0019946	NCP	%	91	70-130	Pass	
TRH C10-C14	S22-Ap0009176	CP	%	86	70-130	Pass	
Naphthalene	S22-Ap0019946	NCP	%	105	70-130	Pass	
TRH C6-C10	S22-Ap0019946	NCP	%	89	70-130	Pass	
TRH >C10-C16	S22-Ap0009176	CP	%	83	70-130	Pass	
<b>Spike - % Recovery</b>							
<b>BTEX</b>				Result 1			
Benzene	S22-Ap0019946	NCP	%	100	70-130	Pass	
Toluene	S22-Ap0019946	NCP	%	80	70-130	Pass	
Ethylbenzene	S22-Ap0019946	NCP	%	75	70-130	Pass	
m&p-Xylenes	S22-Ap0019946	NCP	%	82	70-130	Pass	
o-Xylene	S22-Ap0019946	NCP	%	83	70-130	Pass	
Xylenes - Total*	S22-Ap0019946	NCP	%	82	70-130	Pass	
<b>Spike - % Recovery</b>							
<b>Polycyclic Aromatic Hydrocarbons</b>				Result 1			
Acenaphthene	S22-Ap0015368	NCP	%	106	70-130	Pass	
Acenaphthylene	S22-Ap0015368	NCP	%	123	70-130	Pass	
Anthracene	S22-Ap0015368	NCP	%	110	70-130	Pass	
Benz(a)anthracene	S22-Ap0001091	NCP	%	125	70-130	Pass	
Benzo(a)pyrene	S22-Ap0015368	NCP	%	129	70-130	Pass	
Benzo(b&j)fluoranthene	S22-Ap0015368	NCP	%	130	70-130	Pass	
Benzo(g,h,i)perylene	S22-Ap0015368	NCP	%	129	70-130	Pass	
Benzo(k)fluoranthene	S22-Ap0015368	NCP	%	114	70-130	Pass	
Chrysene	S22-Ap0015368	NCP	%	116	70-130	Pass	
Dibenz(a,h)anthracene	S22-Ap0015368	NCP	%	128	70-130	Pass	
Fluoranthene	S22-Ap0015368	NCP	%	119	70-130	Pass	
Fluorene	S22-Ap0015368	NCP	%	128	70-130	Pass	
Indeno(1,2,3-cd)pyrene	S22-Ap0015368	NCP	%	124	70-130	Pass	
Naphthalene	S22-Ap0015368	NCP	%	122	70-130	Pass	
Phenanthrene	S22-Ap0001091	NCP	%	119	70-130	Pass	



Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g,h,i)perylene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a,h)anthracene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S22-Ap0004807	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Toxaphene	S22-Ap0004807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Polychlorinated Biphenyls				Result 1	Result 2	RPD		
Aroclor-1016	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1221	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1232	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1242	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1248	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1254	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Aroclor-1260	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Total PCB*	S22-Ap0004807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass

## Comments

### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

### Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHS
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

### Authorised by:

Hannah Mawbey	Analytical Services Manager
Gabriele Cordero	Senior Analyst (NSW)
Chamath JHM Annakkage	Senior Analyst (NSW)



**Glenn Jackson**  
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

\* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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Project Name

MACQUARIE PARK

Project ID

Date Sampled

Apr 05, 2022

Report

877420-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP1-0-0.3	22-Ap0009173	Apr 05, 2022	Approximate Sample 337g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP1-0.7-1.0	22-Ap0009174	Apr 05, 2022	Approximate Sample 459g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP2-0-0.3	22-Ap0009175	Apr 05, 2022	Approximate Sample 484g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP2-0.7-1.0	22-Ap0009176	Apr 05, 2022	Approximate Sample 380g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP3-0-0.3	22-Ap0009177	Apr 05, 2022	Approximate Sample 498g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP3-1.5-1.6	22-Ap0009178	Apr 05, 2022	Approximate Sample 481g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP4-0-0.3	22-Ap0009179	Apr 05, 2022	Approximate Sample 391g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP4-0.7-1.0	22-Ap0009180	Apr 05, 2022	Approximate Sample 516g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

**Sample History**

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 05, 2022	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 05, 2022	Indefinite





Environment Testing

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

**Newcastle**  
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**Christchurch**  
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Phone : 0800 856 450  
IANZ # 1290

