



**ENVIRONMENTAL EARTH
SCIENCES**
CONTAMINATION RESOLVED

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

1 OCTOBER 2021
120077
VERSION 2



1 October 2021

Frasers Property Ivanhoe Pty Ltd

Level 2
1C Homebush Bay Drive
Rhodes NSW 2138

Attention: **Chris Koukoutaris**
Senior Development Manager

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

Please find enclosed a copy of our report entitled as above.

Thank you for the opportunity to undertake this work.

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

Project Manager

Linda Lenihan
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120077_Review of EMS_V2

Version control



Issue	Date	Author ¹ / Update ² / Review ³	Signed
V1	27 Aug 2021	Linda Lenihan ¹ / Chris Newland ² / Mark Stuckey ³	
V2	1 Oct 2021	Linda Lenihan ¹ / Chris Newland ² / Mark Stuckey ³	

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1 INTRODUCTION

1.1 Background

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 Stage 1 of construction works at Ivanhoe Estate, Macquarie Park, NSW. The work was completed in accordance with the State Significant Development (SSD) Conditions of Consent within SSD 8903 MOD 1 and SSD 8903 MOD 2.

A schedule for independent environmental audit(s) was prepared by Environmental Earth Sciences:

- 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 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:

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

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

The EMS performance evaluation audit was undertaken to satisfy the requirements of the following:

- *Clause 9* within the 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) (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*; and
- NSW DPIE (2020b) – *Independent Audit, Post Approval Requirements May 2020*.

Frasers engaged Mainland Civil Pty Ltd (Mainland Civil) as the principal contractor for the Stage 1 project.

Mainland Civil prepared an Integrated Management Plan (IMP) detailing the quality, safety, and environmental aspects of the Stage 1 project, documented in:

- Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate, Macquarie Park* (dated 10 December 2020, Revision E) (the ‘IMP’).

Environmental Earth Sciences NSW conducted an initial independent EMS audit of the ‘IMP’ in November and December 2020, with findings documented in:

- 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).

1.2 Guidelines

The six-monthly performance audit (the ‘Audit’) was undertaken in accordance with the following auditing standards and guidance:

- Standards Australia / Standards New Zealand (AS / NZS) *Environmental Management Systems – Requirements with Guidance for Use* (AS / NZS ISO 14001:2015) (the “Standard”);
- DPE (2015 and 2018); and
- DPIE (2020a and 2020b).

1.3 Audit 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.
- Linda Lenihan – Auditor Assistant and Senior Environmental Scientist.

1.4 Audit objectives

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 (dated: 10 November 2020; reference: SSD 8903 MOD 1 and dated: 7 May 2021; reference SSD 8903 MOD 2), *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 implemented and completed within 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.*

The following Conditions were also reviewed for compliance as part of the Audit:

- Monitoring and Environmental Audits (Condition A20).
- Independent Environmental Audit (Conditions B5 – B9).
- Pre-Construction Dilapidation Report (Condition B25).
- Construction Environmental Management Plan (Condition B40).
- Construction Noise and Vibration Management Plan (Conditions B42 and C7).
- Air Quality and Odour Management Plan (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).

1.5 Audit scope

To achieve the stated objectives, Environmental Earth Sciences NSW undertook the following scope of works:

- Completion of the Audit by a team of suitably qualified team of experts.
- Submission of a document request to Frasers and Mainland Civil requesting relevant regulatory approvals (compliance documentation) including, but not limited to environmental monitoring results and waste disposal documentation.
- Half day site inspection by Environmental Earth Sciences NSW personnel to confirm details of the IMS plans and approvals are being followed.
- Consultation with relevant persons from Frasers and Mainland Civil.
- Assess the environmental performance of the project and assess whether it is complying with the requirements in the Development Consent and IMP (including any assessment, plan or program required under these approvals).
- Review the adequacy of strategies, plans or programs required under the abovementioned approvals.
- Recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plant or program required under the abovementioned approvals.
- Delivery of an Audit report detailing the results and recommendations of the Audit.

1.6 Audit period

The audit covers the period of 17 December 2020 to 14 July 2021, and considers the performance against the approved IMP and associated documentation.

2 AUDIT METHODOLOGY

2.1 Audit and assessment team

The audit and assessment process comprised the following members:

- Environmental Earth Sciences: Mark Stuckey, Chris Newland and Linda Lenihan;
- Frasers Property Australia: Peter Statham; and
- Mainland Civil: Tim Saviane, Salvatore Panto and Mitchell Tilia.

2.2 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; and
- Mainland Civil: Tim Saviane, Salvatore Panto and Mitchell Tilia.

2.3 Site inspection

The performance review site inspection was conducted on 14 July 2021 by Linda Lenihan (Environmental Earth Sciences) and Mitchell Tilia (Mainland Civil) and included:

- Inspection of a limited number of representative construction aspects being undertaken in July 2021 that could pose potential environmental risk.
- Audit of associated physical / operational / management controls for risk mitigation.
- Review of an actual incident reports for measurement of the performance relevant to the EMS / IMP.

2.4 Community consultation

Prior to the commencement of site works, notice will be provided to nearest receivers via letter drop informing of the upcoming works, the expected noise levels, durations and contact details of the community liaison officer.

Auditor recommendation: *Mainland Civil to provide example of letter issued.*

Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the notification letter:

- Mainland Civil Pty Ltd (2020c), *Notice of Construction Commencement, Ivanhoe Estate* – (dated 16 December 2020).

2.5 Consultation with relevant agencies

The Planning Secretary confirmed the appointment of Environmental Earth Sciences as the independent auditor. Refer to **Appendix A** for the correspondence letter.

The independent EMS audit was issued by Frasers to City of Ryde Council on 20 September 2021 for their review. Refer to **Appendix A** for the correspondence email.

2.6 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
Compliant	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.
Non-compliant	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.
Not triggered	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.

3 AUDIT FINDINGS

3.1 Documents reviewed

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

- Airsafe OHC Pty Ltd (Airsafe) (2021a), *1 Ivanhoe Place, Macquarie Park - 27.01.21-26.02.21* (ref: 53034; dated 15 March 2021).
- Airsafe (2021b), *1 Ivanhoe Place, Macquarie Park - 28.02.21-29.03.21* (ref: 53034; dated 08 April 2021).
- Airsafe (2021c), *1 Ivanhoe Place, Macquarie Park - 24.05.21-25.06.21* (ref: 57734; dated 5 July 2021).
- City of Ryde Council (2021), *Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997* (ref: POEO2021/0008; 18 March 2021).
- 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).

- Environmental Earth Sciences (2021b) – *Waste Classification Advice for Stockpile Nos. #2, #3 and #5 and Pipe #1 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WC_No.2_V1; 12 February 2021).
- Environmental Earth Sciences (2021c) – *Waste Classification No.3 for Fill Material at Ivanhoe Estate – Corning of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WASTE_NO.3_V1; 5 March 2021).
- Environmental Earth Sciences (2021d) – *Waste Classification of Soil Material in Vicinity of Location BH8 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_WC_BH8_V1; 2 March 2021).
- Environmental Earth Sciences (2021e) – *Report on Management of Unexpected Finding – Ivanhoe Estate, Cnr Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_UXF_V2; 11 February 2021).
- Environmental Earth Sciences (2021f) – *Clearance Certificate for Footprints of Asbestos Pipe #1 at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_CC_No.1; 25 February 2021).
- Environmental Earth Sciences (2021g) – *Clearance Certificate for footprints of asbestos pipe #1 at Ivanhoe Estate, corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_CC1_No1_V1; 12 March 2021).
- Environmental Earth Sciences (2021h) – *Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_ACC_V1; 3 March 2021).
- Environmental Earth Sciences (2021i) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.2_V1; 16 March 2021).
- Environmental Earth Sciences (2021j) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.3_V1; 14 May 2021).
- Environmental Earth Sciences (2021k) – *Asbestos Clearance Certificate Following Removal of Asbestos Fragments – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.4_V1; 21 June 2021).
- 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).
- 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).
- Environmental Earth Sciences (2021n) – *Technical Memorandum: Additional Investigation at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_Technical Memo_V1; 29 January 2021).

- Environmental Earth Sciences (2021o) – *Technical Memorandum: Addendum to Remediation Action Plan at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_RAP Addendum_V1; 29 January 2021).
- 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).
- Enviroview Pty Ltd (2021a) – *Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113* (ref: 600184_0301-2019; 6 April 2021).
- 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).
- Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate - Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').
- Mainland Civil Pty Ltd (2020b), *Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property* (dated 19/11/2020, Revision A) (the 'CNVMP').
- Mainland Civil Pty Ltd (2020c), *Notice of Construction Commencement, Ivanhoe Estate* – (dated 16 December 2020).
- Mainland Civil Pty Ltd (2021a), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 04 February 2021, Revision B) (the 'AMP').
- Mainland Civil (2021b) / Upvise (2021a), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 22/01* (Ref: 210122 Site Safety Walk, 25 Jan 2021).
- Mainland Civil (2021c) / Upvise (2021ab), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 20.2.21* (Ref: 210220 Site Safety Walk, 25 Feb 2021).
- Mainland Civil (2021d) / Upvise (2021c), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 25/3* (Ref: 210220 Site Safety Walk, 25 Mar 2021).
- Mainland Civil (2021e) / Upvise (2021d), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-907* (Ref: 210527 Site Safety Walk, 27 May 2021).
- Mainland Civil (2021f) / Upvise (2021e), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-918* (Ref: 210624 Site Safety Walk, 24 June 2021).
- Mainland Civil (2021g), *pH and Turbidity Readings* (ref: Dewatering).
- Osterman Consult (2021a), *Interval Macquarie Park Ivanhoe Place - Noise - 1 January* (ref: Time frame: 2021-01-01 00:00 - 2021-01-31 23:59).
- Osterman Consult (2021b), *Interval Macquarie Park Ivanhoe Place - Noise - 3 March* (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59).

- Osterman Consult (2021c), *Interval Macquarie Park Ivanhoe Place - Noise - 5 May* (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59).
- Osterman Consult (2021d), *Interval Macquarie Park Ivanhoe Place - Vibration - 1 January* (ref: Time frame 2021-01-01 00:00 - 2021-01-31 23:59).
- Osterman Consult (2021e), *Interval Macquarie Park Ivanhoe Place - Vibration - 3 March* (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59).
- Osterman Consult (2021f), *Interval Macquarie Park Ivanhoe Place - Vibration - 5 May* (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59).

Mainland Civil provided Environmental Earth Sciences with *Export Cartage Tracking Summary Rev* spreadsheet detailing material removed from site and details of the receiving facility. Tracking documentation and receipt information from the receiving facilities were also provided as part of the Audit review.

3.2 Compliance performance

The list of conditions imposed by the Conditions of Consent within SSD 8903 MOD 1, SSD 8903 MOD 2 and the IMP are detailed in **Appendix B (Table A and Table B)** with this listing the compliance status of each condition, along with recommendations for further information (where required).

3.3 Summary of agency notices, orders, penalty notices or prosecutions

City of Ryde Council issued *Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997* (ref: POEO2021/0008; 18 March 2021) to Mainland Civil following receipt of concerns regarding sediment laden water in Shrimpton's Creek. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the Preventive Notice.

Environmental Earth Sciences was advised that this preventive notice was issued to several construction sites in the vicinity of Shrimpton's Creek following an extreme rain event (source: bom.gov.au, accessed 24 August 2021).

3.4 Non-compliances

There are no non-compliances in relation to the review of documents listed in Section 3.1.

3.5 Previous audit recommendations

Environmental Earth Sciences NSW conducted an initial independent environmental audit of the 'IMP' in November and December 2020:

- 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).

Three recommendations were required as a result of the initial audit and are summarised in the sub-sections below.

3.5.1 Construction Noise and Vibration Management Plan (CNVMP)

Environmental Earth Sciences (2020) Auditor Recommendation: *Please identify the suitably qualified person, experience and credentials to demonstrate compliance to Condition B42.*

Osterman Consult was engaged by Mainland Civil to conduct noise and vibration monitoring. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for noise and vibration monitoring reports.

3.5.2 Communication Tools

Prior to the commencement of site works, notice will be provided to nearest receivers via letter drop informing of the upcoming works, the expected noise levels, durations and contact details of the community liaison officer.

Auditor recommendation: *Mainland Civil to provide example of letter issued.*

Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the notification letter:

- Mainland Civil Pty Ltd (2020c), *Notice of Construction Commencement, Ivanhoe Estate* – (dated 16 December 2020).

3.5.3 Construction Soil and Water Management Plan (CSWMP)

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: 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.

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 **Figure 5.7.3a Basin Detail Plan** 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.

3.6 Environmental management plans, sub-plans and compliance documents

3.6.1 Integrated Management Plan (IMP)

Mainland Civil prepared an Integrated Management Plan (IMP) detailing the quality, safety, and environmental aspects of the Stage 1 project:

- Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate, Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').

The following environmental management plans (EMPs) are incorporated in the IMP:

- Dust Management Plan and Air Quality and Odour Management Plan (SSD 8903 MOD 1 and MOD 2 Condition B43).
- Construction Noise and Vibration Management Plan (SSD 8903 MOD 1 and MOD 2 Condition B42).
- Construction Waste Management Plan (SSD 8903 MOD 1 and MOD 2 Condition B44).
- Construction Environmental Management Plan (SSD 8903 MOD 1 and MOD 2 Condition B40).
- Construction Soil and Water Management Plan (SSD 8903 MOD 1 and MOD 2 Condition B45).
- Traffic Management Plan.
- Heavy Vehicle Management.
- Hazardous Materials Management Plan (Conditions B64 and B65).

3.6.2 Construction Noise and Vibration Management Plan (CNVMP)

A Construction Noise and Vibration Management Plan (CNVMP) was also prepared by Mainland Civil:

- Mainland Civil Pty Ltd (2020b), *Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property* (dated 19/11/2020, Revision A) (the 'CNVMP').

3.6.3 Asbestos Management Plan (AMP)

A site-specific Asbestos Management Plan (AMP) was prepared:

- Mainland Civil Pty Ltd (2021a), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 04 February 2021, Revision B) (the 'AMP').

Documents were reviewed against the above EMPs. Refer to **Appendix B (Table A and Table B)** for a detailed review of the EMPs and recommendations for further information.

3.7 Environmental management systems (EMS)

The Stage 1 Ivanhoe Estate, Macquarie Park does not have a standalone EMS, rather separate management plans have been prepared relating to the project as summarised in Section 3.6, however Mainland Civil as an organisation operate under an ISO 14001 accredited EMS.

3.8 Environmental performance

3.8.1 Dust management and air quality and odour management plan (AQOMP)

Monthly dust monitoring is conducted by Airsafe at one location. The dust gauge is placed north of the Midtown Sales Office and south of the nearest residential properties. Three monthly reports were reviewed with dust deposition levels ranging from 1.4 – 3.0 grams per square metre per month ($\text{g/m}^2/\text{month}$). Dust deposition levels are below the NSW guideline of $4 \text{ g/m}^2/\text{month}$ for the months of January/ February, February/ March and May/ June 2021. Refer to **Appendix B – Table A** for a detailed review of the dust management plan and AQOMP.

3.8.2 Construction noise and vibration management (CNVMP)

Osterman Consult was engaged by Mainland Civil to conduct monthly noise and vibration monitoring. One noise level meter and one vibration monitor are located north of the Midtown sales office, close to the nearest residents north of the site. Refer to **Appendix D – Photographs 14 and 15**. Three monthly noise reports were reviewed by Environmental Earth Sciences:

- January 2021 reported maximum noise level (L_{max}) of 90.1 decibels (dBA) and an average noise level (L_{eq}) of 73.90 dBA. L_{eq} is below the highly noise affected 75 dB(A) L_{eq} (15 min) (Osterman Consult (2021a)).
- On review of Osterman Consult (2021b), sound pressure level exceeds 75 dB(A) on two occasions, with the majority of the time the level ranges from 45 – 65 db.(A).
- On review of Osterman Consult (2021c), sound pressure level exceeds 75 dB(A) on one occasion, with the sound pressure level fluctuating between 45 – 70 dB(A) for May 2021.

Three monthly vibration reports were reviewed by Environmental Earth Sciences with maximum velocity ranging from 0.65 – 2.65 millimetres / second (mm/s). The results are below the peak particle velocity of 3 mm/s for structures that are under a preservation order and 5 m/s for dwellings and buildings of similar design and/use in accordance with German Standard DIN4150-3:1999, *Structural vibration - Part 3: Effects of vibration on structures*.

3.8.3 Construction waste management and Hazardous Materials Management

Waste material was sampled by Douglas Partners, David Land & Associates Environmental Services Pty Ltd (DLA), JBS&G and Environmental Earth Sciences and classified in accordance with NSW EPA (2014) — *Waste Classification Guidelines – Part 1: Classifying Waste* (EPA, 2014) (the “Waste Classification 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).

- Environmental Earth Sciences (2021b) – *Waste Classification Advice for Stockpile Nos. #2, #3 and #5 and Pipe #1 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WC_No.2_V1; 12 February 2021).
- Environmental Earth Sciences (2021c) – *Waste Classification No.3 for Fill Material at Ivanhoe Estate – Corning of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WASTE_NO.3_V1; 5 March 2021).
- Environmental Earth Sciences (2021d) – *Waste Classification of Soil Material in Vicinity of Location BH8 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_WC_BH8_V1; 2 March 2021).