**Company Name:** Alliance Geotechnical  
**Address:** 10 Waiher Road  
Seven Hills  
NSW 2147

**Project Name:** MACQUARIE PARK

**Order No.:** 877420  
**Report #:** 1800 288 188  
**Phone:** 02 9675 1888  
**Fax:**

**Received:** Apr 5, 2022 11:30 AM  
**Due:** Apr 11, 2022  
**Priority:** 3 Day  
**Contact Name:** Michael Dunesky

**Eurofins Analytical Services Manager : Andrew Black**

Sample Detail

			Asbestos Absence /Presence	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254						
Sydney Laboratory - NATA # 1261 Site # 18217			X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794						
Mayfield Laboratory - NATA # 1261 Site # 25079						
Perth Laboratory - NATA # 2377 Site # 2370						
<b>External Laboratory</b>						
7	TP4-0-0.3	Apr 05, 2022	Soil	S22- Ap0009179	X	X
8	TP4-0.7-1.0	Apr 05, 2022	Soil	S22- Ap0009180	X	X
9	TP4-1.5-1.7	Apr 05, 2022	Soil	S22- Ap0009181	X	X
10	TP5-0.2-0.3	Apr 05, 2022	Soil	S22- Ap0009182	X	X
11	TP3-0.7-1.0	Apr 05, 2022	Soil	S22- Ap0009183	X	
12	TP3-1.8-2.0	Apr 05, 2022	Soil	S22- Ap0009184	X	
13	TP4-FRAG	Apr 05, 2022	Building Materials	S22- S22- Ap0009185	X	

## Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour blue indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour orange indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

## Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001). If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

## Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/md	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

## Calculations

Airborne Fibre Concentration:  $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{t}\right)$

Asbestos Content (as asbestos):  $\% w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos):  $\% w/w = \frac{\sum (m \times P_A) \times x}{x}$

## Terms

<b>%asbestos</b>	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 <i>Appendix 2</i> , else assumed to be 15% in accordance with WA DOH <i>Appendix 2 (P<sub>A</sub>)</i> .
<b>ACM</b>	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
<b>AF</b>	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
<b>AFM</b>	Airborne Fibre Monitoring, e.g. by the MFM.
<b>Amosite</b>	Amosite Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
<b>AS</b>	Australian Standard.
<b>Asbestos Content (as asbestos)</b>	Total % w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
<b>Chrysotile</b>	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
<b>COC</b>	Chain of Custody.
<b>Crocidolite</b>	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
<b>Dry</b>	Sample is dried by heating prior to analysis.
<b>DS</b>	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
<b>FA</b>	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
<b>Fibre Count</b>	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
<b>Fibre ID</b>	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
<b>Friable</b>	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
<b>HSG248</b>	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
<b>HSG264</b>	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
<b>ISO (also ISO/IEC)</b>	International Organization for Standardization / International Electrotechnical Commission.
<b>K Factor</b>	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
<b>LOR</b>	Limit of Reporting.
<b>MFM (also NOHSC:3003)</b>	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
<b>NEPM (also ASC NEPM)</b>	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
<b>Organic</b>	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
<b>PCM</b>	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
<b>PLM</b>	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
<b>SMF</b>	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
<b>SRA</b>	Sample Receipt Advice.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
<b>UK HSE HSG</b>	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
<b>UMF</b>	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
<b>WA DOH</b>	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
<b>Weighted Average</b>	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (%w/w).

Alliance Geotechnical  
 10 Welder Road  
 Seven Hills  
 NSW 2147



NATA Accredited  
 Accreditation Number 1261  
 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing  
 NATA is a signatory to the ILAC Mutual Recognition  
 Arrangement for the mutual recognition of the  
 equivalence of testing, medical testing, calibration,  
 inspection, proficiency testing scheme providers and  
 reference materials producers reports and certificates.

Attention: Michael Dunesky  
 Report 879642-L  
 Project name ADDITIONAL- MACQUARIE PARK  
 Received Date Apr 12, 2022

Client Sample ID			TP2-0-0.3
Sample Matrix			US Leachate
Eurofins Sample No.			S22- Ap0026860
Date Sampled			Apr 05, 2022
Test/Reference	LOR	Unit	
<b>Heavy Metals</b>			
Lead	0.01	mg/L	< 0.01
<b>USA Leaching Procedure</b>			
Leachate Fluid <sup>CO1</sup>		comment	1.0
pH (initial)	0.1	pH Units	5.4
pH (off)	0.1	pH Units	5.1
pH (USA HCl addition)	0.1	pH Units	2.3





Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
<b>Method Blank</b>										
<b>Heavy Metals</b>										
Lead				mg/L	< 0.01			0.01	Pass	
<b>LCS - % Recovery</b>										
<b>Heavy Metals</b>										
Lead				%	114			80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Spike - % Recovery</b>										
<b>Heavy Metals</b>										
Lead				S22-Ap0023805	NCP	%	101	75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code	
<b>Duplicate</b>										
<b>Heavy Metals</b>										
Lead				S22-Ap0026637	NCP	mg/L	0.16	0.18	7.0	30% Pass

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10 Welder Road  
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Arrangement for the mutual recognition of the  
equivalence of testing, medical testing, calibration,  
inspection, proficiency testing scheme providers and  
reference materials producers reports and certificates.

Attention: Michael Dunesky  
Report 882384-AID  
Project Name 2 LYONPARK RD  
Project ID 15030  
Received Date Apr 22, 2022  
Date Reported May 02, 2022

**Methodology:**

**Asbestos Fibre Identification** Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.  
*NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*

**Unknown Mineral Fibres** Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.  
*NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*

**Subsampling Soil Samples** The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.  
*NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*

**Bonded asbestos-containing material (ACM)** The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.  
*NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*

**Limit of Reporting** The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).  
The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).  
*NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP5_0_0.2	22-Ap0048263	Apr 22, 2022	Approximate Sample 89g Sample consisted of: Brown coarse-grained soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP5_0.7_1	22-Ap0048264	Apr 22, 2022	Approximate Sample 210g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
N_0_0.5	22-Ap0048265	Apr 22, 2022	Approximate Sample 252g Sample consisted of: Brown coarse-grained soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
N_0.5_1	22-Ap0048266	Apr 22, 2022	Approximate Sample 207g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
S_0_0.5	22-Ap0048267	Apr 22, 2022	Approximate Sample 227g Sample consisted of: Brown fine-grained clayey soil and rocks	Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of asbestos containing material = 4.2g* Total estimated asbestos content in the sample = 0.42g* Total estimated asbestos concentration = 0.19% w/w** Organic fibre detected. No trace asbestos detected.
S_0.5_1	22-Ap0048268	Apr 22, 2022	Approximate Sample 193g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
E_0_0.5	22-Ap0048269	Apr 22, 2022	Approximate Sample 147g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
E_0.5_1	22-Ap0048270	Apr 22, 2022	Approximate Sample 217g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
W_0_0.5	22-Ap0048271	Apr 22, 2022	Approximate Sample 190g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
W_0.5_1	22-Ap0048272	Apr 22, 2022	Approximate Sample 146g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.







Environment Testing

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Eurofins Environment Testing NZ Limited

NZBN: 9429046024954

Company Name: Alliance Geotechnical

Address: 10 Welder Road  
Seven Hills  
NSW 2147

Project Name: 2 LYONPARK RD  
Project ID: 15030

Order No.:

Report #: 882384  
Phone: 1800 288 188  
Fax: 02 9675 1888

Received:

Apr 22, 2022 5:45 PM  
Due: Apr 29, 2022  
Priority: 5 Day  
Contact Name: Michael Dunesky

Eurofins Analytical Services Manager : Andrew Black

Sample Detail

			Asbestos - AS4964	HOLD	Moisture Set	Alliance WAC Suite 2:TRH/BTEXN/PAH/M8/OCCP/PCB/Asb
Melbourne Laboratory - NATA # 1261 Site # 1254						
Sydney Laboratory - NATA # 1261 Site # 18217			X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794						
Mayfield Laboratory - NATA # 1261 Site # 25079						
Perth Laboratory - NATA # 2377 Site # 2370						
External Laboratory						
13 S_0_0_5	Apr 22, 2022	Soil	X			S22- Ap0048267
14 S_0_5_1	Apr 22, 2022	Soil	X			S22- Ap0048268
15 E_0_0_5	Apr 22, 2022	Soil	X			S22- Ap0048269
16 E_0_5_1	Apr 22, 2022	Soil	X			S22- Ap0048270
17 W_0_0_5	Apr 22, 2022	Soil	X			S22- Ap0048271
18 W_0_5_1	Apr 22, 2022	Soil	X			S22- Ap0048272
19 TP5_0_4_0_5	Apr 22, 2022	Soil		X		S22-

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## Units

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g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM ( $V = r \times t$ )
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

## Calculations

Airborne Fibre Concentration: 
$$C = \left(\frac{F}{n}\right) \times \left(\frac{M}{n}\right) \times \left(\frac{1}{V}\right) \times \left(\frac{1}{r}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$$

Asbestos Content (as asbestos): 
$$\% w/w = \frac{(m \times P_A)}{M}$$

Weighted Average (of asbestos): 
$$\%_{WA} = \frac{\sum (m \times P_A)_i}{x}$$

## Terms

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<b>Fibre ID</b>	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerte) or Crocidolite asbestos.
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<b>SMF</b>	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
<b>SRA</b>	Sample Receipt Advice.
<b>Trace Analysis</b>	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
<b>UK HSE HSG</b>	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
<b>UMF</b>	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
<b>WA DOH</b>	Reference document for the NEPM. Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
<b>Weighted Average</b>	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% <sub>WA</sub> ).

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Fwd: Eurofins Test Results, Invoice - Report 882384 - Site 2 LYONPARK RD (15030)



Ayodeji Awopetu  
To: Michael Dunesky

Reply Reply All Forward

Wed 4/05/2022 1:31 AM

From: Andrew Black <[AndrewBlack@eurofins.com](mailto:AndrewBlack@eurofins.com)>

Sent: Tuesday, May 3, 2022 1:34:06 PM

To: Ayodeji Awopetu <[ayodeji@aliso.com.au](mailto:ayodeji@aliso.com.au)>

Subject: RE: Eurofins Test Results, Invoice - Report 882384 - Site 2 LYONPARK RD (15030)

That would be:

40x30x5mm

Andrew Black  
Analytical Services Manager

Eurofins | Environment Testing Australia Pty Ltd

Unit 7

7 Friesian Close

SANDGATE NSW 2304

AUSTRALIA

Phone +61 2 9900 8490

Mobile +61 410 220 750

Email [AndrewBlack@eurofins.com](mailto:AndrewBlack@eurofins.com)

Website [eurofins.com.au/environmental-testing](http://eurofins.com.au/environmental-testing)

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Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
MACQUARIE FIELDS	Callers Service Station	60 Harsko STREET	Service Station	Regulation under CLM Act not required	-33.88557278	150.8933681
MACQUARIE PARK	Callers North River Service Station	41-43 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.78118236	151.1312241
MACQUARIE PARK	1-7 Waterloo Road, Macquarie Park	1-7 Waterloo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.72006077	151.1332145
MACQUARIE PARK	Parkers Creek Depot - Proposed Operations Centre Site	140 Willis ROAD	Landfill	Regulation under CLM Act not required	-33.70581579	151.1367079
MACQUARIE PARK	De Bunge Cycleway - Lane Cove National Park	Riverside DRIVE	Other Petroleum	Regulation under CLM Act not required	-33.77668905	151.130542
MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act	-33.73693058	151.1572926
MAITLAND	Hanna and High Street	Hanna Street and High STREET	Service Station	Regulation under CLM Act not required	-33.73731483	151.1515879
MAITLAND	Coles Express Service Station	230 High STREET	Service Station	Regulation under CLM Act not required	-33.73923007	151.1420999
MALDEN	ANZAC Rifle Range former landfill	Franklin STREET	Landfill	Regulation being finalised	-33.81792471	151.2566173
MANDALONG	Mandalong Mine	Mandalong ROAD	Other Industry	Regulation under CLM Act not required	-33.11735583	151.4616451
MANGROVE MOUNTAIN	Parkway Litter Containment Pit site	258 Warwick ROAD	Unclassified	Regulation under CLM Act not required	-33.24617847	151.1877214
MANILLA	Tamworth Regional Council Works Depot Manilla	73 River STREET	Other Petroleum	Regulation under CLM Act not required	-30.74879441	150.7181011
MANLY	Callers Service Station	88 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.79306089	151.2853633
MANLY	Open Space at end of Stuart Street (Lot 1 DP544297)	End of Stuart STREET	Gasworks	Regulation under CLM Act not required	-33.8070063	151.2868273
MANLY	St Peters Estate	151 Daney ROAD	Unclassified	Regulation under CLM Act not required	-33.8044546	151.1933595

## Search results

Your search for: **General Search** with the following criteria

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Number	Name	Location	Type	Status	Issued date
<a href="#">13044</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	POEO licence	Issued	08 May 2009
<a href="#">1113906</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Aug 2010
<a href="#">1118584</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 Nov 2010
<a href="#">1504092</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Feb 2012
<a href="#">1508075</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	29 Aug 2012
<a href="#">1532458</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Sep 2015
<a href="#">1614037</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	Compliance Audit	Complete	01 Nov 2021
<a href="#">1606383</a>	CITY OF RYDE	160 WICKS ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Dec 2021
<a href="#">11735</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	POEO licence	Surrendered	04 Sep 2002
<a href="#">1021136</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Oct 2002
<a href="#">1022236</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	19 Nov 2002
<a href="#">1024227</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	24 Jan 2003
<a href="#">1024695</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	05 Feb 2003
<a href="#">1025435</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	07 Mar 2003
<a href="#">1025609</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	18 Mar 2003
<a href="#">1026362</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 May 2003
<a href="#">1027792</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	13 Jun 2003
<a href="#">1028574</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	27 Jun 2003
<a href="#">1028809</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	04 Jul 2003
<a href="#">1028972</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	11 Jul 2003

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06 April 2022

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>	<u>Issued date</u>
<a href="#">1035772</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	30 Mar 2004
<a href="#">1036202</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Apr 2004
<a href="#">1036587</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	30 Apr 2004
<a href="#">1037117</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	20 May 2004
<a href="#">1038510</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Aug 2004
<a href="#">1039737</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	10 Aug 2004
<a href="#">1039827</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	13 Aug 2004
<a href="#">1040010</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	25 Aug 2004
<a href="#">1040389</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	03 Sep 2004
<a href="#">1041466</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	14 Oct 2004
<a href="#">1041576</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	21 Oct 2004
<a href="#">1042053</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	05 Nov 2004
<a href="#">1042245</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	12 Nov 2004
<a href="#">1042739</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	08 Dec 2004
<a href="#">1044133</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	07 Feb 2005
<a href="#">1044638</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	25 Feb 2005
<a href="#">1046135</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	01 Apr 2005
<a href="#">1047127</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	29 Apr 2005
<a href="#">1048083</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	02 Jun 2005
<a href="#">1048777</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	16 Jun 2005