Waste tracking documentation was recorded by Mainland Civil and provided to Environmental Earth Sciences. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for documentation of waste material disposed from site.

General Solid Waste (GSW)

21,403 m³ or 42,807 tonnes GSW (Recyclable) was disposed offsite to:

- MET Recycling, 134 Carnarvon Street, Silverwater NSW 2128 – 35,731 tonnes;
- Brandown, 90 Range Road, Cecil Park – 2,135 tonnes; and
- Benedict Recycling, Crozier Road, Belrose NSW 2085 – 4,941 tonnes.

GSW (Special Waste – Asbestos):

401 m³ or 803 tonnes GSW (Special Waste – Asbestos) was disposed offsite to:

- Horsley Park Waste Management Facility, located at 752/716 Wallgrove Rd, Horsley Park NSW 2175 – 392 m³ or 785 tonnes; and
- Suez Recycling & Recovery Pty Ltd, located at 1725 Elizabeth Drive, Kemps Creek NSW 2178 – 9 m³ of 18 tonnes.

Asbestos remediation works were conducted in accordance with:

- Mainland Civil Pty Ltd (2021a), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 4 February 2021, Revision B, Doc No.: MC-AMP-1378) (the 'AMP'),

Following removal of asbestos impacted material, a competent person from Environmental Earth Sciences conducted site inspections, resulting in the following documents:

- Environmental Earth Sciences (2021e) – *Report on Management of Unexpected Finding – Ivanhoe Estate, Cnr Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_UXF_V2; 11 February 2021).

- Environmental Earth Sciences (2021f) – *Clearance Certificate for Footprints of Asbestos Pipe #1 at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_CC_No.1; 25 February 2021).
- Environmental Earth Sciences (2021g) – *Clearance Certificate for footprints of asbestos pipe #1 at Ivanhoe Estate, corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_CC1_No1_V1; 12 March 2021).
- Environmental Earth Sciences (2021h) – *Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_ACC_V1; 3 March 2021).
- Environmental Earth Sciences (2021i) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.2_V1; 16 March 2021).
- Environmental Earth Sciences (2021j) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.3_V1; 14 May 2021).
- Environmental Earth Sciences (2021k) – *Asbestos Clearance Certificate Following Removal of Asbestos Fragments – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.4_V1; 21 June 2021).

Asphalt, brick and concrete

1,302 m³ or 2,151 tonnes of asphalt, brick and concrete was disposed offsite to:

- Concrete Recyclers, 14 Thackeray Street, Camellia NSW 2142 – 2,019 tonnes; and
- Boral, 39a Widemere Rd, Wetherill Park NSW 2164 – 132 tonnes.

Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for disposal documentation of GSW (recyclable), GSW (Special Waste – Asbestos) and asphalt, brick and concrete.

Excavated natural material (ENM) and Virgin excavated natural 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).

Approximately 6,303 m³ or 12,606 tonnes ENM was disposed offsite to:

- BT Civil, Veron Rd, Schofields – 12,177 tonnes; and
- Box Hill – 429 tonnes.

Approximately 109,614 m³ or 242,606 tonnes of VENM (clay, sandstone and shale) disposed offsite to 35 different facilities. Refer to **Appendix B – Table C** for details of the VENM receiving facilities.

3.8.4 Soil and water management

Soil management

During the performance review audit site inspection on 14 July 2021, Linda Lenihan noted the following:

- 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 **Photographs 4 – 12** in **Appendix D**.
- Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site. Waste blasters used to clean tyres of vehicles before leaving site.

Water management

Mainland Civil (2021g), *pH and Turbidity Readings* (ref: *Dewatering*) document reviewed by Environmental Earth Sciences and the following is noted:

- pH and turbidity parameters were tested twice in March, twice in May and once in June 2021.
- pH readings ranged from 6.74 – 6.99 and turbidity readings ranged from 21.8 – 29.4 Nephelometric Turbidity Units (NTU).
- Water from the sediment basin was discharged to storm water on five occasions. pH and Turbidity readings were within the acceptable criteria for the discharge of water.

City of Ryde Council issued *Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997* (ref: POEO2021/0008; 18 March 2021) to Mainland Civil following receipt of concerns regarding sediment laden water in Shrimpton's Creek. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the Preventive Notice.

3.8.5 Traffic Management Plan / Heavy Vehicle Management.

Environmental Earth Sciences is not aware of any noise complaints received by Frasers Property or Mainland Civil for the period of January – July 2021. Noise monitoring was conducted at one location only during January – July 2021. The Auditor recommends further information be provided on when regular noise monitoring is carried out.

3.9 Complaints

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. Refer to **Appendix C** of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for documentation.

3.10 Incidents

Environmental Earth Sciences is not aware of any incidents occurring in January – July 2021.

3.11 Actual verses predicted environmental impacts

There are no actual environmental impacts during January – July 2021.

3.12 Site inspection

Site inspection associated with the Audit was undertaken on 14 July 2021 by Linda Lenihan and Mitchell Tilia of Mainland Civil. Due to NSW COVID restrictions, it was agreed that documentation would not be inspected on-site and documentation would be reviewed remotely by Environmental Earth Sciences.

3.13 Site interview

The site interview associated with the Audit was undertaken on 14 July 2021 by Linda Lenihan, Salvatore Panto and Mitchell Tilia of Mainland Civil.

3.14 Previous review of compliance report recommendations

Environmental Earth Sciences NSW conducted an initial independent environmental audit of the 'IMP' in November and December 2020. Refer to Section 3.5 for details on previous recommendations.

3.15 Improvement opportunities

The Auditor recommends the following improvement opportunities:

- Limit the height of stockpiles and ensure stockpiles are compacted and secure at the end of each day.

- Due to the size of the site, multiple dust gauges should be installed for monthly monitoring.
- Regular noise monitoring should be conducted focusing on more than one noise sensitive location.
- Calibration records for water quality meter should be available.
- Noise meter is overdue for calibration.

3.16 Key strengths

Mainland Civil are completing civil works generally in accordance with their IMP with good record keeping and communication.

4 RECOMMENDATIONS

4.1 Non-compliances

No features were identified as being “non-compliant” for the Audit period.

4.2 Opportunities for improvement

The Auditor recommends the following improvement opportunities:

- Limit the height of stockpiles and ensure stockpiles are compacted and secure at the end of each day.
- Due to the size of the site, multiple dust gauges should be installed for monthly monitoring.
- Regular noise monitoring should be conducted focusing on more than one noise sensitive location.
- Calibration records for water quality meter should be available.
- Noise meter is overdue for calibration.

Refer to **Appendix B – Table D** for Proponent Response to Audit Findings.

5 CONCLUSION

Environmental Earth Sciences NSW was engaged by Frasers Property Australia (Ivanhoe) to conduct a six-monthly performance audit of the project environmental management systems

(EMS) for Stage 1 of construction works at Ivanhoe Estate, Macquarie Park, NSW in accordance with SSD Conditions of Consent within SSD 8903 MOD 1 and MOD 2.

Further information is required as per **Appendix B (Table A and Table B)**.

6 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 PO120125_Variation 5 issued Environmental Earth Sciences NSW for and on behalf of Frasers Property Australia, is included in Section 3 (Scope of Work) of this report;
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 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.

7 REFERENCES

Airsafe OHC Pty Ltd (Airsafe) (2021a), *1 Ivanhoe Place, Macquarie Park - 27.01.21-26.02.21* (ref: 53034; dated 15 March 2021).

Airsafe (2021b), *1 Ivanhoe Place, Macquarie Park - 28.02.21-29.03.21* (ref: 53034; dated 08 April 2021).

Airsafe (2021c), *1 Ivanhoe Place, Macquarie Park - 24.05.21-25.06.21* (ref: 57734; dated 5 July 2021).

City of Ryde Council (2021), *Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997* (ref: POEO2021/0008; 18 March 2021).

Department of Environment & Climate Change (DECC) (2009), *Interim Construction Noise Guideline* (DECC, 2009).

Environmental Earth Sciences (2020) – *Clearance certificate for Stages 2, 3 and 4 at Ivanhoe Estate, Macquarie Park, NSW* (ref: 120064_CC_V1; 23 June 2020).

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) – *Waste Classification of Material at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120120_WC_V3; 31 March 2021).

Environmental Earth Sciences (2021b) – *Waste Classification Advice for Stockpile Nos. #2, #3 and #5 and Pipe #1 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WC_No.2_V1; 12 February 2021).

Environmental Earth Sciences (2021c) – *Waste Classification No.3 for Fill Material at Ivanhoe Estate – Corning of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_WASTE_NO.3_V1; 5 March 2021).

Environmental Earth Sciences (2021d) – *Waste Classification of Soil Material in Vicinity of Location BH8 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_WC_BH8_V1; 2 March 2021).

Environmental Earth Sciences (2021e) – *Report on Management of Unexpected Finding – Ivanhoe Estate, Cnr Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_UXF_V2; 11 February 2021).

Environmental Earth Sciences (2021f) – *Clearance Certificate for Footprints of Asbestos Pipe #1 at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120120_CC_No.1; 25 February 2021).

Environmental Earth Sciences (2021g) – *Clearance Certificate for footprints of asbestos pipe #1 at Ivanhoe Estate, corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_CC1_No1_V1; 12 March 2021).

Environmental Earth Sciences (2021h) – *Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_ACC_V1; 3 March 2021).

Environmental Earth Sciences (2021i) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.2_V1; 16 March 2021).

Environmental Earth Sciences (2021j) – *Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.3_V1; 14 May 2021).

Environmental Earth Sciences (2021k) – *Asbestos Clearance Certificate Following Removal of Asbestos Fragments – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW* (ref: 120077_CC_No.4_V1; 21 June 2021).

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).

Environmental Earth Sciences (2021n) – *Technical Memorandum: Additional Investigation at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_Technical Memo_V1; 29 January 2021).

Environmental Earth Sciences (2021o) – *Technical Memorandum: Addendum to Remediation Action Plan at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW* (ref: 120077_RAP Addendum_V1; 29 January 2021).

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).

Enviroview Pty Ltd (2021a) – *Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113* (ref: 600184_0301-2019; 6 April 2021).

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).

German Standard DIN4150-3 (1999-02) *Structural vibration - Part 3: Effects of vibration on structures.*

GreenPlus Property Services (Nov 2020a) – *Pre-construction Dilapidation Inspection, Herring Road in Conjunction with Re-development of MidTown at 1 Ivanhoe Avenue, Macquarie Park* (ref: 820049.1_(Rv), dated 10 November 2020).

GreenPlus Property Services (Nov 2020b) – *Pre-construction Dilapidation Inspection, Display Suite, In Conjunction with Re-development of MidTown at 1 Ivanhoe Avenue, Macquarie Park* (ref: 820049.2_(Rv.1), dated 10 November 2020).

GreenPlus Property Services (Nov 2020c) – *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* (ref: 820049.3_(Rv.1), dated 10 November 2020).

Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate - Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').

Mainland Civil Pty Ltd (2020b), *Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property* (dated 19/11/2020, Revision A) (the 'CNVMP').

Mainland Civil Pty Ltd (2020c), *Notice of Construction Commencement, Ivanhoe Estate* – (dated 16 December 2020).

Mainland Civil Pty Ltd (2021a), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 04 February 2021, Revision B) (the 'AMP').

Mainland Civil (2021b) / Upvise (2021a), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 22/01* (Ref: 210122 Site Safety Walk, 25 Jan 2021).

Mainland Civil (2021c) / Upvise (2021ab), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 20.2.21* (Ref: 210220 Site Safety Walk, 25 Feb 2021).

Mainland Civil (2021d) / Upvise (2021c), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 25/3* (Ref: 210220 Site Safety Walk, 25 Mar 2021).

Mainland Civil (2021e) / Upvise (2021d), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-907* (Ref: 210527 Site Safety Walk, 27 May 2021).

Mainland Civil (2021f) / Upvise (2021e), *1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-918* (Ref: 210624 Site Safety Walk, 24 June 2021).

Mainland Civil (2021g), *pH and Turbidity Readings* (ref: Dewatering).

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*.

Osterman Consult (2021a), *Interval Macquarie Park Ivanhoe Place - Noise - 1 January* (ref: Time frame: 2021-01-01 00:00 - 2021-01-31 23:59).

Osterman Consult (2021b), *Interval Macquarie Park Ivanhoe Place - Noise - 3 March* (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59).

Osterman Consult (2021c), *Interval Macquarie Park Ivanhoe Place - Noise - 5 May* (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59).

Osterman Consult (2021d), *Interval Macquarie Park Ivanhoe Place - Vibration - 1 January* (ref: Time frame 2021-01-01 00:00 - 2021-01-31 23:59).

Osterman Consult (2021e), *Interval Macquarie Park Ivanhoe Place - Vibration - 3 March* (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59).

Osterman Consult (2021f), *Interval Macquarie Park Ivanhoe Place - Vibration - 5 May* (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59).

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



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 'Julia Pope'.

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

Linda Lenihan

From: Chris Koukoutaris <Chris.Koukoutaris@frasersproperty.com.au>
Sent: Monday, 20 September 2021 2:51 PM
To: 'cityofryde@ryde.nsw.gov.au'
Cc: Stephan Pawelczyk; Linda Lenihan
Subject: RE: Independent Environmental Audit Report - SSDA 8903 - Condition B9

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

To Whom it May Concern,

In accordance with SSDA 8903 – Condition B9 please find attached Independent Environmental Audit report (link below) carried out on the project.

Please let us know if you have any comments by **Friday 1st October 2021.**

Thanks

 [210806 ENV Audit Mainland.pdf](#)

Regards

Chris Koukoutaris
Senior Development Manager
Frasers Property Australia

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APPENDIX B: INDEPENDENT AUDIT TABLES

Table A: Independent Audit Table

Approval (ID) / Mainland Civil IMP Section	Number	Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
5.4: Dust management Plan (DMP)	1	<p>5.4.2: Dust and debris mitigation and control methods: Mitigation methods include:</p> <ul style="list-style-type: none"> • site control traffic: wetting down exposed soil haul routes. • earth moving management: the use of mist water from gurneys for general site dust suppression and to target dust generating activities. • Application of mist water from gurneys/hoses to any stockpiled materials. Use of a street sweeper to clean pavements and road. • Loading truck and dogs in a controlled manner and covering loads when entering and exiting site. • soil surface compaction of loose material ensures that soil particles are packed tightly, minimising the likelihood of excessive dust emissions. • Installation and maintenance of site fencing, hoarding and/or barriers in an effort to contain dust and minimise wind across the site. Providing barriers to discourage unwanted vehicle access causing disturbance. • Sediment traps are in place to capture sediment prior to drainage water entering the primary settling ponds and eventual use in the dust suppression system. As a result, sediment captured in the sediment traps and allowed to dry out, is a potential dust source. • During extreme winds dusty activities may be postponed until more suitable weather is prevalent. 	<ul style="list-style-type: none"> • An Environmental Scientist, Linda Lenihan, from Environmental Earth Sciences attended site regularly from January - March 2021 and monthly during May - July 2021 and dust suppression methods were in use, including the use of mist water. • Asbestos impacted soil material was removed from site on 27 February 2021 and mist water was used to dampen the material during loading of material into the trucks. • During performance review audit site inspection on 14 July 2021, Linda Lenihan noted that the ground surface of the access route was damp and a water cart was present onsite. Mist water was being applied for general dust suppression. Refer to Photographs 1 - 3 in Appendix D. • 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 Photographs 4 - 12 in Appendix D. 	Limit the height of stockpiles and ensure stockpiles are secure at the end of each day.	Compliant	
5.4 DMP 5.4.3 Managing exposure to silica dust in the workplace	2	<ul style="list-style-type: none"> • Suppression: Water or fine mist suppression is also employed to control dust clouds which are not always amenable to use of fixed point ventilation. Some foundries utilise such systems. Water suppression is also used effectively in construction for brick, tile, stone and concrete cutting. 	<ul style="list-style-type: none"> • During performance review audit site inspection on 14 July, Linda Lenihan noted that the ground surface of the access route was damp and a water cart was present onsite. Mist water was also being applied for general dust suppression. Refer to Photographs 1 - 3 in Appendix D. 	---	Compliant	
5.4: DMP and Table 5.8.6: Key Performance Indicators	3	<ul style="list-style-type: none"> • Dust deposition levels below 4 grams per square metre per month (g/m²/month) per NSW guidelines (Test method as per AS3580.10.1 <i>Methods for Sampling and Analysis of Ambient Air Method 10.1: Determination of Particulate Matter-Deposited Matter-Gravimetric Method</i>). 	<ul style="list-style-type: none"> • Dust monitoring completed by Airsafe OHC Pty Ltd and one dust gauge placed north of the Midtown Sales Office and immediately south of the nearest residential properties. See Photograph 13 in Appendix D. • Three monthly reports were reviewed by Environmental Earth Sciences (refer to Appendix C of the original report for the Airsafe reports): • Airsafe OHC Pty Ltd (Airsafe) (2021a), 1 Ivanhoe Place, Macquarie Park - 27.01.21-26.02.21 (ref: 53034; dated 15 March 2021). • Airsafe (2021b), 1 Ivanhoe Place, Macquarie Park - 28.02.21-29.03.21 (ref: 53034; dated 08 April 2021). • Airsafe (2021c), 1 Ivanhoe Place, Macquarie Park - 24.05.25 - 25.06.21 (ref: 57734; dated 5 July 2021). • Airsafe (2021a) reported insoluble solids result of 3.0 g/m²/month for January / February 2021. • Airsafe (2021b) reported insoluble solids of 1.4 g/m²/month for February / March 2021. • Airsafe (2021c) reported insoluble solids result of 2.8 g/m²/month for May / June 2021. 	Dust deposition levels are below the NSW guideline of 4 g/m ² /month for the months of January/ February, February/March and May/June 2021.	Compliant	
5.8: Air Quality and odour management plan (AQOMP). 5.8.2 Material Classification and Odour Suppressants	4	<ul style="list-style-type: none"> • In the event odours are detected, the environmental consultant will be notified and area isolated until the source of contamination / odour is determined. Mainland Civil will establish odour suppressant control measures as per environmental consultant's advice whilst the material is tested and waste classification is provided. 	<ul style="list-style-type: none"> • Mainland Civil confirm odour suppressants were not required during the January - July 2021 period. 	----	Compliant	
5.8: AQOMP 5.8.3 Stockpile Management and Cartage Control	5	<ul style="list-style-type: none"> • Effective handling of excavated material and stockpiles onsite are integral to minimising potential odours and dust impacts on air quality. 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 2m 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. Dust control and suppression to be implemented in the form of wetting work areas and stockpiles. All trucks carting material off site will cover their loads prior to leaving the site. 	<ul style="list-style-type: none"> • Mainland Civil confirm odour suppressants were not required during the January - July 2021 period. • Linda Lenihan attended site regularly from January - March 2021 and monthly during May - July 2021 and observed trucks had covered their loads prior to leaving site. Traffic control management was also present onsite during removal of material from site. • 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 secure at the end of each day.	Compliant	