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<u>Number</u>	<u>Name</u>	<u>Location</u>	<u>Type</u>	<u>Status</u>	<u>Issued date</u>
<a href="#">1087564</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	22 May 2008
<a href="#">1104864</a>	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	s.80 Surrender of a Licence	Issued	14 Aug 2009
<a href="#">11916</a>	MAN DIESEL AUSTRALIA PTY LTD	36-42 WATERLOO ROAD, MACQUARIE PARK, NSW 2113	POEO licence	No longer in force	29 May 2003
<a href="#">1050941</a>	MAN DIESEL AUSTRALIA PTY LTD	36-42 WATERLOO ROAD, MACQUARIE PARK, NSW 2113	s.58 Licence Variation	Issued	11 Sep 2005
<a href="#">1565069</a>	Zinfra Pty Ltd	1A Talavera Road, MACQUARIE PARK, NSW 2113	s.55 Licence Refusal	Issued	24 May 2018

[12345](#)

06 April 2022



	A	B	C	D	E	F	G	H	I	J	K	L												
1	<b>UCL Statistics for Uncensored Full Data Sets</b>																							
2																								
3	User Selected Options																							
4	Date/Time of Computation			ProUCL 5.114/04/2022 10:43:34 AM																				
5	From File			WorkSheet.xls																				
6	Full Precision			OFF																				
7	Confidence Coefficient			95%																				
8	Number of Bootstrap Operations			2000																				
9																								
10																								
11	<b>C0</b>																							
12																								
13	<b>General Statistics</b>																							
14	Total Number of Observations				8				Number of Distinct Observations				7											
15									Number of Missing Observations				0											
16					Minimum				16				Mean				47.25							
17					Maximum				140				Median				29							
18					SD				42.11				Std. Error of Mean				14.89							
19					Coefficient of Variation				0.891				Skewness				1.821							
20																								
21	Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use																							
22	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.																							
23	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).																							
24	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.1																							
25																								
26	<b>Normal GOF Test</b>																							
27	Shapiro Wilk Test Statistic				0.772				<b>Shapiro Wilk GOF Test</b>															
28	5% Shapiro Wilk Critical Value				0.818				Data Not Normal at 5% Significance Level															
29	Lilliefors Test Statistic				0.248				<b>Lilliefors GOF Test</b>															
30	5% Lilliefors Critical Value				0.283				Data appear Normal at 5% Significance Level															
31	Data appear Approximate Normal at 5% Significance Level																							
32																								
33	<b>Assuming Normal Distribution</b>																							
34	<b>95% Normal UCL</b>						<b>95% UCLs (Adjusted for Skewness)</b>																	
35	95% Student's-t UCL			75.46			95% Adjusted-CLT UCL (Chen-1995)			81.98														
36							95% Modified-t UCL (Johnson-1978)			77.06														
37																								
38	<b>Gamma GOF Test</b>																							
39	A-D Test Statistic				0.473				<b>Anderson-Darling Gamma GOF Test</b>															
40	5% A-D Critical Value				0.725				Detected data appear Gamma Distributed at 5% Significance Level															
41	K-S Test Statistic				0.221				<b>Kolmogorov-Smirnov Gamma GOF Test</b>															
42	5% K-S Critical Value				0.298				Detected data appear Gamma Distributed at 5% Significance Level															
43	Detected data appear Gamma Distributed at 5% Significance Level																							
44																								
45	<b>Gamma Statistics</b>																							
46	k hat (MLE)				1.907				k star (bias corrected MLE)				1.275											
47	Theta hat (MLE)				24.77				Theta star (bias corrected MLE)				37.05											
48	nu hat (MLE)				30.52				nu star (bias corrected)				20.41											
49	MLE Mean (bias corrected)				47.25				MLE Sd (bias corrected)				41.84											
50									Approximate Chi Square Value (0.05)				11.15											
51	Adjusted Level of Significance				0.0195				Adjusted Chi Square Value				9.469											
52																								
53	<b>Assuming Gamma Distribution</b>																							
54	95% Approximate Gamma UCL (use when n>=50))						86.47						95% Adjusted Gamma UCL (use when n<50)						101.8					

## Asbestos Clearance Certificate

Certificate Reference	15030-ER-2-1	Certificate Date	16/05/2022
Definition of Clearance Inspection (Work Health and Safety Regulation 2017, Reg 473, Part (5) (a) and (b))	An inspection of an asbestos removal area after asbestos removal work has been completed to verify that the area is safe for normal use, that: <ul style="list-style-type: none"> <li>- includes a visual inspection.</li> </ul>		

CLIENT DETAILS	
Client	Christie Civil Pty Ltd
Client project name	Road Bridge Construction

CLEARANCE INSPECTION DETAILS			
Site address	2 Lyonpark Road, Macquarie Park NSW 2113		
Lot and DP	Lot 101 in DP 1263727		
Nature of asbestos removal work	Bonded Excavation 400m <sup>2</sup> area inspected		
Details of specific asbestos removal work area(s)	Refer to site plan in Appendix A		
Date of removal works	Start	06/05/2022	Finish: 06/05/2022
Contact details of Licensed Class A/B Asbestos Removalist	Company Name:	Christie Civil Pty Ltd	
	Company License No.:	AD211094	
	Supervisor Contact No.:	0412004164	
Date and time of clearance inspection	07/05/2022 at 07:00		
Name of LAA or Competent Person doing inspection	Ayodeji Awopetu		

ASBESTOS REMOVAL DOCUMENTATION			
Was a copy of the asbestos removal control plan (ARCP) provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Was a copy of the asbestos removal works notification form provided?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Is the removal work (e.g. use of enclosures, decontamination facilities, waste facilities) consistent with the ARCP and the notification form?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

ASBESTOS REMOVAL WORK AREA			
Was visible asbestos residue found on exposed surfaces, in the asbestos removal work area or in the vicinity of the area where the removal work was carried out?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
Was visible asbestos residue found on the surface of the transit route and/or waste route?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>

Was air monitoring undertaken as part of the removal works and the results were less than 0.01 fibres/mL?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Were the air monitoring samples been analysed by a NATA-accredited laboratory or a laboratory approved by the WHS regulator?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Where air monitoring was part of the clearance inspection, Is the air monitoring report attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Were validation samples collected from within the removal area? If yes, how many?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	If yes, how many?
Was asbestos detected, using NATA accredited methods, in the samples collected?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Is the Laboratory Certificate of Analysis attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

<b>ENCLOSURES</b>			
<i>Prior to dismantling the enclosure</i>			
Was the exposed surfaces of, the area within the enclosure and the area immediately surrounding the enclosure, inspected and no visible asbestos residue observed?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Was air monitoring undertaken as part of the clearance inspection and the results was less than 0.01 fibres/mL?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Has the air monitoring sample been analysed by a NATA-accredited laboratory or a laboratory approved by the WHS regulator?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Is the air monitoring report attached?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
How many validation samples were collected?	X		N/A <input checked="" type="checkbox"/>
Was asbestos detected, using NATA accredited methods, in the samples collected?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
Can the enclosure be dismantled?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
<i>After the enclosure is dismantled and removed</i>			
Was the exposed surfaces of, area where the enclosure was erected and the area immediately surrounding where the enclosure was erected, inspected and no visible asbestos residue observed.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>

<b>ASBESTOS CLEARANCE DECLARATION</b>			
In the context of asbestos risk, Alliance Geotechnical declares that, as at the date and time of the inspection:			
- The asbestos removal work area inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
- The former enclosure area inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
- The transit route and waste route inspected is free of visible asbestos and suitable for reoccupation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
This declaration must be read in conjunction with the Limitations set out below, and the attached "Important Information About This Report" statement.			

**LIMITATIONS**

This clearance inspection was undertaken with reference to industry accepted practice and was limited to exposed surfaces within the areas nominated in this report that were accessible at the date and time of the inspection. Areas below those surfaces, or adjacent to the nominated areas are not addressed in this certificate and may contain asbestos.

No inspection can be regarded as absolute. Alliance does not warrant or guarantee that all visible asbestos material has been removed, and subsequently, Alliance does not accept liability or responsibility for the completeness of asbestos removal works.

If material suspected of containing asbestos is identified after the date and time of the inspection reported in this clearance certificate, activities should be stopped immediately, access to the area where the material was observed should be restricted, and Alliance contacted for further advice.

**REFERENCES**

NSW Government 2019, 'Code of Practice: How to manage and control asbestos in the workplace', dated August 2019

NSW Government 2019, 'Code of Practice: How to safely remove asbestos', dated August 2019

SafeWork NSW, 'Non-Friable Asbestos Clearance Certificate – No Air Monitoring', Catalogue No. SW08272

Work Health and Safety Act 2011

Work Health and Safety Regulation 2017

For and on behalf of Alliance Geotechnical Pty Ltd



Ayodeji Awopetu  
Graduate Environmental Consultant

**Attached**

Important Information About This Report

Appendix A – Asbestos Removal Work Area Figure

Appendix B – Photographs of Asbestos Removal Work Areas



## Important Information About This Report

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This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to Alliance's engagement. The report must not be used for any purpose other than the purpose specified at the time Alliance was engaged to prepare the report.

The findings presented in this report are based on specific data and information made available during the course of this project. To the best of Alliance's knowledge, these findings represent a reasonable interpretation of the general condition of the site at the time of report completion.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Alliance.

Logs, figures, and drawings are generated for this report based on individual Alliance consultant interpretations of nominated data, as well as observations made at the time fieldwork was undertaken.

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Should additional information that may impact on the findings of this report be encountered or site conditions change, Alliance reserves the right to review and amend this report.