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5.8: AQOMP 5.8.4: Onsite monitoring and recording:	6	<ul style="list-style-type: none"> Onsite dust monitors will be installed near construction work faces and monitored monthly. As the work faces progress, the monitors will also need to be reinstalled at the relevant locations. Results will be recorded on the dust monitoring register and available at the site office for review. 	<ul style="list-style-type: none"> Onsite dust monitoring was conducted at one location only on a monthly basis. Dust monitoring reports were provided electronically. Environmental Earth Sciences did not get to audit the dust monitoring register onsite due to COVID restrictions. 	Section 5.8.4 refer to multiple monitors, but only one dust gauge installed each month. What is the reasoning for not having multiple dust gauges installed onsite?	Not triggered.	
5.8: AQOMP 5.8.5 Proactive/Reactive Management Strategies & Response Mechanisms	7	<ul style="list-style-type: none"> Dust - Seize works if excessive dust noticeable. Conduct investigation into source of dust if there is a complaint received. Regular site management meetings to review environmental controls. Key performance indicators (KPI)s: a. No dust to be visible leaving the site boundaries. Weekly Site environmental inspection. b. No complaints received over the duration of the project. If complaint is received it is to be recorded in the Complaints Register. c. Dust deposition levels below 4g/m2/month per NSW guidelines (Test method as per AS3580.10.1.	Key performance indicators (KPI)s: a. Weekly site environmental inspections completed. Environmental Earth Sciences reviewed five weekly site inspections: <ul style="list-style-type: none"> Mainland Civil (2021b) / Upvise (2021a), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 22/01 (Ref: 210122 Site Safety Walk, 25 Jan 2021). Mainland Civil (2021c) / Upvise (2021ab), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 20.2.21 (Ref: 210220 Site Safety Walk, 25 Feb 2021). Mainland Civil (2021d) / Upvise (2021c), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 25/3 (Ref: 210220 Site Safety Walk, 25 Mar 2021). Mainland Civil (2021e) / Upvise (2021d), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-907 (Ref: 210527 Site Safety Walk, 27 May 2021). Mainland Civil (2021f) / Upvise (2021e), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-918 (Ref: 210624 Site Safety Walk, 24 June 2021). 	---	Compliant	
			<ul style="list-style-type: none"> Environmental Earth Sciences reviewed five Weekly site inspections and notes 'sediment fencing and silt socks are secure and in good condition' is on the checklist. Weekly Site Safety Walk 20.02.2021 contains photo of a damaged silt sock that is to be replaced. Weekly Site Safety Walk 25.03.2021 has the following comment under 'Environmental': Erosion & sediment controls checked. Silt fence / sand bags replaced where damaged. Weekly Site Safety Walk 27.05.2021 has noted the following comment under 'Excavation': Sediment fencing around the perimeter of site and additional fencing around stockpiles. Weekly Site Safety Walk 27.05.2021 stockpiles inspected, covered and fenced with sediment controls in place. Silt fences in place around stockpiles and in place preventing entry to existing stormwater system. No complaints received by Frasers or Mainland Civil during January - July 2021. Dust deposition levels are below the NSW guideline of 4 g/m2/month for the months of January/ February, February/March and May/June 2021. 	---	Compliant	
5.8: AQOMP 5.8.5 Proactive/Reactive Management Strategies & Response Mechanisms	8	Follow unexpected finds process immediately. If odour generating material is known, either remove or treat with odour suppressants. If unknown, investigate where odour is coming from. Conduct investigation into source of odour if there is a complaint received. Regular site management meetings to review environmental controls.	Mainland Civil confirm odour suppressants were not required during the January - July 2021 period. No odour complaints received by Frasers or Mainland Civil during January - July 2021.	---	Compliant	
5.8: AQOMP 5.8.5 Proactive/Reactive Management Strategies & Response Mechanisms	9	Asbestos (Unknown Finds): Cease works and follow unexpected finds process. Follow asbestos management plan and control measures.	Refer to 5.6 Construction waste management plan (CWMP): 5.6.7. Hazardous waste and 4.8: Hazardous materials for information on asbestos management and control measures. Numbers 16 and 18 below.	---	Compliant	
5.8: AQOMP 5.8.5 Proactive/Reactive Management Strategies & Response Mechanisms	10	Plant: Use of well-maintained and service plant. Plant operators to conduct daily plant pre start checklists to ensure plant are in well working order with no excessive smoke.	No excessive smoke noted during performance review audit on 14 July 2021. No complaints of excessive smoke received by Frasers or Mainland Civil during January - July 2021.	Where are daily plant pre-start records kept?	Not triggered.	
5.8: AQOMP 5.8.7 Compliance Protocol and 5.8.8 Contingency Management Strategies	11	In the event that there is an exceedance of dust depositions obtained within the dust monitoring testing and/or all other air quality and odour influences, the below contingency management strategies will be implemented as part of the AQOMP.	No exceedances or complaints received.	---	Compliant	

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5.5 Noise (and vibration) management plan and Mainland Civil Pty Ltd (2020), Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property (dated 19/11/2020, Revision A) (the 'CNVMP').	12	<p>Include a pro-active and reactive strategy for dealing with complaints including achieving the construction noise goals, particularly with regard to verbal and written response;</p> <ul style="list-style-type: none"> Detail noise monitoring, reporting and response procedures consistent with consent requirements; Provide for internal audits of compliance of all plant and equipment; Indicate site establishment timetabling to minimise noise impacts; Include procedures for notifying residents of construction activities likely to affect their noise amenity; 	<ul style="list-style-type: none"> Osterman Consult was engaged by Mainland Civil to conduct monthly noise and vibration monitoring. One noise level meter is located north of the Midtown sales office, close to the nearest residents north of the site. Refer to Photographs 14 and 15 in Appendix D. Three monthly noise reports were reviewed by Environmental Earth Sciences: <ul style="list-style-type: none"> Osterman Consult (2021a), <i>Interval Macquarie Park Ivanhoe Place - Noise - 1 January</i> (ref: Time frame: 2021-01-01 00:00 - 2021-01-31 23:59). Osterman Consult (2021b), <i>Interval Macquarie Park Ivanhoe Place - Noise - 3 March</i> (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59). Osterman Consult (2021c), <i>Interval Macquarie Park Ivanhoe Place - Noise - 5 May</i> (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59). January 2021 reported maximum noise level (Lmax) of 90.1 decibels (dB(A)) and an average noise level (Leq) of 73.90 dBA. Leq is below the highly noise affected 75 dB(A)Leq (15 min) (Osterman Consult (2021a)). On review of Osterman Consult (2021b), sound pressure level exceeds 75 dB(A) on two occasions, with the majority of the time the noise level ranges from 45 - 65 db.(A). On review of Osterman Consult (2021c), sound pressure level exceeds 75 dB(A) on one occasion, with the sound pressure level fluctuating between 45 - 70 dB(A) for May 2021. No other noise monitoring event was undertaken during January - July 2021. Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents: Mainland Civil Pty Ltd (2020c), <i>Notice of Construction Commencement, Ivanhoe Estate</i> – (dated 16 December 2020). Refer to Appendix C for the interval noise reports and the communication letter. 	<p>Further information required:</p> <ul style="list-style-type: none"> Provide for internal audits of compliance of all plant and equipment; and Indicate site establishment timetabling to minimise noise impacts. Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out? 	Not triggered.	
7. Heavy vehicle management 7.7: Speeding Management	13	<p>Heavy Vehicle Risk Register: control measure for noise from vehicles and plant;</p> <ul style="list-style-type: none"> noise levels to be regularly monitored and personnel are to wear class iv or better ear plugs if levels exceed 85dba; and regular noise monitoring to be carried out. Section 7 of CNVMP states: <i>Periodic noise monitoring will be conducted at other locations as required. In the event that a noise complaint is received then the monitoring frequency may be increased following a formal review.</i> 	Environmental Earth Sciences was advised that the only noise monitoring conducted is the full time noise monitor set up north of the Midtown Sales Office.	<p>Environmental Earth Sciences is not aware of any noise complaints received by Frasers Property or Mainland Civil for the person of January - July 2021.</p> <p>Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out?</p>	Not triggered.	
5.5 CNVMP 5.5.4 Vibration	14	A full time vibration monitor will be installed at the same location as the noise monitor shown within Section 7 of report "Construction Noise and Vibration Management Plan" the 'CNVMP'.	<p>Osterman Consult was engaged to conduct monthly vibration monitoring. One vibration monitor is located north of the Midtown sales office, close to the nearest residents north of the site. Refer to Photographs 14 and 15 in Appendix D. Three monthly vibration reports were reviewed by Environmental Earth Sciences:</p> <ul style="list-style-type: none"> Osterman Consult (2021d), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 1 January</i> (ref: Time frame 2021-01-01 00:00 - 2021-01-31 23:59). Osterman Consult (2021e), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 3 March</i> (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59). Osterman Consult (2021f), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 5 May</i> (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59). <p>Osterman Consult (2021d): maximum velocity (V): 2.65 millimetres per second (mm/s).</p> <p>Osterman Consult (2021e): maximum V: 0.65 mm/s.</p> <p>Osterman Consult (2021f): maximum V: 0.65 mm/s.</p> <p>Refer to Appendix C of Version 1 of the audit for the interval noise reports and the communication letter.</p>	<p>Maximum velocity (V) recorded was 2.65 mm/s - below the peak particle velocity of 3 mm/s for structures that are under a preservation order and 5 m/s for dwellings and buildings of similar design and/use (German Standard DIN4150-3 (1999-02): <i>Structural vibration - Part 3: Effects of vibration on structures.</i></p>	Compliant	
5.6: Construction waste management plan (CWMP)	15	<p>Requirements for managing construction waste types / streams: The types and quantities of each type of material to be excavated from each location are monitored on a daily record of loads chart and recorded in a cartage summary document.</p> <p>7.2: Roles and Responsibilities: Project Manager All records (such as cartage and tip dockets) are kept and secured with all records of business related activity.</p>	<ul style="list-style-type: none"> Material removed from site included General solid waste (GSW), GSW (Special Waste - Asbestos), Excavated natural material (ENM), recycled material including asphalt, brick and concrete, and Virgin excavation natural material (VENM) (Clay, sandstone. Material removed from site was recorded on Mainland Civil - Export Cartage Tracking Summary Rev spreadsheet. The spreadsheet was reviewed by Environmental Earth Sciences. Refer to Appendix C of the original report for documentation of material removed from site. 	---	Compliant	

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5.6: CWMP 5.6.2 Requirements for Managing Construction Waste Types / Streams and 5.6.6 Recycling and disposal facilities and 5.6.7.1 Contaminated soil source, location, quantity and characteristics	16	5.6.2: All wastes and materials generated on the site during construction (and dual operation) shall be classified in accordance with the NSW EPA's <i>Waste Classification Guidelines</i> prior to being transported the waste off site and be disposed of to a facility that may lawfully accept the waste. 5.6.6: Once classified, waste can then be disposed of at an Environmental Protection Authority (EPA) licensed facility. All waste to be monitored through Mainland Civil Cartage summary. 5.6.7.1: Prior to excavation works, a preliminary investigation or testing (environmental site assessments/soil sampling) will identify any contaminated materials (whether man-made or naturally occurring) in accordance with the industrial waste resource guidelines- soil sampling.	<ul style="list-style-type: none"> Waste material was sampled by Douglas Partners, David Land & Associates Environmental Services Pty Ltd (DLA), JBS&G and Environmental Earth Sciences and classified in accordance NSW EPA (2014) — <i>Waste Classification Guidelines – Part 1: Classifying Waste</i> (EPA, 2014) (the "Waste Classification Guidelines"). The results of the laboratory analysis are documented in the following reports: <ul style="list-style-type: none"> Environmental Earth Sciences (2021a) – <i>Waste Classification of Material at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120120_WC_V3; 31 March 2021). Environmental Earth Sciences (2021b) – <i>Waste Classification Advice for Stockpile Nos. #2, #3 and #5 and Pipe #1 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120120_WC_No.2_V1; 12 February 2021). Environmental Earth Sciences (2021c) – <i>Waste Classification No.3 for Fill Material at Ivanhoe Estate – Corning of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120120_WASTE_NO.3_V1; 5 March 2021). Environmental Earth Sciences (2021d) – <i>Waste Classification of Soil Material in Vicinity of Location BH8 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_WC_BH8_V1; 2 March 2021). 	These reports are not included in the appendices of this report, but were provided to Mainland Civil prior to removal of material from site. Waste Classification reports will be documented in the site Validation Report to be completed by Environmental Earth Sciences and submitted to Frasers Property.	Compliant	
5.6: CWMP 5.6.2 Requirements for Managing Construction Waste Types / Streams	17	Only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the site: - Waste soil/water, hydrocarbons/water mixtures or emulsions; and - Grease trap waste.	Environmental Earth Sciences was advised by Mainland Civil that no hazardous, industrial or Group A wastes listed have been generated on site. Mainland Civil stores 100 litres (L) of diesel and 100 L of petrol onsite at any one time. Diesel and petrol are stored in fuel jerry cans locked in bunded fuel cages on site near the site accommodation sheds.	---	Compliant	
5.6 CWMP: 5.6.7 Hazardous waste 4.8: Hazardous material	18	The collection and transport of any hazardous waste will be carried out in accordance with the statutory requirements, and collection and transport by a licenced operator, and disposal at appropriately licensed disposal facilities.	<p>401 m³ or 803 tonnes GSW (Special Waste - Asbestos) was disposed to</p> <ul style="list-style-type: none"> Horsley Park Waste Management Facility, located at 752/716 Wallgrove Rd, Horsley Park NSW 2175 – 785 tonnes; and Suez Recycling & Recovery Pty Ltd, located at 1725 Elizabeth Drive, Kemps Creek NSW 2178 – 18 tonnes. Horsley Park Waste Management Facility, Environment Protection Licence (EPL) No. 11584 - can legally accept asbestos. Suez Recycling & Recovery Pty Ltd, EPL No. 4068 was reviewed and confirmed to legally accept asbestos. <p>Refer to Appendix C of Version 1 for documentation of material removed from site.</p>	---	Compliant	
5.6 CWMP: 5.6.7. Hazardous Waste: 5.6.7.3 Onsite management and 5.6.7.6 Monitoring and 5.6.7.7 Clearance Inspection	19	<ul style="list-style-type: none"> Engagement of hygienist to undertake fibre air monitoring for the duration of the contaminated works (if required). Dust suppression and wetting down of unknown finds / asbestos fibres. Set up of works area around the identified impacted area (exclusions zone) with barrier tape and signage. The temporary fencing surrounding the contaminate removal area is to be covered internally with geo-fabric or plastic sheeting to help contain dust. Black plastic polythene sheeting (200um thickness) on ground surface at access point as drop sheet. Establish a decontamination area adjacent to the entrance of works. Removal of contaminated material – Excavator. Where possible, avoid relocating the contaminated soil/material onsite and load directly from the source into the truck. This will minimise the likelihood of cross contamination of clean soils. 	<ul style="list-style-type: none"> Air monitoring was conducted by Environmental Earth Sciences during removal of asbestos impacted material on 27 February 2021 to verify the integrity of the control measures and to ensure concentrations of airborne asbestos did not exceed the control standard (0.01 fibres/ml of air). Three air monitors, equipped with membrane filters, were strategically placed around the site by a competent person: Environmental Earth Sciences (2021h) – <i>Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_ACC_V1; 3 March 2021). Water spray was used as dust suppression during loading of material into trucks. Black plastic sheeting was placed on the ground surface of the loading area prior to removal of material. Prior to offsite disposal, asbestos impacted stockpiles were covered with plastic sheeting, the areas were fenced off with barrier tape and signage identical to the exclusion zones. Linda Lenihan, of Environmental Earth Sciences, attended site regularly from January - March 2021 and monthly during May - July 2021 and observed the asbestos control measures. Further photographs can be provided on request. 	The <i>Clearance Certificate</i> is not included in the appendices of this report, but was provided to Frasers in March 2021.	Compliant	