**Appendix A – Asbestos Removal Work Area Figure**

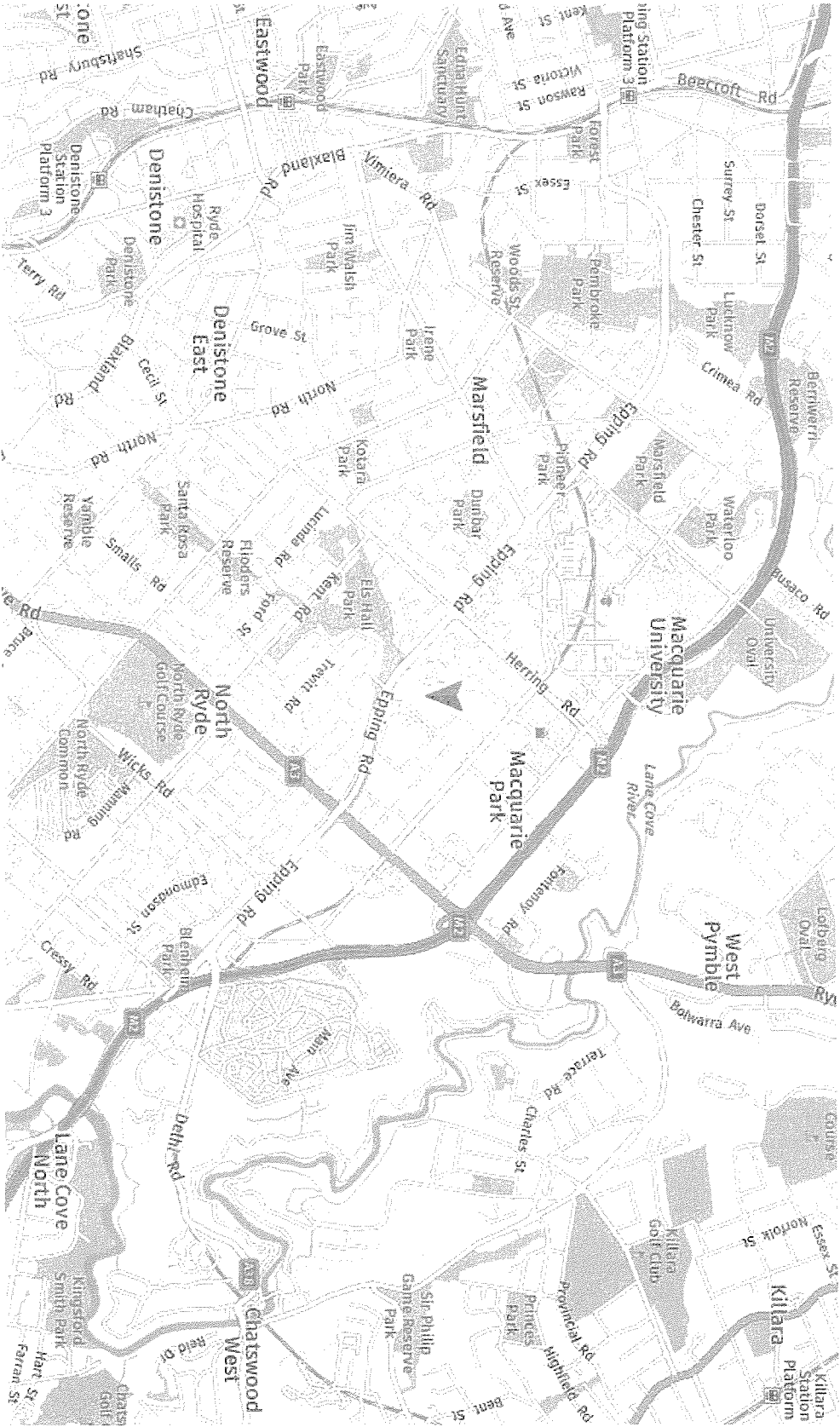


Image Source: [www.nearmap.com](http://www.nearmap.com)

**Site Locality**

Client Name:	Christie Civil Pty Ltd	Figure Number:	1
Project Name:	Asbestos Clearance Inspection	Figure Date:	16 May 2022
Project Location:	2 Lyonpark Road, Macquarie Park NSW 2113	Report Number:	15030-ER-2-1





Image Source: [www.nearmap.com](http://www.nearmap.com)


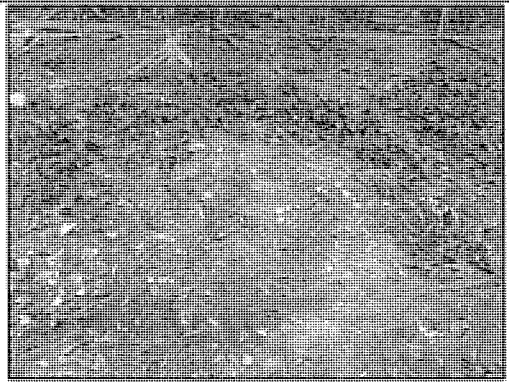


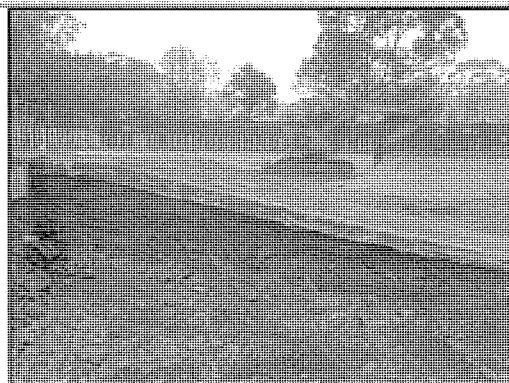
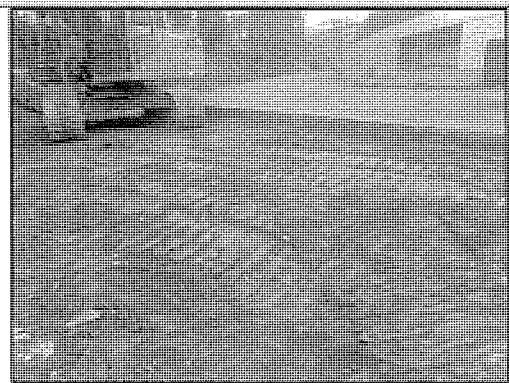
**Sample Locations**

Client Name:	Christie Civil Pty Ltd	Figure Number:	2
Project Name:	Asbestos Clearance Inspection	Figure Date:	16 May 2022
Project Location:	2 Lyonpark Road, Macquarie Park NSW 2113	Report Number:	15030-ER-2-1





**Appendix B – Photographs of Asbestos Removal Work Areas**

Photographs of asbestos removal work area prior to inspection/removal	
	
Photographs of asbestos removal work area post inspection/removal	
	
Photographs of transit route and waste route	
	



Eastern Creek Ecology Park  
Bingo Waste Services Pty Ltd

A.B.N 43162988623

1 Kangaroo Avenue

EASTERN CREEK NSW 2766

Phone: 1300 424 646



Docket GEN1424010-1

Date: 06/05/22

Time In: 8:28:19 AM | Time Out: 8:43:02 AM

**Customer**

Christie Civil Pty Ltd

2 Lyonpark Rd

MACQUARIE PARK

PO: IVANHOE LPR

Vehicle: CO80PR

Type	UOM	Qty.
Gross:	Tonne	52.96
Tare:	Tonne	18.02
Net: Incoming: Asbestos Soils	Tonne	34.94

Driver Name: Rod

Printed: 23/05/2022 6:13:45 PM

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Statement of Compliance

You are under the instruction of site personnel

All machinery has right of way at all times

No hazardous materials are accepted

All Drivers must check axle weights and GVM

All loads must be adequately restrained

You agree to take all reasonable steps to prevent breaches of heavy vehicle national laws

Any breaches of the above may be subject to extra charges

---

Quote Contract Reference No. 68458 for faster service.

Eastern Creek Ecology Park  
Bingo Waste Services Pty Ltd

A.B.N 43162988623

1 Kangaroo Avenue

EASTERN CREEK NSW 2766

Phone: 1300 424 646



Docket GEN1424054-1

Date: 06/05/22

Time In: 9:06:19 AM | Time Out: 9:20:36 AM

**Customer**

Christie Civil Pty Ltd

2 Lyonpark Rd

MACQUARIE PARK

PO: IVANHOE LPR

Vehicle: 001KBT

Type	UOM	Qty.
Gross:	Tonne	53.30
Tare:	Tonne	18.54
Net: Incoming: Asbestos Soils	Tonne	34.76

Driver Name: Serg

Printed: 23/05/2022 6:13:45 PM

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Statement of Compliance

You are under the instruction of site personnel

All machinery has right of way at all times

No hazardous materials are accepted

All Drivers must check axle weights and GVM

All loads must be adequately restrained

You agree to take all reasonable steps to prevent breaches of heavy vehicle national laws

Any breaches of the above may be subject to extra charges

---

Quote Contract Reference No. 68458 for faster service.



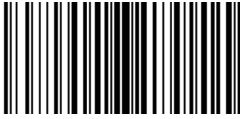
Eastern Creek Ecology Park  
Bingo Waste Services Pty Ltd

A.B.N 43162988623

1 Kangaroo Avenue

EASTERN CREEK NSW 2766

Phone: 1300 424 646



Docket GEN1424126-1

Date: 06/05/22

Time In: 10:23:30 AM | Time Out: 10:36:40 AM

**Customer**

Christie Civil Pty Ltd

2 Lyonpark Rd

MACQUARIE PARK

PO: IVANHOE LPR

Vehicle: CO80PR

Type	UOM	Qty.
Gross:	Tonne	58.14
Tare:	Tonne	17.94
Net: Incoming: Asbestos Soils	Tonne	40.20

Driver Name: Rod

Printed: 23/05/2022 6:13:45 PM

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Statement of Compliance

You are under the instruction of site personnel

All machinery has right of way at all times

No hazardous materials are accepted

All Drivers must check axle weights and GVM

All loads must be adequately restrained

You agree to take all reasonable steps to prevent breaches of heavy vehicle national laws

Any breaches of the above may be subject to extra charges

---

Quote Contract Reference No. 68458 for faster service.