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5.6 CWMP: 5.6.7.6 Monitoring and 5.6.7.7 Clearance Inspection	20	5.6.7.6: An Independent Environmental consultant will be engaged to undertake representative air monitoring for the disturbance and movement of contaminated-impacted soil within the exclusion zone/s, as outlined above. Air monitor filters shall be replaced at the end of each work day where potential contaminated-impacted soil was disturbed. All airborne fibre monitoring will be conducted in accordance with the <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust</i> [NOHSCH:3003(2005)] and analysed at a NATA-accredited laboratory. 5.6.7.7: The standards for clearance inspections will be determined by visual inspection of the work areas, ensuring that the work has been completed satisfactorily and that there is no visual evidence of contaminated material.	Clearance inspections were conducted by Environmental Earth Sciences following removal of asbestos material as summarised in the following reports provided to Frasers: <ul style="list-style-type: none"> Environmental Earth Sciences (2021g) – <i>Clearance Certificate for footprints of asbestos pipe #1 at Ivanhoe Estate, corner of Herring Road and Epping Road, Macquarie Park, NSW</i> (ref: 120077_CC1_No1_V1; 12 March 2021). Environmental Earth Sciences (2021h) – <i>Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_ACC_V1; 3 March 2021). Environmental Earth Sciences (2021i) – <i>Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_CC_No.2_V1; 16 March 2021). Environmental Earth Sciences (2021j) – <i>Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_CC_No.3_V1; 14 May 2021). Environmental Earth Sciences (2021k) – <i>Asbestos Clearance Certificate Following Removal of Asbestos Fragments – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW</i> (ref: 120077_CC_No.4_V1; 21 June 2021). 	---	Compliant	
5.6 CWMP: 5.6.7.4: Management Practices	21	During soil disturbance works within the exclusion zone, a water spray pump or water hose shall be available to suppress the dust at the commencement of the activity and at regular intervals during the day, i.e. every 30 minutes, when surface water evaporates or when the generation of dust becomes noticeable. The use of water spray must be monitored to ensure runoff does not occur or controls must be implemented to capture any runoff.	During performance review audit site inspection on 14 July 2021, Linda Lenihan noted that mist water was being applied for dust suppression. Refer to Photograph 2 in Appendix D .	---	Compliant	
5.6 CWMP: 5.6.7.5: Waste tracking	22	A suitably qualified consultant with appropriate experience should be present on site during soil loading and removal works, to record waste tracking information (i.e. registration plates, time leaving site, and approximate volume being disposed).	<ul style="list-style-type: none"> Mainland Civil are licenced with SafeWork NSW for the removal of friable and non-friable asbestos contaminated material – Licence: AD213265. The licence is included in Appendix A of Mainland Civil Pty Ltd (2021), <i>Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd</i> (dated 4 February 2021, Revision B, Doc No.: MC-AMP-1378) (the ‘AMP’). Linda Lenihan, a suitably qualified consultant was onsite during loading and removal of 733 tonne of asbestos impacted material on 27 February 2021. 51 tonne and 18 tonne of material were disposed offsite in March and April under the supervision of Mainland Civil. 	---	Compliant	
5.7 Soil and water management plan (SWMP) Table 5.7.2– Soil and Water Sources and Mitigation Methods	23	Soil (sand) Management: <ul style="list-style-type: none"> Prevent sand and rock sediments entering stormwater drains. Stockpile materials on sealed surfaces (existing roadways) away from stormwater drains (inlets). Install silt fencing and silt socks where applicable. Install metal rumble grid at site exit to facilitate removal of dirt and debris from wheels of exiting vehicles. Gravel will be installed beneath the shaker ramp to allow it to act as a wash-down bay where necessary. Water blasters will be used to clean tyres of exiting vehicles as required. Install gravel / and filled geotextile socks or coil mats around stormwater drains to prevent sediment runoff. 	<ul style="list-style-type: none"> During performance review audit site inspection on 14 July 2021, Linda Lenihan noted the following: 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 Photographs 4 - 12 in Appendix D . <ul style="list-style-type: none"> 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. 	---	Compliant	
5.7 SWMP: Table 5.7.2– Soil and Water Sources and Mitigation Methods and 5.7.3 Temporary sediment basin	24	Water Management: <ul style="list-style-type: none"> Sediment laden water that accumulates within the site is not to be discharged into any water body or stormwater system without first being treated and tested for pH and turbidity as per Mainland Civil’s pH and Turbidity Treatment Procedures. Sediment controls - refer to Soil (sand) management above. Dewatering of ponded stormwater or infiltrated groundwater. Subsequent collection to the site water cart for reuse for dust suppression. 	<ul style="list-style-type: none"> Mainland Civil (2021g), <i>pH and Turbidity Readings</i> (ref: Dewatering) document reviewed by Environmental Earth Sciences and the following is noted: pH and turbidity tested twice in March, twice in May and once in June 2021. pH readings ranged from 6.74 – 6.99 and turbidity readings ranged from 21.8 – 29.4 Nephelometric Turbidity Unit (NTU). Water from the sediment basin was discharged to storm water on five occasions. pH and Turbidity readings were within the acceptable criteria for the discharge of water. 	Calibration record of water quality meter requested during the audit, but was not provided by Mainland Civil.	Not triggered.	

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5.7 SWMP: 5.7.5: Minimising spoil removal and increase reuse and 5.7.5.1 Spoil temporary stockpile location	25	<ul style="list-style-type: none"> The soil type including soil physical and chemical characteristic across the site are carefully assessed and recorded to provide information on the type of valuable resource that are available. The majority of spoil that would be generated from the construction activities is expected to meet the classifications of Virgin excavated natural Material (VENM). 5.7.5.1 Spoil temporary stockpile location: Any spoil that is to be reused on site will be stockpiled in the temporary stockpile. Excess spoil would be disposed of at a location that has appropriate approval or licences to accept the material. Solid waste and more highly contaminated materials will not be reused or imported to onsite. Imported materials include; stabilised sand. 	1,302 m ³ or 2,151 tonnes of asphalt, brick and concrete disposed offsite to <ul style="list-style-type: none"> Concrete Recyclers, 14 Thackeray Street, Camellia NSW 2142 – 2,019 tonnes; Boral, 39a Widemere Rd, Wetherill Park NSW 2164 – 132 tonnes. 6,303 m ³ or 12,606 tonnes ENM disposed offsite to <ul style="list-style-type: none"> BT Civil, Veron Rd, Schofields – 12,177 tonnes; and Box Hill – 429 tonnes. 109,614 m ³ or 242,606 tonnes of VENM (clay, sandstone and shale) disposed offsite to 35 different facilities. Refer to Appendix B - Table C for list of facilities where VENM material was recycled. 21,403 m ³ or 42,807 tonnes GSW (Recyclable) disposed offsite to <ul style="list-style-type: none"> MET Recycling, 134 Carnarvon Street, Silverwater NSW 2128 – 35,731 tonnes; Brandown, 90 Range Road, Cecil Park – 2,135 tonnes; and Benedict Recycling, Crozier Road, Belrose NSW 2085 – 4,941 tonnes. 401 m ³ or 803 tonnes GSW (Special Waste - Asbestos) disposed to <ul style="list-style-type: none"> Horsley Park Waste Management Facility, located at 752/716 Wallgrove Rd, Horsley Park NSW 2175 – 785 tonnes; and Suez Recycling & Recovery Pty Ltd, located at 1725 Elizabeth Drive, Kemps Creek NSW 2178 – 18 tonnes. 	---	Compliant	
5.7 SWMP: 5.7.6: Erosion and sediment control inspection checklist	26	As part of Mainland’s weekly site walk, the site sediment controls are inspected to ensure they are compliant with their design intent. In the event of non-conformance, they will be immediately rectified and re-inspected by the site supervisor and site engineer. These controls are also visually monitored daily by the site supervisor to ensure they comply.	<ul style="list-style-type: none"> Environmental Earth Sciences reviewed five Weekly site inspections and notes 'sediment fencing and silt socks are secure and in good condition' is on the checklist. Weekly Site Safety Walk 20.02.2021 contains photo of a damaged silt sock that is to be replaced. Weekly Site Safety Walk 25.03.2021 has the following comment under 'Environmental': <i>Erosion & sediment controls checked. Silt fence / sand bags replaced where damaged</i>. Weekly Site Safety Walk 27.05.2021 has noted the following comment under 'Excavation': <i>Sediment fencing around the perimeter of site and additional fencing around stockpiles</i>. Weekly Site Safety Walk 27.05.2021 stockpiles inspected, covered and fenced with sediment controls in place. <i>Silt fences in place around stockpiles and in place preventing entry to existing stormwater system</i>. During performance review audit site inspection on 14 July 2021, Linda Lenihan noted site fencing and barriers are 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 Photographs 4 - 12 in Appendix D. 	---	Compliant	
2: Communication and Consultation	27	<p>2.1 Tool box Meetings: During the course of the works, the Site Supervisor or Site Management Team will conduct pre-start Tool Box talks and Daily Prestart Meetings as part of keeping up the safety and environmental awareness of workers. Specific safety and environmental issues can be addressed, accidents/near misses can be reviewed, SWEMS Statements can be presented, safety alerts discussed or any other health, safety or environmental related issues tabled. It is an open forum for discussion and will be recorded on the “Tool Box Meeting” form, which will be signed off by all those present. These documents can be made available to Frasers Property upon request.</p> <p>2.2.4: Onsite communication and Workplace Health, Safety and Environment (WHSE) consultation methods.</p>	These documents were not audited during the performance review audit. Environmental Earth Sciences notes there is a 'SWMS Observation' section in the Weekly site safety walk inspections and the following subcontractors were observed: <ul style="list-style-type: none"> Civil & Tunnel in January 2021; Hasson in February 2021; Challita in March 2021; Mainland in May 2021; and RIX in June 2021. 	---	Compliant	
3.10: Project audits:	28	During the course of the works on this project, the HSEQ Manager will conduct regular internal reviews on the IMP to ensure that it is being implemented and conforms to Mainland Civil’s certified Environmental Management System. On completion of the actions to address Non-Conformances, the document is to be submitted back to the Systems Coordinator/Manager to be closed out, IMP updated and reissued and relevant changes made to policies.	Not audited.		Not triggered.	

Table A: Independent Audit Table

Approval (ID) / Mainland Civil IMP Section	Number	Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
		<p>3.10.1: The objective of an Internal Review is to:</p> <ul style="list-style-type: none"> Identify any action, process or procedure that may lead to or has caused a non-conformance or does not comply with current road laws and regulations. Report any action, process or procedure that has or may cause a non-conformance to the Compliance Manager. Investigate why a non-conformance happened / what was the root cause. On completion, the onsite HSEQ Manager will prepare and submit a report to the onsite Project Manager and Site Supervisor, detailing the findings (including any non-conformances) and list any actions to be taken. 	Not audited.		Not triggered.	
		An independent environmental audit for Mainland Civil's HSEQ Certification will be completed for Ivanhoe Estate by a suitably qualified person/team approved by the site HSEQ Manager as a requirement for Mainland's certification.	Not audited.		Not triggered.	
		Section 3.2: Project quality objectives and targets: Internal and external audit: To complete regular internal and external audits to monitor and maintain compliance. Regular site audits every 8 weeks and external audits bi-annually.	External audit completed by Environmental Earth Sciences In December 2020 and July 2021 on Mainland Civils compliance in accordance with their IMP, AMP and CNVMP.	Further information required: When are the regular internal site audits conducted.	Not triggered.	
		<p>3.10.1: Internal audits: The IMP will be reviewed every 3 months or unless changes are made prior by HSEQ Manager.</p> <p>3.10.1: The objective of an Internal Review is to: Monitor the management system to seek further improvement and review generated documents, processes and procedures and for any legislative changes.</p>		Further information required: When are the regular internal site audits conducted.	Not triggered.	
<p>2.3: Complaints 2.3.2: Complaints handling procedure. 5 - Environmental Management, Table 5.1: Environmental Objectives and target:</p>	29	<p>"No complaints received from the community, Frasers Property or the environmental regulator (including on behalf of a local resident)".</p> <p>5.5 Noise: 5.5.1: Compliance requirements: Include a pro-active and reactive strategy for dealing with complaints including achieving the construction noise goals, particularly with regard to verbal and written response.</p> <p>2.3.2: Complaints Handling Procedure: All environment complaints received from the public and/or regulatory agency are investigated by the site HSEQ Manager. Any changes required to the HSEQ documentation are to be communicated to all relevant staff in a site tool-box discussion. The effectiveness of corrective and preventive actions taken will be reviewed by the onsite HSEQ Manager and Construction Manager.</p>	<ul style="list-style-type: none"> 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. Refer to Appendix C of the original report. City of Ryde Council issued Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997 (ref: POEO2021/0008; 18 March 2021) to Mainland Civil following receipt of concerns regarding sediment laden water in Shrimpton's Creek. Refer to Appendix C of the original report for the Preventive Notice. 	<ul style="list-style-type: none"> What was the outcome of the stockpile complaint? Environmental Earth Sciences was advised that this preventive notice was issued to several construction sites in the vicinity of Shrimpton's Creek following an extreme rain event (source: bom.gov.au, accessed 24 August 2021). 	Not triggered.	
<p>Section 3.5: Non-conformance and Corrective Action Prevention</p>		<p>Non Conformance Report will be raised for:</p> <ul style="list-style-type: none"> Specification deviation or work that fails to meet quality standards. Non-compliance with the site rules. Non-compliance with Health, Safety and Environmental Legislation requirements. Repeated safety or housekeeping issues identified during inspections. <p>The Non-Conformance shall be completed and issued to the offending party. Non Conformances shall be registered in the office non-conformance register. The Project Manager / Site Supervisor will decide on the appropriate disposition and corrective actions. Nonconformances raised as a result of a Safety or Environmental issue to be reviewed by the HSEQ Manager to confirm if systems need to be updated and if any company wide alerts, correspondence are required.</p> <ul style="list-style-type: none"> Specification deviation or work that fails to meet quality standards. 	Non-conformance register not reviewed at the time of the performance review audit.	What corrective actions were out in place as a result of the complaint and Prevention Notice?	Not triggered.	

Table A: Independent Audit Table

Approval (ID) / Mainland Civil IMP Section	Number	Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
• 4.7: Safe Work and Environmental Method Statements (SWEMS).	30	<ul style="list-style-type: none"> • 4.7.1: General: • 4.7.2: Safe Work Procedures (SWPs) • Appendix B: Project Safety and Environmental Risk Register and Control Measures. • 4.7.4: Site inspections: On a weekly basis the Site Engineers along with the assistance of the HSEQ Manager and/or Site Supervisors will complete a Weekly Site Safety and Environmental Walk to inspect and identify where controls are adequate, inadequate or not relevant. If any inadequate, unsafe or environmentally unsuitable situations are identified which may be deemed serious or life threatening, or significant or threatening to the environment, then a 'Non-conformance Report' will be instigated detailing the corrective and/or preventive action required. • 4.7.5: Plant and equipment pre-start checks. 	Environmental Earth Sciences reviewed five weekly site inspections: <ul style="list-style-type: none"> • Mainland Civil (2021b) / Upvise (2021a), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 22/01 (Ref: 210122 Site Safety Walk, 25 Jan 2021). • Mainland Civil (2021c) / Upvise (2021ab), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 20.2.21 (Ref: 210220 Site Safety Walk, 25 Feb 2021). • Mainland Civil (2021d) / Upvise (2021c), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk 25/3 (Ref: 210220 Site Safety Walk, 25 Mar 2021). • Mainland Civil (2021e) / Upvise (2021d), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-907 (Ref: 210527 Site Safety Walk, 27 May 2021). • Mainland Civil (2021f) / Upvise (2021e), 1378 Macquarie - Ivanhoe Estate, Weekly Site Safety Walk HSE 139-MAN-918 (Ref: 210624 Site Safety Walk, 24 June 2021). 	---	Compliant	
3.9: Calibration	31	Mainland Civil maintains a log or register of all inspection, measuring and testing equipment and provides independent certification of calibrations. The calibrations are carried out as per the manufacturer's written recommendations and records of such work will be maintained on site. This includes; water testing kits, noise meters, air monitors and laser meters. If requested by Frasers Property, the certifications and results of any testing or calibrations will be provided.	<ul style="list-style-type: none"> • The noise meter was last calibrated on 19 February 2018 and is overdue for calibration. • The vibration monitor was last calibrated on 26 October 2020. • Calibration record of water quality meter requested during the audit, but was not provided by Mainland Civil. 	<ul style="list-style-type: none"> • Noise meter is overdue calibration. • Calibration record of water quality meter requested during the audit, but was not provided by Mainland Civil. 	Not triggered.	

Notes:	
Complaint	
Non-compliant	
Not triggered	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part A Monitoring and Environmental Audits						
A20	32	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	
Schedule 2 - Part B Independent Environmental Audit						
B5	33	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: • 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). 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: • DPIE (2020), <i>Audit Program, Ivanhoe Estate Stage 1 SSD-8903-PA-2</i> (ref: Appointment of Experts, 24 August 2020).	---	Compliant	
B6	34	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	35	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	36	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: (a) assesses the environmental performance of the development, and its effects on the surrounding environment including the community; (b) assesses whether the development is complying with the terms of this consent; (c) reviews the adequacy of any document required under this consent; and (d) recommends measures or actions to improve the environmental performance of the development, and improvements to any document required under this consent.	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	37	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	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part B Pre-Construction Dilapidation Report						
B25	38	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.	Mainland Civil engaged GreenPlus Property Services as the suitably qualified structural engineer to prepare Pre-Construction Dilapidation Reports: <ul style="list-style-type: none"> 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). 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). 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). 	---	Compliant	
Schedule 2 - Part B Construction Environmental Management Plan (CEMP)						
B40	39	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: a) describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase;	Mainland Civil Pty Ltd (2020a), <i>Integrated Management Plan, Ivanhoe Estate - Macquarie Park</i> (dated 10 December 2020, Revision E) (the 'IMP'). a) The relevant stages and phases of construction include: Stage 1 – Roadworks – Week 1 to Week 26 Stage 2 – Roadworks – Week 8 to Week 26 Stage 3 – Bulk Excavation to A1 – Week 23 to Week 40.		Compliant	
B40	40	b) describe all activities to be undertaken on the site during site establishment and construction of the development;	Site activities include: site establishment, service locating, tree removals, strip and stockpile existing topsoil and mulch for reuse, demolish existing pavements, cap existing water and remove redundant services, bulk excavation for development of two new roads, service installation, install kerbs and asphalt to new road, install pavers to road and parking bays, design and construct shoring wall to basement and bulk excavation to basement.	---	Compliant	
B40	41	c) include a Dust Management Plan, incorporating the mitigation measures outlined in the Air Quality Assessment, prepared by WSP, dated October 2018.	Refer to Table A Numbers 1 - 11 for details on the DMP and AQOMP. 5.4.2: Dust and debris mitigation and control measures: the mitigation measures outlined in the Air Quality Assessment as detailed in 5.4.2	Section 5.8.4 refer to multiple monitors, but only one dust gauge installed each month. What is the reasoning for not having multiple dust gauges installed onsite?	Not triggered	
B40	42	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	43	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 1.8 of the IMP details the legal requirements and other obligations that are applicable to Mainland Civil's activities during site establishment and construction, and include the Commonwealth Laws, National Codes of Practice, NSW Legislation, NSW Codes of Practice.		Compliant	
B40	44	f) be prepared in consultation with Council and include specific consideration of measures to address any requirements of Council during site establishment and construction;				
B40	45	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 1.13 of the IMP and include the following: Site Manager, Health, Safety, Environment & Quality Manager, Senior Project Engineer, Site Engineer and Site Supervisor.	---	Compliant	
B40	46	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;	Refer to Table A Numbers 1 - 11 for Air impacts. Refer to Table A - Number 12 for Noise impacts.	---	Compliant	
B40	47	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. 5.7.4: Construction site rainwater testing, treatment and discharge: 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	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B40	48	j) management of groundwater during construction;	Table 5.7.2: Stormwater and/or infiltrated groundwater (considered unlikely due depth of excavation). Water management: control measures include pH and turbidity testing prior to discharge. <ul style="list-style-type: none"> • Mainland Civil (2021g), <i>pH and Turbidity Readings</i> (ref: Dewatering) document reviewed by Environmental Earth Sciences and the following is noted: <ul style="list-style-type: none"> • pH and turbidity tested twice in March, twice in May and once in June 2021. • pH readings ranged from 6.74 – 6.99 and turbidity readings ranged from 21.8 – 29.4 Nephelometric Turbidity Unit (NTU). • Water from the sediment basin was discharged to storm water on five occasions. pH and Turbidity readings were within the acceptable criteria for the discharge of water. 	Calibration record of water quality meter requested during the audit, but was not provided by Mainland Civil.	Not triggered	
B40	49	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	Refer to point 'h' above.	---	Compliant	
B40	50	l) include arrangements for community consultation and complaints handling procedures during construction.	2.3.2: Complaints Handling Procedure: All environment complaints received from the public and/or regulatory agency are investigated by the site HSEQ Manager. Appendix E: Mainland Civil Site Rules: Any comments, suggestions or complaints from the public in regard to safety and environmental issues in or around the site are to be reported to the Site Supervisor. Fraser's 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. Refer to Appendix C . City of Ryde Council issued Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997 (ref: POEO2021/0008; 18 March 2021) to Mainland Civil following receipt of concerns regarding sediment laden water in Shrimpton's Creek. Refer to Appendix C for the Preventive Notice.	<ul style="list-style-type: none"> • What was the outcome of the stockpile complaint? • Environmental Earth Sciences was advised that this preventive notice was issued to several construction sites in the vicinity of Shrimpton's Creek following an extreme rain event (source: bom.gov.au, accessed 24 August 2021). 	Not triggered	
Schedule 2 - Part B Construction Noise and Vibration Management Plan (CNVMP)						
B42	51	a) be prepared in accordance with the EPA's Interim Construction Noise Guideline	Mainland Civil Pty Ltd (2020), Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Fraser's Property (dated 19/11/2020, Revision A) (the 'CNVMP' report). The CNVMP report was prepared in accordance with <ul style="list-style-type: none"> • Department of Environment & Climate Change (DECC) (2009), Interim Construction Noise Guideline (DECC, 2009); and • German Standard DIN4150-3:1999 Structural vibration Part 3: Effects of Vibration on Structures. Recommendation from December 2020 audit: Please identify the suitably qualified person, experience and credentials to demonstrate compliance to B42. Rauf Osterman of Osterman Consult has 30 years of experience in the Tunnelling, Construction and Mining Industry. Osterman Consult was engaged by Mainland Civil to conduct noise and vibration monitoring. Refer to Table A - Numbers 12 - 14.	---	Compliant	
B42	52	b) identify nearby sensitive receivers and land uses;	Not required. Section 6 of the CNVMP: Nearest Receivers - seven receivers identified and land uses listed.	Not required.	Not triggered	
B42	53	c) identify the noise management levels for the project;	7: Noise monitoring plan - Table 11: Summarised Noise Emission Criteria - noise levels for residential and commercial land uses. Residential day time noise level objective of 48 dB(A)Lea (15 min) is well below the highly noise affected 75 dB(A)Lea (15 min) as recommended in DECC (2009). Commercial noise objective of 63 dB(A)Lea (15 min) is below the Lea (15 min) 70 dB(A) for offices, retail outlets as recommended in Section 4.1.3 of DECC (2009). <ul style="list-style-type: none"> • Osterman Consult (2021a) – January 2021 reported Lmax 90.1 dBA and Leq 73.90 dBA. Leq is below the highly noise affected 75 dB(A)Leq (15 min). • Osterman Consult (2021b) – March 2021 reported Lomax: 97.20 dBA and Leq: 81.0 dBA. Leq is above the highly noise affected 75 dB(A)Lea (15 min). • Osterman Consult (2021c) – May 2021 reported Lmax: 91.90 dBA, Leq: 76.100 dBA. Leq is above the highly noise affected 75 dB(A)Lea (15 min). 	On review of Osterman Consult (2021b), sound pressure level exceeds 75 dB(A) on two occasions, with the majority of the time the level ranges from 45 - 65 db.(A). On review of Osterman Consult (2021c), sound pressure level exceeds 75 dB(A) on one occasion, with the sound pressure level fluctuating between 45 - 70 dB(A) for May 2021.	Compliant	
B42	54	d) identify the construction methodology and equipment to be used and the key sources of noise and vibration;	4: Construction Activities: details plant and activities required to complete works. 8: Vibration Management Plan: Mainland Civil works that are expected to cause vibration include: excavation of sandstone; hammering and sawing sandstone; and anchoring (drilling) in sandstone.	Not required.	Not triggered	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B42	55	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.	Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out?	Not triggered	
B42	56	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 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.	Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out?	Not triggered	
B42	57	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	Section 5: Communication Tools: "Prior to the commencement of site works, notice will be provided to nearest receivers via letter drop informing of the upcoming works, the expected noise levels, durations and contact details of the community liaison officer". • Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents: Mainland Civil Pty Ltd (2020c), <i>Notice of Construction Commencement, Ivanhoe Estate</i> (dated 16 December 2020). Refer to Appendix C for the interval noise reports and the communication letter.	----	Compliant	
B42	58	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 7 : Noise monitoring plan: A full time noise monitor will be installed at monitoring location #3 for the duration of Stage 1A works. Periodic noise monitoring will be conducted at other locations as required. In the event that a noise complaint is received then the monitoring frequency may be increased following a formal review. Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out? Environmental Earth Sciences is not aware of any noise complaints received by Frasers Property or Mainland Civil for the person of January - July 2021. 8: Vibration Management Plan: Mainland Civil works that are expected to cause vibration include: • Excavation of sandstone; • Hammering and sawing sandstone; and • Anchoring (drilling) in sandstone. As these works have been identified as high risk activities for vibration, a full time vibration monitor shall be installed at the same location as the noise monitor. Osterman Consult was engaged to conduct monthly vibration monitoring. One vibration monitor is located north of the Midtown sales office, close to the nearest residents north of the site. Refer to Photographs 14 and 15 in Appendix D . Three monthly vibration reports were reviewed by Environmental Earth Sciences: • Osterman Consult (2021d), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 1 January</i> (ref: Time frame 2021-01-01 00:00 - 2021-01-31 23:59). • Osterman Consult (2021e), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 3 March</i> (ref: Time frame 2021-03-01 00:00 - 2021-03-31 23:59). • Osterman Consult (2021f), <i>Interval Macquarie Park Ivanhoe Place - Vibration - 5 May</i> (ref: Time frame 2021-05-01 00:00 - 2021-05-31 23:59). Osterman Consult (2021d): maximum V: 2.65 (mm/s). Osterman Consult (2021e): maximum V: 0.65 mm/s. Osterman Consult (2021f): maximum V: 0.65 mm/s.	Noise monitoring was conducted at one location only during January - July 2021. When is regular noise monitoring carried out? Maximum velocity (V) recorded was 2.65 mm/s - below the peak particle velocity of 3 mm/s for structures that are under a preservation order and 5 m/s for dwellings and buildings of similar design and/use (German Standard DIN4150-3 (1999-02): <i>Structural vibration - Part 3: Effects of vibration on structures</i> .	Not triggered Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part B Air Quality and Odour Management Plan (AQOMP)						
B43	59	a) staged excavation to limit the surface area of exposed odorous material;	Not required. 5.8.1: Sequencing and staging of works will be geared to minimise the area of excavated surfaces open concurrently for extended periods of time and therefore minimise the impact of potential odours.	Not required.	Not triggered	
B43	60	b) application of odour suppressants;	5.8.2: Material Classification and Odour Suppressants - in consultation with environmental consultant. Two options for odour suppression and control are provided. Mainland Civil confirm odour suppressants were not required during the January - July 2021 period.	---	Compliant	
B43	61	c) effective covering of stockpiles and truckloads of excavation spoil; and	5.8.3: 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 2m in height. If there is a requirement to go higher due to space/loading requirements, material stockpiles will need to wetted during the day and covered over night. All trucks carting material off site will cover their loads prior to leaving the site. Fraser's 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. Refer to Appendix C for documentation.	Limit the height of stockpiles and ensure stockpiles are secure at the end of each day.	Not triggered	
B43	62	d) expedited removal of odorous material from the development to a facility legally able to accept those wastes.	5.8.2: 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. Mainland Civil confirm odour suppressants were not required during the January - July 2021 period.	---	Not triggered	
B43	63	The AQOMP must include proactive and reactive management strategies, key performance indicators (KPIs), monitoring measures, record keeping, response mechanisms, contingency and compliance reporting measures.	5.8.5: Proactive/Reactive Management Strategies & Response Mechanisms. 5.8.7: Compliance protocol. 5.8.8: Contingency Management Strategies includes KPIs. 5.8.4: Onsite Monitoring and Recording and Table 5.8.6: KPIs. Refer to Table A Numbers 7 - 11 for details on the AQOMP.	---	Compliant	
Schedule 2 - Part B B44. Construction Waste Management Plan (CWMP)						
B44	64	a. the estimated volume or weight of materials that will be reused, recycled or removed from the site;	1,302 m ³ or 2,151 tonnes of asphalt, brick and concrete disposed offsite to: • Concrete Recyclers, 14 Thackeray Street, Camellia NSW 2142 – 2,019 tonnes; • Boral, 39a Widemere Rd, Wetherill Park NSW 2164 – 132 tonnes.	---	Compliant	
B44	65	b. on-site material storage areas during construction;	6,303 m ³ or 12,606 tonnes ENM disposed offsite to • BT Civil, Veron Rd, Schofields – 12,177 tonnes; and • Box Hill – 429 tonnes.	---	Compliant	
B44	66	c. materials and methods used during construction to minimise waste;	109,614 m ³ or 242,606 tonnes of VENM (clay, sandstone and shale) disposed offsite to 35 different facilities - Refer to Appendix A / Table C for documentation of material recycled.	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B44	67	<p>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; Table 1.8 updated to include codes of practice and guidelines for management and removal of asbestos. NSW EPA (2014) - Waste Classification Guidelines - Part 1: Classifying Waste also referenced in Table 1.8.</p> <ul style="list-style-type: none"> • 5.3: Unexpected Finds Protocol: If the contamination source is verified as asbestos, SafeWork NSW will be notified and approval obtained prior to handling and removal of contaminated material from site. Remediation is to be undertaken as per the Site Environmental Consultants' instruction, Asbestos Management Plan, Asbestos Removal SWMS in accordance with Protection of the Environment Operations (Waste) Regulation 2014. • 5.6.7: details Hazardous Waste (including potential asbestos) under the following subsections: <ul style="list-style-type: none"> • 5.6.7.1: Contaminated soil source, location, quantity and characteristics: • 5.6.7.2: Training requirements. • 5.6.7.3: Onsite management: Engagement of hygienist to undertake fibre air monitoring. Dust suppression and wetting down of unknown finds/asbestos fibres. • 5.6.7.4.: Management Practices. • 5.6.7.5.: Waste tracking. 	<ul style="list-style-type: none"> • Environmental Earth Sciences (2021b) – Waste Classification Advice for Stockpile Nos. #2, #3 and #5 and Pipe #1 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW (ref: 120120_WC_No.2_V1; 12 February 2021). • Environmental Earth Sciences (2021e) – Clearance Certificate for Footprints of Asbestos Pipe #1 at Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park, NSW (ref: 120120_CC_No.1; 25 February 2021). • Environmental Earth Sciences (2021f) – Report on Management of Unexpected Finding – Ivanhoe Estate, Cnr Herring Road and Epping Road, Macquarie Park NSW (ref: 120077_UXF_V2; 11 February 2021). • 5.3: Unexpected Finds Protocol: If the contamination source is verified as asbestos, SafeWork NSW will be notified and approval obtained prior to handling and removal of contaminated material from site. <p>Remediation works were conducted as per:</p> <ul style="list-style-type: none"> • Environmental Earth Sciences environmental consultant instruction; • Mainland Civil Pty Ltd (2021), Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd (dated 4 February 2021, Revision B, Doc No.: MC-AMP-1378) (the 'AMP'). • Waste tracking documentation was kept by Mainland Civil and provided to Environmental Earth Sciences. Refer to Appendix C for documentation of asbestos waste disposed from site. <p>401 m³ or 803 tonnes GSW (Special Waste - Asbestos) disposed to</p> <ul style="list-style-type: none"> • Horsley Park Waste Management Facility, located at 752/716 Wallgrove Rd, Horsley Park NSW 2175 – 785 tonnes; and • Suez Recycling & Recovery Pty Ltd, located at 1725 Elizabeth Drive, Kemps Creek NSW 2178 – 18 tonnes. 	---	Compliant	
B44	68	<ul style="list-style-type: none"> • 5.6.7.6: Monitoring: All airborne fibre monitoring will be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust [NOHSCH:3003(2005)] and analysed at a NATA-accredited laboratory. • 5.6.7.7.: Clearance inspection. 	<ul style="list-style-type: none"> • Environmental Earth Sciences (2021g) – Clearance Certificate for footprints of asbestos pipe #1 at Ivanhoe Estate, corner of Herring Road and Epping Road, Macquarie Park, NSW (ref: 120077_CC1_No1_V1; 12 March 2021). • Environmental Earth Sciences (2021h) – Asbestos Clearance Certificate of Footprints of Stockpiles #2, #3 and #5 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW (ref: 120077_ACC_V1; 3 March 2021). • Environmental Earth Sciences (2021i) – Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW (ref: 120077_CC_No.2_V1; 16 March 2021). • Environmental Earth Sciences (2021j) – Asbestos Clearance Certificate for Footprint at Pipe #2 – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW (ref: 120077_CC_No.3_V1; 14 May 2021). • Environmental Earth Sciences (2021k) – Asbestos Clearance Certificate Following Removal of Asbestos Fragments – Ivanhoe Estate, Corner of Herring Road and Epping Road, Macquarie Park NSW (ref: 120077_CC_No.4_V1; 21 June 2021). • Air monitoring was conducted by Environmental Earth Sciences during removal of material to verify the integrity of the control measures and to ensure concentrations of airborne asbestos did not exceed the control standard (0.01 fibres/ml of air). Three air monitors, equipped with membrane filters, were strategically placed around the site by a competent person. Refer to Environmental Earth Sciences (2021h). 	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B44	69	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	5.6.6: Table 5.6.6a – Recycling and Disposal Facilities: Lists the recycling and / or waste facility that are nominated to accept the various material types to be disposed offsite. Should the unexpected finds be classified as asbestos, this will be disposed at licensed facility who can legally accept asbestos. 1,302 m3 or 2,151 tonnes of asphalt, brick and concrete disposed offsite to: <ul style="list-style-type: none"> Concrete Recyclers, 14 Thackeray Street, Camellia NSW 2142 – 2,019 tonnes; Boral Recycling Widemore, 39a Widemere Rd, Wetherill Park NSW 2164 – 132 tonnes. 12,606 tonnes ENM disposed offsite to <ul style="list-style-type: none"> BT Civil, Veron Rd, Schofields – 12,177 tonnes; and Box Hill – 429 tonnes. 109,614 m3 or 242,606 tonnes of VENM (clay, sandstone and shale) disposed offsite to 35 different facilities - Refer to Appendix A - Table C for further details. <ul style="list-style-type: none"> 21,403 m3 or 42,807 tonnes GSW (Recyclable) disposed offsite to <ul style="list-style-type: none"> MET Recycling, 134 Carnarvon Street, Silverwater NSW 2128 – 35,731 tonnes; Brandown, 90 Range Road, Cecil Park – 2,135 tonnes; and Benedict Recycling, Crozier Road, Belrose NSW 2085 – 4,941 tonnes. 401 m3 or 803 tonnes GSW (Special Waste - Asbestos) disposed to <ul style="list-style-type: none"> Horsley Park Waste Management Facility, located at 752/716 Wallgrove Rd, Horsley Park NSW 2175 – 785 tonnes; and Suez Recycling & Recovery Pty Ltd, located at 1725 Elizabeth Drive, Kemps Creek NSW 2178 – 18 tonnes. 	<ul style="list-style-type: none"> Concrete Recyclers - Environment Protection Licence (EPL) # 6664 Boral Recycling Widemere- EPL No. 11815. MET Recycling - EPL No. 20948 Veolia Environmental Services (Australia) Pty Ltd, Horsley Park Waste Management Facility, Wallgrove Rd, Horsley Park NSW - EPL # 11584 - can legally accept asbestos. Suez Recycling & Recovery Pty Ltd, Elizabeth Drive Landfill Facility, EPL - 4068 can legally accept asbestos. 	Compliant	
B44	70	f. identification within the CWMP of the responsibility for the transferral of waste and recycling bins within the property to the collection point.	5.6.6: Recycling and disposal facilities - Table 5.6.6b – Personnel Responsible for waste transfer.		Compliant	
Schedule 2 - Part B						
B45. Construction Soil and Water Management Plan (CSWMP)						
B45	71	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. Refer to Photographs 4 - 7 in Appendix D. 5.7: Soil and Water Management Plan: Figure 5.7.2d – Erosion and Sediment Control Plan shows the proposed location of the sediment basin. Table 5.7.2: Soil and Water Sources and Mitigation Methods - provides mitigation measures for soil (sand) management, sediment fines, import of bulk supplies of material and water management for works including excavation and service trenching.	---	Compliant	
B45	72	b. catchment plan;	5.7.3: Temporary sediment basin.	---	Compliant	
B45	73	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 5.7.2d: Erosion and Sediment Control Plan shows the proposed location of the sediment basin. Figure 5.7.3a: Basin Detail Plan shows runoff from the entire site will be directly to the temporary sediment basin.	---	Compliant	
B45	74	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 Figure 5.7.3a . Details of the sediment basin are included in Section 5.7.3: Temporary sediment basin : size 20 m x 35 m, depth / max ponding level 0.54 m, minimum volume of 1065 m ³ , outlet pipes with sieve-style filtration system. Refer to 5.7.4. for Flocculation methodology.	---	Compliant	
B45	75	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;	<ul style="list-style-type: none"> Mainland Civil (2021g), pH and Turbidity Readings (ref: Dewatering) document reviewed by Environmental Earth Sciences and the following is noted: <ul style="list-style-type: none"> pH and turbidity tested twice in March, twice in May and once in June 2021. pH readings ranged from 6.74 – 6.99 and turbidity readings ranged from 21.8 – 29.4 Nephelometric Turbidity Unit (NTU). Water from the sediment basin was discharged to storm water on five occasions. pH and Turbidity readings were within the acceptable criteria for the discharge of water. 	---	Compliant	
B45	76	f. identification and management of any stormwater run-on to the site from adjacent sites;	City of Ryde Council issued Direction to Take Preventive Action, Section 96 Protection of the Environment Operations Act 1997 (ref: POEO2021/0008; 18 March 2021) to Mainland Civil following receipt of concerns regarding sediment laden water in Shrimpton's Creek. Refer to Appendix C for the Preventive Notice.	Earth Sciences was advised that this preventive notice was issued to several construction sites in the vicinity of Shrimpton's Creek following an extreme rain event (source: bom.gov.au, accessed 24 August 2021).	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B45	77	g. location of any temporary stockpiles (soil, spoil, topsoil or otherwise) and accompanying sediment and erosion control measures;	<ul style="list-style-type: none"> During performance review audit site inspection on 14 July 2021, Linda Lenihan noted the following: <ul style="list-style-type: none"> 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 Photographs 4 - 12 in Appendix D. <ul style="list-style-type: none"> Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site. Waste blasters used to clear tyres also. Figure 5.7.2d - Erosion and Sediment Control Plan shows indicative location of stockpile. Table 5.7.2: Soil and Water Sources and Mitigation Methods: provides mitigation measures for soil (sand) management, sediment fines, import of bulk supplies of material and water management. 	---	Compliant	
B45	78	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"> 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. Figure 5.7.2d - Erosion and Sediment Control Plan shows indicative vehicle washdown bay location. Table 5.7.2: Soil and Water Sources and Mitigation Methods. 	---	Compliant	
B45	79	i. a daily and weekly site inspection checklist consistent with IECA Best Practice Erosion and Sediment Control documents.	Six site inspection checklists reviewed: 15 March, 12 April, 3 May, & June, 12 July and 9 August 2021. Refer to documentation in Appendix C of Version 1 of this audit report. 5.7.6: Erosion and sediment control inspection checklist : These controls are also visually monitored daily by the site supervisor to ensure they comply. In conjunction with the above figure 5.7.6a, extract from the weekly HSE walk, Mainland will implement the Weekly site inspection checklist prepared by the International erosion Control Association (IECA). A copy of this form is located in Appendix C of Version 1 of this audit report.	Are site inspection checklist consistent with IECA Best Practice being conducted weekly or monthly?	Compliant	
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:						
B45	80	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 Figure 5.7.3a .	Not required.	Not triggered	
B45	81	b. using type D soils (unless otherwise demonstrated by an analysis of site soils by a qualified geotechnical);	Figure 5.7.3a: General notes: 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	82	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 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.		Compliant	
B45	83	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 required.	Not triggered	
Schedule 2 - Part B Contamination						
B55	84	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.				

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
B56	85	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	86	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	87	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	
Schedule 2 - Part B						
B64						
B64	88	The Applicant shall comply with any notification requirements to SafeWork NSW concerning the handling and removal of any asbestos.	Frasers engaged Environmental Earth Sciences as the environmental consultant for management of asbestos impacted material. Asbestos material was managed in accordance with the site specific AMP. • Mainland Civil are licenced with SafeWork NSW for the removal of friable and non-friable asbestos contaminated material – Licence: AD213265. The licence is included in Appendix A of Mainland Civil Pty Ltd (2021), the ‘AMP’: Mainland Civil Pty Ltd (2021), <i>Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd</i> (dated 4 February 2021, Revision B, Doc No.: MC-AMP-1378) (the ‘AMP’). Safework NSW issued <i>Notice of intent to remove non-friable asbestos</i> to Mainland Civil (ref: Notification Number: 940R-00300402-02, dated 4/02/2021) prior to removal of asbestos impacted material from the site.	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part B						
B65		B65				
B65	89	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'.	Part 7 of 2014 regulation details transport, disposal and management of asbestos waste. Part 7 - Clauses 78 - 81 - are detailed in Section 9 of the AMP and Section 3 details the contractors / consultants who will be engaged if asbestos is found onsite. <ul style="list-style-type: none"> • Mainland Civil are licenced with SafeWork NSW for the removal of friable and non-friable asbestos contaminated material – Licence: AD213265. • Waste Disposal Site: Veolia, Horsley Park Waste Management Facility, 716-736 Wallgrove Road, Horsley Park, NSW, 2175 - Environment Protection Licence No. 11584. • Cartage Contractor: Bulk Transport Solutions Pty Ltd. • Licenced Asbestos Assessor: Guangzhou Ju – LAA001176 - Environmental Earth Sciences International. • Asbestos Removal Supervisors: Brett Talbot, Mark Anderson – Mainland Civil. • Asbestos impacted material disposed offsite to facilities that can legally accept asbestos waste. • Frasers Property engaged Environmental Earth Sciences as the suitably qualified consultant and works were completed under the guidance of Guangzhou Ju and Linda Lenihan. • Safework NSW issued Notice of intent to remove non-friable asbestos to Mainland Civil (ref: Notification Number: 940R-00300402-02, dated 4/02/2021) prior to removal of asbestos impacted material from the site. 	---	Compliant	
Schedule 2 - Part C						
Construction Noise and Vibration Management						
C7	90	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, Mainland Civil have considered the following guideline: - DECC Interim Construction Noise Guideline.		Compliant	
C8	91	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 id not substantially tonal or impulsive in nature.		Compliant	
C9	92	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 Mainland Civil or Frasers Property.		Compliant	
C10	93	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.				
C11	94	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	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part C Contamination						
C15	95	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: <ul style="list-style-type: none"> 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	
C16	96	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.	
C17	97	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.	
C18	98	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.	
C19	99	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.	
C20	100	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.	
C21	101	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 findings and managed in accordance with Mainland Civils <i>Asbestos Management Plan</i> : Mainland Civil Pty Ltd (2021), Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd (dated 4 February 2021, Revision B, Doc No.: MC-AMP-1378) (the ‘AMP’).	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part C Waste Management						
C28	102	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) Environmental Earth Sciences field staff attended site regularly from January - March 2021 and monthly during May - July 2021 and observed trucks had covered their loads prior to leaving site. Traffic control management was also present during removal of material from site. d) Metal rumble grid installed at site exit to facilitate removal of sediment and other materials prior to vehicles leaving site. Water blasters used to clear tyres also.	---	Compliant	
Schedule 2 - Part C Management of Construction Waste						
C31	103	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 Mainland Civil and provided to Environmental Earth Sciences as part of this audit. Good housekeeping practices were noted during Environmental Earth Sciences site inspections.	---	Compliant	
Schedule 2 - Part C Identification and Removal of Hazardous Waste						
C32	104	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: <i>Environmental Earth Sciences (2020) – Clearance certificate for Stages 2, 3 and 4 at Ivanhoe Estate, Macquarie Park, NSW</i> (ref: 120064_CC_V1; 23 June 2020).	---	Compliant	
C33	105	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.	<ul style="list-style-type: none"> Mainland Civil are licenced with SafeWork NSW for the removal of friable and non-friable asbestos contaminated material – Licence: AD213265. Frasers Property engaged Environmental Earth Sciences as the suitably qualified environmental consultant and asbestos clearance certificates were issued under the guidance of Guangzhou Ju and Linda Lenihan. 	---	Compliant	
Schedule 2 - Part C Covering of Loads						
C34	106	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.	Environmental Earth Sciences field staff attended site regularly from January - March 2021 and monthly during May - July 2021 and observed trucks had covered their loads prior to leaving site. Traffic control management was also present during removal of material from site.	---	Compliant	
Schedule 2 - Part C Vehicle Cleansing						
C35	107	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. Water blasters used to clear tyres also.	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part C Stockpile Management						
C36	108	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 Photographs 4 - 12 in Appendix D.		Compliant	
Schedule 2 - Part C Erosion and Sediment Control						
C37	109	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 are effectively implemented and in good condition on the day of the site audit inspection. Environmental Earth Sciences reviewed five Weekly site inspections and notes 'sediment fencing and silt socks are secure and in good condition' is on the checklist. • Weekly Site Safety Walk 20.02.2021 contains photo of a damaged silt sock that is to be replaced. • Weekly Site Safety Walk 25.03.2021 has the following comment under 'Environmental': Erosion & sediment controls checked. Silt fence / sand bags replaced where damaged. • Weekly Site Safety Walk 27.05.2021 has noted the following comment under 'Excavation': Sediment fencing around the perimeter of site and additional fencing around stockpiles. • Weekly Site Safety Walk 27.05.2021 stockpiles inspected, covered and fenced with sediment controls in place. Silt fences in place around stockpiles and in place preventing entry to existing stormwater system.	---	Compliant	
Schedule 2 - Part C Dust Control Measures						
C38	110	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: 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; 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; 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; 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; 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; f) all equipment wheels shall be washed before exiting the site using manual or automated sprayers and drive-through washing bays; g) gates shall be closed between vehicle movements and shall be fitted with shade cloth; and h) cleaning of footpaths and roadways shall be carried out regularly.	a) Physical barriers are in place to prevent wind or activity from generating dust emissions. Refer to Photographs 2 - 3 in Appendix D. b) --- c) Stockpiles were stored at suitable locations. d) During audit site inspection on 14 July, Environmental Earth Sciences noted that the ground surface was slightly damp and a water cart was present onsite. No run-off was observed. Mist water was also being applied for general dust suppression. Refer to Photographs 1 - 3 in Appendix D. e) Vehicles covered during transport of material from the site. f) Metal rumble grid installed at site exit to facilitate removal of dirt and debris prior to vehicles leaving site. Water blasters used to clear wheels. g) Gate is fitted with shade cloth. h) Roadways regularly cleaned.		Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part C Stormwater						
C49	111	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 good housekeeping practices during the site audit inspection. (b) Diesel and petrol are stored in fuel jerry cans locked in bunded fuel cages on site near the site accommodation sheds. (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 installed and in good condition. Refer to Photographs 4 - 12 in Appendix D .	---	Compliant	
Schedule 2 - Part C Bunding						
C52	112	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.	Mainland Civil stores 100 litres (L) of diesel and 100 L of petrol onsite at any one time. Diesel and petrol are stored in fuel jerry cans locked in bunded fuel cages on site near the site accommodation sheds.	---	Compliant	
Schedule 2 - Part D Contamination						
D5	113	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': • Enviroview Pty Ltd (2021a) – <i>Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113</i> ; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021a). • 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).	---	Compliant	
D6	114	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: • 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). It is Environmental Earth Sciences understanding that groundwater was not abstracted from the site for beneficial use.	---	Compliant	

Table B: Independent Audit

Condition of consent number	Number	Compliance Requirement	Evidence collected (Data/document author, date, title, reference number)	Independent Audit Comment & Recommendations	Compliance status	Proponent Response to Findings
Schedule 2 - Part D Post-Construction Dilapidation Report						
D19	115	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.	
Schedule 2 - Part D Contamination						
D52	116	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': • Enviroview Pty Ltd (2021a) – <i>Site Audit Report, Ivanhoe Estate, Macquarie Park, NSW 2113</i> ; (ref: 600184_0301-2019; 6 April 2021) (Enviroview, 2021a). • 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).	---	Compliant	
		Notes:				
		Complaint				
		Non-compliant				
		Not triggered				

Table C: VENM Receiving Facilities

	VENM Receiving Address	Tonnes
1	Suez at 1725 Elizabeth St, Kemps Creek	5280
2	Red Gables at Box Hill	55539
3	Megex at Yarrawarra St, Prestons	13134
4	WEM Civil Terry Rd at Box Hill	5676
5	WEM Civil at Schofields	18051
6	RMA at 100 Cartwright Ave, Miller	3168
7	Boral Emu Plains	9405
8	PGH at Cecil Hills	27225
9	PF Formation at Maroota	5808
10	BRM at Smeaton Grange	1023
11	Dixon Sands, Maroota	3036
12	Veolia at Wallgrove Road, Horsley Park	7029
13	BRM, Marsden Park	6963
14	WEM, Leppington	9207
15	BRM, Shanes Park	11286
16	Collective Civil, Oran Park Drive, Oran Park	1109
17	Delaney Civil, Wisemans Ferry	4818
18	WEM, Austral	15873
19	ANL, Kemps Creek	150
20	Hills St Grammar School, 33 Kenthurst Road, Kenthurst	231
21	WEM, Box Hill	14256
22	Nelson	33
23	Penrith	1683
24	Borg Civil, Bringelly	13662
25	Concrete Recyclers, 14 Thackeray Street, Camellia	330
26	Hasson, 81 Riverstone Parade, Riverstone	132
27	Glendenning	1650
28	Pemuway	825
29	Richmond	495
30	Northern Road, Middle Dural	2790
31	Londonderry	924
32	Castle Hill	495
33	Penrith	495
34	Devcon, Thirmlmere	462
35	Yarramundi	363
	Total (tonnes)	242606
	Total m3	109614

Table D: Proponent Response to Audit Findings

Condition of consent number (ID)	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponent's Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
Proponent response to 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).					
B42. Construction Noise and Vibration Management Plan (CNVMP)	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 relevantbe prepared in accordance with the EPA's <i>Interim Construction Noise Guideline</i> .		Please identify the suitably qualified person, experience and credentials to demonstrate compliance to B42	Osterman Consult was engaged by Mainland Civil to conduct noise and vibration monitoring. Refer to Appendix C of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for noise and vibration monitoring reports.	Closed.
B42. CNVMP	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.		Mainland Civil / Frasers to provide example of letter issued.	Mainland Civil provided Environmental Earth Sciences with the letter provided to neighbouring residents. Refer to Appendix C of Version 1 of this audit (ref: 120077_Review of EMS_V1, 27 August 2021) for the notification letter: <ul style="list-style-type: none"> • Mainland Civil Pty Ltd (2020c), <i>Notice of Construction Commencement, Ivanhoe Estate</i> – (dated 16 December 2020). 	Closed.
B45. Construction Soil and Water Management Plan (CSWMP)	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.		Cannot find reference to this. Please provide evidence that these events were factored for the sediment basin design.	On review of Figure 5.7.3a Basin Detail Plan in the IMP, Environmental Earth Scieines 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.	Closed.

Table D: Proponent Response to Audit Findings

Condition of consent number (ID)	Compliance Requirement	Independent Audit Finding	Independent Audit Recommendation	Proponent's Proposed Action / Action taken / Response (as applicable)	Proposed Action Due Date
Proponent responses					
C36 Stockpile Management	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.		
B40 (c) Construction Environmental Management Plan (CEMP)	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.		
B42 (f) Construction Noise and Vibration Management Plan (CNVMP)	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.		
B45. Construction Soil and Water Management Plan (CSWMP) 5.7 SWMP: Table 5.7.2– Soil and Water Sources and Mitigation Methods and		Calibration records for water quality meter should be available.	Water quality meter to be calibrated and records provided to Environmental Earth Sciences.		
B42 Construction Noise and Vibration Management Plan		Noise meter is overdue for calibration.	Noise meter to be calibrated.		

APPENDIX C: INDEPENDENT AUDIT DECLARATION FORM

Independent Audit Report Declaration Form

Project Name	Stage 1 Ivanhoe Estate
Consent Number	SSD 8903 MOD 1
Description of Project	Review of Environmental Management Practices as part of Stage 1 Construction Works
Project Address	Ivanhoe Estate, Macquarie Park, NSW
Proponent	Frasers Property Australia
Title of Audit	Independent Environmental Audit at Stage 1 Ivanhoe Estate, Macquarie Park, NSW. Version 1
Date	27 August 2021

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

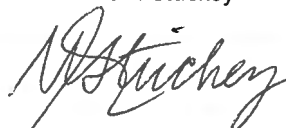
- b. The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both).

Independent Auditor Declaration

Name of Auditor

Mark Stuckey

Signature



Qualification

Environmental Management Systems (EMS) Lead Auditor; and Site Auditor – accredited under the Contaminated Land Management (CLM) Act 1997 in New South Wales

Company

Environmental Earth Sciences NSW

Company Address

PO Box 380, North Sydney NSW 2059

APPENDIX D: SITE INSPECTION PHOTOGRAPHS



1. Water cart present onsite on day of site inspection.



2. Application of mist water for general dust suppression.



3. Ground surface of access route wetted down and clear of loose material.



4. Sediment basin in eastern portion of the site.



5. Sediment basin in eastern portion of the site.



6. Swale in northern portion of site.



7. View of sediment basin (facing west).



8. Erosion and sediment control east of sediment basin.



9. Erosion and sediment control – silt fencing in good condition.



10. Erosion and sediment control – silt fencing in good condition.



11. Erosion and sediment control – eastern portion of site (Road 2).



12. Erosion and sediment control – silt socks in place along Road 2.



13. Dust deposition gauge located north of the Midtown Sales office and south of the nearest residential properties.



14. Noise meter and vibration monitor located north of the Midtown Sales office and south of the nearest residential properties.



15. Noise meter and vibration monitor.



16. Site activities on the day of performance review audit inspection.



17. Recycled material stockpiled prior to removal



18. Good housekeeping: No staining on the ground surface.



19. Observation: emulsion on ground surface, occurred day before audit and Mainland Civil advised will be cleaned up as part of the weekly site inspection.

17 December 2020

Frasers Property Ivanhoe Pty Ltd

Level 2
Homebush Bay Drive
Rhodes NSW 2138

Attention: **Chris Koukoutaris**
Senior Development Manager

**Preliminary findings - independent environmental audit at Stage 1 Ivanhoe Estate,
Macquarie Park, NSW**

1 Introduction

Environmental Earth Sciences NSW was engaged by Frasers Property Australia (Frasers) to conduct an initial independent environmental audit of Stage 1 Ivanhoe Estate, Macquarie Park, NSW in accordance with the State Significant Development (SSD) Conditions of Consent within SSD 8903, and the Department of Planning and Environment's (2015) *Independent Audit Guideline* and (2018) *Independent Audit – Post Approval Requirements* guidance.

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

Frasers engaged Mainland Civil as the principal contractor for the Stage 1 project. Mainland Civil prepared an Integrated Management Plan (IMP) detailing the quality, safety, and environmental aspects of the Stage 1 project:

- Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate, Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').

2 Objectives

The objective of the independent 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 (dated: 10 November 2020; reference: SSD 8903 MOD 1):

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



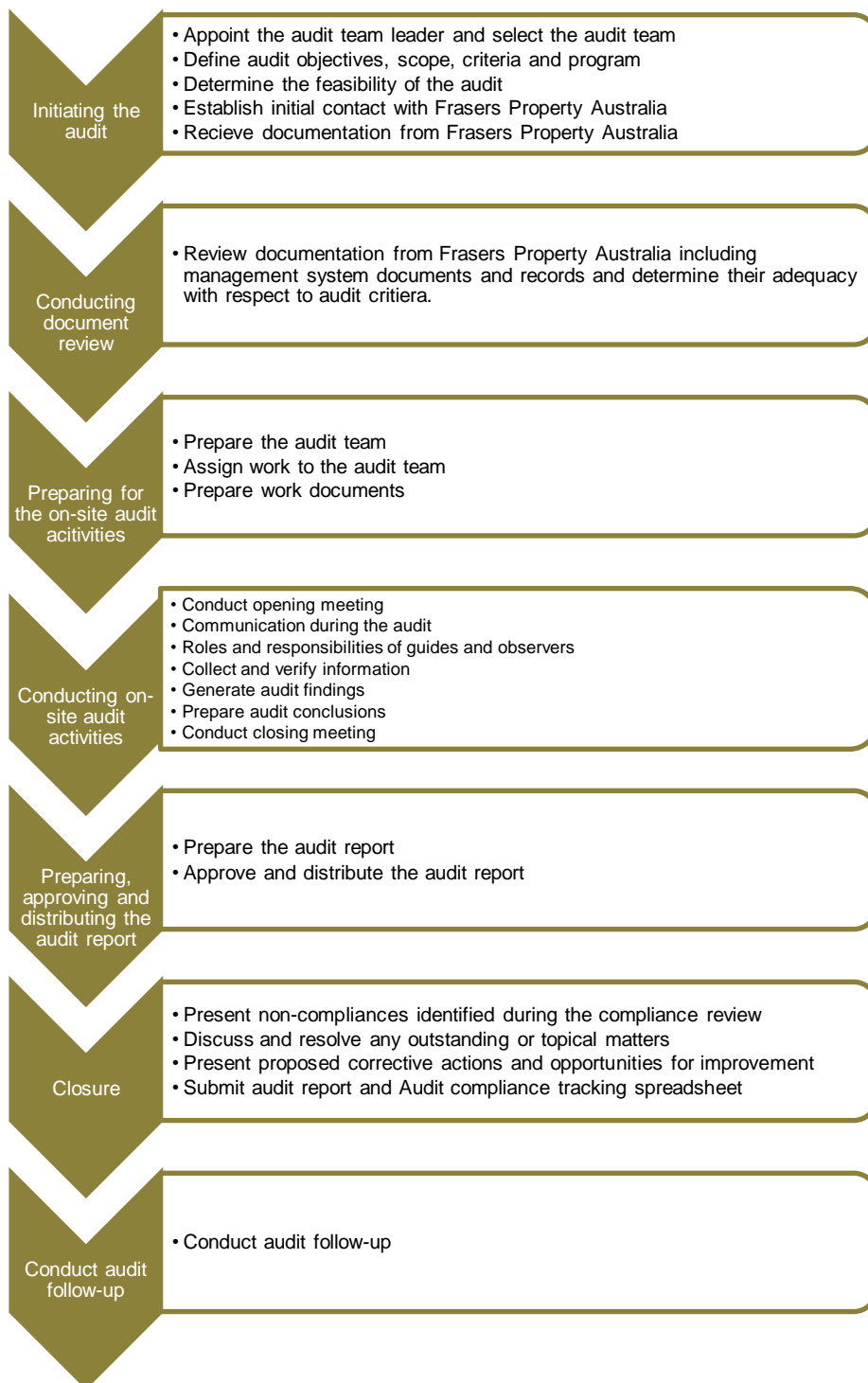
- *B5: No later than one month before the commencement of construction or within another timeframe agreed with the Planning Secretary, a program of independent environmental audits must be prepared for the development in accordance with AS/NZS ISO 19011:2014 Guidelines for auditing management systems (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 implemented and completed 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.*

The following Conditions were also reviewed for compliance as part of the audit:

- Construction Environmental Management Plan (Condition B40).
- Construction Noise and Vibration Management Plan (Condition B42).
- Air Quality and Odour Management Plan (Condition B43).
- Construction Waste Management Plan (Condition B44).
- Construction Soil and Water Management Plan (Condition B45).
- Unexpected Contamination Finds Protocol (UFP) (Condition B59).
- Hazardous Materials Management Plan (Conditions B64 and B65).

3 Audit Methodology

The compliance audit methodology was based upon the principles within AS/NZS ISO 19011:2014 *Guidelines for auditing management systems*, and consideration of Standards Australia HB 203:2012 Managing environment-related risk and AS/NZS ISO 14001:2016 Environmental management systems – requirements with guidance for use, as summarised below.



The audit was conducted in accordance with the environmental management systems review actions and suggestions included in **Appendix A**.

3.1 Document review

The documents reviewed prior to the on-site audit include:

- 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).
- Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate, Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').
- Mainland Civil Pty Ltd (2020b), *Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property* (dated 19/11/2020, Revision A) (the 'CNVMP').
- Mainland Civil Pty Ltd (2020c), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 11 December 2020, Revision A) (the 'AMP').

3.2 Audit team

The audit team comprised:

- Mark Stuckey – Environmental Management Systems (EMS) Lead Auditor; and Environmental Auditor – Contaminated Land in New South Wales.
- Geordie McMillan – Principal / Certified Environmental Practitioner (Site Contamination) SC41089.
- Linda Lenihan – Senior Environmental Scientist / auditor assistant.

3.3 Onsite audit

The initial site inspection is proposed for January 2021 with an annual audit conducted 12 months later throughout the duration of the project, unless there are significant changes to the development plans within the 12-month timeframe.

4 Conclusion

The audit advice is interim and subject to review of request information and site inspections in 2021.

Refer to **Appendix A** for detailed audit findings.

5 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 PO120125_V1 issued by Environmental Earth Sciences NSW for and on behalf of Frasers Property Australia, is included in Scope of Work of this report;
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 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.

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

Project Manager
Linda Lenihan
Senior Environmental Scientist

120077_EMS Audit_V2

Project Director / Internal Reviewer
Geordie McMillan
Principal / Certified Environmental
Practitioner (Site Contamination)

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.

6 References

AS/NZS ISO 19011:2014 *Guidelines for auditing management systems*.

Department of Planning and Environment (2015), *Independent Audit Guideline*.

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).

Mainland Civil Pty Ltd (2020a), *Integrated Management Plan, Ivanhoe Estate, Macquarie Park* (dated 10 December 2020, Revision E) (the 'IMP').

Mainland Civil Pty Ltd (2020b), *Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property* (dated 19/11/2020, Revision A) (the 'CNVMP').

Mainland Civil Pty Ltd (2020c), *Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd* (dated 11 December 2020, Revision A) (the 'AMP').

Standards Australia HB 203:2012 *Managing environment-related risk and AS/NZS ISO 14001:2016 Environmental management systems*

APPENDIX A: EMS REVIEW ACTIONS AND SUGGESTIONS

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
POLICY	4.2	Has the organisation (top management) defined and documented its environmental policy?	Yes	Appendix A Environmental and Sustainability Policy. 1.4 Mainland Policies : Policies are reviewed annually in consultation with Safety and Environmental Management and Managing Directors.	
	4.2a	Is the policy appropriate to the organisation's activities and their potential environmental impacts (nature & scale)?	Yes	Project involves road construction and bulk excavation for a building basement. Complete site establishment and civil excavation and construction works.	
	4.2b	Does the policy include commitments to continual improvement and prevention of pollution? Have methods been established to monitor continual improvement and prevention of pollution?	Yes	Set environmental and sustainability objectives and targets to ensure continuous improvement. Seek to minimise construction related aspects and impacts including noise, vibration, groundwater, air quality, land contamination, amenity and heritage.	
	4.2c	Does the policy commit to compliance with environmental legislation and regulations? Does the policy identify any other requirements to which the organisation subscribes (& commit to comply)?	Yes	Comply with all relevant government legislation, policies and planning instruments, ISO14001:2015 and by meeting obligations required for Australian Government environmental and sustainability reporting.	
	4.2d	Does the policy provide a framework for (setting &) reviewing environmental objectives and targets?	Yes under HSEQ Manager duties.	Policy states: "Set environmental and sustainability objectives and targets to ensure continuous improvement". Policy does not provide a framework for reviewing environmental objectives and targets. 5.8.5 Proactive/Reactive Management Strategies & Response Mechanisms: regular site management meetings to review environmental control in place for dust and odour. HSEQ Manager: Periodic reviews and audits of the business activities are conducted and any reoccurrence of incidents are known and controls applied.	
	4.2e	Has policy been communicated and implemented (documented & maintained) to all persons working for or on behalf of Mainland Civil?	Yes	Communicate and make this policy available to staff and interested parties and encourage stakeholder engagement.	
	4.2f	Is the policy communicated to all persons working for and with Mainland Civil?			
4.2g	Is policy available to the public?				
PLANNING		Does the organisation have a procedure to identify the appropriate environmental aspects of its activities products & services, which it can control or influence?	Yes	5 - Environmental Management, Table 5.1: Environmental Objectives and targets: identifies the following environmental aspects: soil and water control, dust, noise and vibration. Hazardous materials, contaminated materials, construction waste management and complaints. The procedures for the environmental aspects are detailed in the following sections 5.7 Soil and water management plan, 5.4: Dust management and 5.8: Air Quality and odour management plan. 5.5 Noise (and vibration) management plan and separate CNVMP report 4.8: Hazardous material and 5.6.7 contaminated / hazardous materials. 5.6: Construction waste management plan (CWMP) and 2.3: complaints.	
	4.3.1	Does the aspects evaluation process take into account planned or new developments, new or modified activities, products and services?	Yes	The project is the construction of a new development. 5.4.2: Dust and debris mitigation and control methods: Mainland Civil will take all necessary steps to limit creation of any dust and debris nuisance, which might arise during the preparation of the site and during construction.	
		Does the aspects evaluation lead to logical conclusions regarding significance?		4.7.4: Site inspections : If any inadequate, unsafe or environmentally unsuitable situations are identified which may be deemed serious or life threatening, or significant or threatening to the environment, then a 'Non-conformance Report' will be instigated detailing the corrective and/or preventive action required.	
		Is information relating to environmental aspects kept up to date?	Yes	1.6 Project Objectives and Targets: The (objectives and targets) are realistic, minimise any hazards and risks and ensure the facilitation of continual improvement and have been developed based on the following requirements: Significant safety and environmental aspects and impacts.	
		Have significant environmental aspects been considered in developing and maintaining the EMS?	Yes	5: Environmental Management, Table 5.1: Environmental Objectives and targets 5.4.1: Significant potential dust generating activities. 5.5.2: Significant potential noise generating activities and protection of noise.	
		Have aspects having legal and/or regulatory reporting, monitoring or operational requirements been identified as "significant" aspects?			
		Has a procedure been developed and implemented to identify applicable regulatory, legal and other requirements?	Yes	1.8: Legal and other requirements, Table 1.8 details Commonwealth Laws, National Codes of Practice, NSW Legislation, NSW Codes of Practice and other Legislation and Guidelines. Table 1.8 updated to include codes of practice and guidelines for management of asbestos.	
	4.3.2	Has the organisation determined how identified legal & other requirements apply to its environmental aspects?	Yes	5: Environmental Management: Mainland Civil operates under an ISO 14001 accredited Environmental Management System (EMS), Mainland Civil's Environmental Management provides the framework for the onsite construction managers to implement specified corporate standards and practices in a consistent manner.	
		Are current copies of all applicable regulatory and other requirements accessible to personnel as necessary?	Yes	1.4: Mainland Policies: The policies are outlined in the site inductions to all site personnel and are displayed on the site notice boards, lunch rooms and site management plans, to be available to relevant interested parties, as appropriate.	

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
PLANNING		Have environmental objectives and targets been established at each relevant function and level in the organisation?	Yes		
		Are Objectives and Targets documented?	Yes	5.1: <i>Environmental Objectives and Targets</i>	
	4.3.3	Have programmes for the achievement of environmental objectives and targets been established and implemented?	Yes	<ul style="list-style-type: none"> 5.4: <i>Dust Management Plan</i> - details dust and debris mitigation and control methods. 5.5: <i>Noise and vibration management plan</i>: identify general activities that will be carried out and associated noise sources. Mainland Civil Pty Ltd (2020), <i>Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property</i> (dated 19/11/2020, Revision A) (the 'CNVMP'). 5.6: <i>Construction Waste Management Plan</i> 5.7: <i>Soil and water management plan - Table 5.7.2- Soil and Water Sources and Mitigation Methods</i> 5.8: <i>Air quality and odour management plan.</i> 5.6: <i>Construction waste management plan (CWMP).</i> 5.6.2: <i>Requirements for managing construction waste types / streams.</i> 5.6.7.4: <i>Management Practices: for hazardous waste.</i> 	
		Are programmes updated?	Yes	3.10: <i>Project audits: 3.10.1: Internal audits: During the course of the works on this project, the HSEQ Manager will conduct regular internal reviews on the IMP to ensure that it is being implemented and conforms to Mainland Civil's certified Environmental Management System.</i> <i>On completion of the actions to address Non-Conformances, the document is to be submitted back to the Systems Coordinator/Manager to be closed out, IMP updated and reissued and relevant changes made to policies.</i>	
		Have responsibilities been assigned for environmental management programmes at each appropriate function and level? (Do programs include means and time-frame for achieving?)	Yes	1.12: <i>Roles, responsibilities and authorities</i> - responsibilities of Project Manager: <ul style="list-style-type: none"> Monitor the implementation of the project IMP and report to the Construction Manager and HSEQ Manager on all Safety and Environmental issues. Providing leadership to the Project in following and supporting the IMP in a public manner to help develop a positive environmental culture supporting environmental policy and review the performance reports and take strategic actions to continuously improve the IMP. 	
IMPLEMENTATION AND OPERATION	4.4.1	Have responsibilities and authorities for environmental management been defined and documented (& communicated)?	Yes	1.12: <i>Roles, responsibilities and authorities</i> - responsibilities of Project Manager, Health, Safety, Environment & Quality (HSEQ) Manager, Senior Project Engineer, Site Engineer, Site Supervisor and offsite Construction Manager.	
		Has a Management Representative been assigned?	Yes	Project Manager: Tim Saviane.	
		(Have essential resources been provided by management?)	Yes	1.12: <i>Roles, responsibilities and authorities. Project Manager responsibilities: Allocate sufficient human and financial resources to implement the IMP.</i>	
		Have the roles, responsibilities, and authorities for the Management Representative been defined?	Yes	Refer to 1.12: <i>Roles, responsibilities and authorities</i> .	
	4.4.2	Are any person(s) working for or on behalf of the organisation, who can cause significant environmental impacts, competent on the basis of education, training and or experience?	Yes	7.2: Site supervisor / receiver responsibilities includes: <i>Engage suitable suppliers engaged to perform any service are suitable, competent and legally able to perform the task as required, with consideration to Fatigue and other influences.</i> <ul style="list-style-type: none"> Worker (heavy Vehicle Person) or driver must ensure that all reasonable steps have been taken or applied to: Your Fit for Duty, competent, have been provided training, information and resources that is required to perform the task safely. 1.13: <i>Roles, responsibilities & authorities: Offsite - Director - Stuart Muir: Ensure that all personnel that are employed are competent in the tasks they are employed to perform .</i> 	
		Have procedures been established to assure all employees are aware of the Environmental Policy (importance of conformance, consequences of departure), actual and potential impacts and their responsibilities?	Yes	2: <i>Communication and Consultation - 2.1 Tool box Meetings</i> : During the course of the works, the Site Supervisor or Site Management Team will conduct pre-start Tool Box talks and Daily Prestart Meetings as part of keeping up the safety and environmental awareness of workers. Specific safety and environmental issues can be addressed, accidents/near misses can be reviewed, SWEMS Statements can be presented, safety alerts discussed or any other health, safety or environmental related issues tabled. It is an open forum for discussion and will be recorded on the "Tool Box Meeting" form, which will be signed off by all those present. These documents can be made available to Frasers Property upon request.	
	4.4.3	Are procedures maintained for communication of environmental issues between various levels of the organisation?	Yes	2.2.4: <i>Onsite communication and Workplace Health, Safety and Environment (WHSE) consultation methods.</i>	
	Are procedures maintained for receiving, documenting and responding to communications from external interested parties?	Yes	2.3.2: <i>Complaints handling procedure.</i>		
	Has the organisation recorded its decision on external communications on its significant environmental aspects?	Yes	5 - <i>Environmental Management, Table 5.1: Environmental Objectives and target: "No complaints received from the community, Frasers Property or the environmental regulator (including on behalf of a local resident)".</i>		

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
IMPLEMENTATION AND OPERATION	4.4.4	Have the main elements of the EMS, and their interaction, been described in paper or electronic form?	Yes	Electronic copy	
		Does documentation of main EMS elements provide direction to related documentation?	Yes	1.8: Legal and other requirements.	
	4.4.5a/b	Is there a procedure for controlling documents?	Yes	Document control table and register of Amendments and Distribution Register in the IMP before Contents page.	
		Do procedures include approval of, and reviewing and updating of documents?			
	4.4.5c	Are changes to documents and current revision status identified?	Yes		
	4.4.5d	Are current versions of all required documents available at all essential locations?	Yes	The current version of the IMP is readily available to managers, employees and key stakeholders.	
	4.4.5e	Is all documentation legible, readily identifiable?	Yes	Several spelling typos throughout document.	
	4.4.5f	Are relevant documents of external origin identified and their distribution controlled?	Yes	Document of external origin identified in IMP. For example: Figure 5.7.3a: General notes: 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).	
	4.4.5g	Are obsolete documents promptly removed or otherwise protected from unintended use?	Yes	Document control shall be in accordance with Mainland Civil's HSEQ Standards, ensuring: <ul style="list-style-type: none"> The Integrated Management Plan (IMP) is maintained and up to date; The current version of the IMP is readily available to managers, employees and key stakeholders; and The site HSEQ Manager will retain all superseded (obsolete) pages the IMP for a minimum of 7 years. 	
	4.4.6	Are activities associated with significant environmental aspects planned and carried out under specified conditions?	Yes		
	4.4.6a	Have documented procedures been established for operations associated with significant environmental aspects, where their absence could lead to a deviation from policy and objectives and targets?	Yes	3.5: A Non Conformance Report will be raised for: <ul style="list-style-type: none"> Specification deviation or work that fails to meet quality standards Non-compliance with the site rules Non-compliance with Health, Safety and Environmental Legislation requirements Repeated safety or housekeeping issues identified during inspections. The Non-Conformance shall be completed and issued to the offending party. Non Conformances shall be registered in the office non-conformance register. The Project Manager / Site Supervisor will decide on the appropriate disposition and corrective actions. Non-conformances raised as a result of a Safety or Environmental issue to be reviewed by the HSEQ Manager to confirm if systems need to be updated and if any company wide alerts, correspondence are required.	
	4.4.6b	Are operating criteria stipulated in the procedures?	Yes		
	4.4.6c	Have procedures been established relating to the significant environmental aspects of materials and services purchased and used by the organisation?	Yes	3.6: Product & Services and Section 7: Heavy Vehicle Management (Sub-Plan).	
	4.4.6c	Are procedures in place to communicate relevant procedures and/or requirements, regarding significant environmental aspects of purchased products or services, to suppliers including contractors?	Yes	1.5: Procurement process: Suppliers and subcontractors will be made aware of Mainland Civil's environmental requirements and their obligations as an environmental supplier. Project specific information relating to the environmental requirements will be included in procurement and subcontract documentation through the contract and scope of works and the performance of suppliers and subcontractors measured and reported.	
	4.4.7	Have procedures been implemented to identify the potential for and respond to accidents and emergencies?	Yes	Appendix B: Project Safety and Environmental Risk Register and Control Measures.	
		Are procedures in place to prevent and mitigate impacts of accidents and emergencies?	Yes	<ul style="list-style-type: none"> 4.7: Safe Work and Environmental Method Statements (SWEMS). 4.7.1: General: 4.7.2: Safe Work Procedures (SWPs) Appendix B: Project Safety and Environmental Risk Register and Control Measures. 4.7.4: Site inspections: On a weekly basis the Site Engineers along with the assistance of the HSEQ Manager and/or Site Supervisors will complete a Weekly Site Safety and Environmental Walk (Appendix C) to inspect and identify where controls are adequate, inadequate or not relevant. If any inadequate, unsafe or environmentally unsuitable situations are identified which may be deemed serious or life threatening, or significant or threatening to the environment, then a 'Non-conformance Report' will be instigated detailing the corrective and/or preventive action required. 4.7.5: Plant and equipment pre-start checks. 	
Are emergency preparedness and response procedures reviewed and revised as appropriate (in particular after an occurrence)?		Yes	Appendix D: Emergency Response Procedures.		
	Are emergency procedures tested where practicable?	Yes	Appendix D: The site team is to ensure that firefighting equipment e.g. Fire Extinguishers are tested and tagged every biannually.		

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
CHECKING	4.5.1	Are there procedures for monitoring key characteristics of operations that can have significant impacts?	Yes	<ul style="list-style-type: none"> • <i>Table 5.1: Environmental Objectives and targets</i> lists the following environmental aspects for the project: soil and water control, dust, noise and vibration, hazardous materials, contaminated materials, construction waste management and complaints. The ongoing environmental monitoring of the above environmental aspects are detailed in the following sections of the IMP: • <i>5.6.2: Requirements for managing construction waste types:</i> The types and quantities of each type of material to be excavated from each location are monitored on a daily record of loads chart and recorded in a cartage summary document. • <i>5.7.6: Erosion and sediment control inspection checklist:</i> site sediment controls to be monitored on a daily basis. • <i>5.6.7.4: Management Practice s:</i> the use of water spray must be monitored to ensure runoff does not occur or controls must be implemented to capture any runoff. • <i>5.8.4: Onsite monitoring and recording :</i> Onsite dust monitors will be installed near construction workfaces and monitored monthly. • <i>5.8.8: Contingency management strategies:</i> this section details strategies for control of dust, odour, asbestos fibres and plant. • <i>7.7: Speeding Management :</i> Heavy Vehicle Risk Register: control measure for noise from vehicles and plant: • noise levels to be regularly monitored and personnel are to wear class iv or better ear plugs if levels exceed 85dba; and • regular noise monitoring to be carried out. 	
		Are records available to track performance and conformance with objectives and targets?	Yes	3.3: <i>Document and data control.</i>	
		Is all monitoring equipment appropriately maintained and calibrated or verified (& records of this process maintained)?	Yes	3.9: <i>Calibration: Mainland Civil maintains a log or register of all inspection, measuring and testing equipment and provides independent certification of calibrations. The calibrations are carried out as per the manufacturer's written recommendations and records of such work will be maintained on site. This includes; water testing kits, noise meters, air monitors and laser meters. If requested by Frasers Property, the certifications and results of any testing or calibrations will be provided.</i>	
	4.5.2	Is there a procedure for periodically evaluating compliance with legal and regulatory requirements?	Yes	3.2: <i>Project quality objectives and targets: Internal and external audit: To complete regular internal and external audits to monitor and maintain compliance. Regular site audits every 8 weeks and external audits bi-annually.</i>	
		Are records of these evaluations kept?	Yes	3.10.1: <i>Internal audits: Record all findings in an Internal Review Report to declare the review has been conducted.</i>	
		Has the organisation fully evaluated its compliance with legal and regulatory requirements and implemented corrective action where necessary?	Yes	1.8: <i>Legal and other requirements,</i> Table 1.8 details Commonwealth Laws, National Codes of Practice, NSW Legislation, NSW Codes of Practice and other Legislation and Guidelines. Table 1.8 updated to include codes of practice and guidelines for management of asbestos.	
		Does the organisation evaluate its compliance with other requirements to which it subscribes?	Yes		
		Are records of these evaluations kept?	Yes	3.10.2: <i>External audits: An independent environmental audit for Mainland Civil's HSEQ Certification will be completed for Ivanhoe Estate by a suitably qualified person/team approved by the site HSEQ Manager as a requirement for Mainland's certification.</i>	

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
CHECKING	4.5.3	Are there procedures for identifying and correcting nonconformities and mitigating any environmental impacts?	Yes	<p>3.10.1: The objective of an Internal Review is to:</p> <ul style="list-style-type: none"> Identify any action, process or procedure that may lead to or has caused a non-conformance or does not comply with current road laws and regulations. Report any action, process or procedure that has or may cause a non-conformance to the Compliance Manager. Investigate why a non-conformance happened / what was the root cause. On completion, the onsite HSEQ Manager will prepare and submit a report to the onsite Project Manager and Site Supervisor, detailing the findings (including any non-conformances) and list any actions to be taken. <p>Section 3.5: Non-conformance and Corrective Action Prevention - Non Conformance Report will be raised for:</p> <ul style="list-style-type: none"> Specification deviation or work that fails to meet quality standards Non-compliance with the site rules Non-compliance with Health, Safety and Environmental Legislation requirements Repeated safety or housekeeping issues identified during inspections. <p>The Non-Conformance shall be completed and issued to the offending party. Non Conformances shall be registered in the office non-conformance register</p> <p>The Project Manager / Site Supervisor will decide on the appropriate disposition and corrective actions.</p> <p>Nonconformances raised as a result of a Safety or Environmental issue to be reviewed by the HSEQ Manager to confirm if systems need to be updated and if any company wide alerts, correspondence are required.</p>	
		Are the causes of any nonconformities investigated and corrective and preventive actions timely, appropriate and effective?	Yes	<p>3.5: A Non Conformance Report will be raised for:</p> <ul style="list-style-type: none"> Specification deviation or work that fails to meet quality standards Non-compliance with the site rules Non-compliance with Health, Safety and Environmental Legislation requirements Repeated safety or housekeeping issues identified during inspections. <p>The Non-Conformance shall be completed and issued to the offending party. Non Conformances shall be registered in the office non-conformance register.</p> <p>The Project Manager / Site Supervisor will decide on the appropriate disposition and corrective actions. Non-conformances raised as a result of a Safety or Environmental issue to be reviewed by the HSEQ Manager to confirm if systems need to be updated and if any company wide alerts, correspondence are required.</p>	
		Are the results of corrective and preventive actions recorded?	Yes	3.5: Non Conformances shall be registered in the office non-conformance register.	
		Is the effectiveness of corrective and preventive actions reviewed?	Yes	3.5: Nonconformances raised as a result of a Safety or Environmental issue to be reviewed by the HSEQ Manager to confirm if systems need to be updated and if any company wide alerts, correspondence are required.	
	4.5.4	Have procedures been implemented for identification, maintenance, disposal and retention of environmental records?	Yes	7.2: Roles and Responsibilities: Project Manager All records (such as cartage and tip dockets) are kept and secured with all records of business related activity.	
		Are environmental records legible, readily retrievable, protected and traceable?	Yes	7.2: HSEQ Manager: Records are kept and secured and all records of business related activity, purchasing, maintenance repairs, work related or driving (including rest times) are recorded and reviewed.	
		Are there sufficient records to demonstrate conformance to the requirements of this standard?	Yes		
	4.5.5	Have internal EMS audit procedures been developed and implemented?	Yes	<ul style="list-style-type: none"> 3.10.3: Heavy Vehicle Audits: HSEQ National Manager will conduct regular internal reviews on the contractors to verify operation of system processes and act appropriately by taking corrective actions to minimize the likelihood of a non-conformance reoccurring in compliance with current road transport legislation. To achieve this, all documents records, processes and procedures are subject to regular reviews to verify that all results and activities conform to our policies, procedures and comply with current Acts and Regulations. 3.10.1: Internal audits - refer to 4.6 below. 	
		Do internal audits determine whether the EMS conforms to planned arrangements & has been properly implemented & maintained?	Yes	3.10.3: Findings after any review are to be monitored to gauge whether processes or procedures should be amended or introduced into the management system to better ensure compliance with road transport laws.	
		Are audit frequencies and topics based on the environmental importance of the activity concerned and the results of prior audits?	Yes		
		Do audit procedures cover how results are reported and how results are provided to management?	Yes	3.10.1: Internal audits: Report any action, process or procedure that has or may cause a non-conformance to the Compliance Manager.	
		Do audit procedures adequately define scope, frequency, methods and responsibilities?	Yes	3.10.1: Internal audits: During the course of the works on this project, the HSEQ Manager will conduct regular internal reviews on the IMP to ensure that it is being implemented and conforms to Mainland Civil's certified Environmental Management System.	
		Does the selection of auditors and performance of audits ensure that the audit process is impartial and objective?	Yes	Section 3.10.2: External Audits: Auditors will meet the qualification criteria in AS/NZS ISO 19011:2002 Guidelines for quality and/or environmental management systems auditing. This guideline is superseded by 19011:2014.	
		Has the audit system been fully and effectively implemented?	Yes		
		Do audit reports and records indicate a reliable system which can be used as a tool in the third party audit process?	Yes		

TABLE A - EMS REVIEW ACTIONS AND SUGGESTIONS

Req	Ref	Clause	Rating	Auditor's Notes / Comments / Supporting Documentation	Comments and Recommendations
MANAGEMENT REVIEW	4.6	Do periodic management reviews take place to ensure the continuing suitability, adequacy and effectiveness of the EMS / IMP?	Yes	3.10.1: Internal audits: The IMP will be reviewed every 3 months or unless changes are made prior by HSEQ Manager.	
		Are the reviews undertaken by top management?	Yes	3.10.1: HSEQ Manager will conduct regular internal reviews on the IMP to ensure that it is being implemented and conforms to Mainland Civil's certified Environmental Management System.	
		Do management review inputs include	Yes		
		· Internal audits	Yes	3.2:Project Quality Objectives and Targets: To complete regular internal audits to monitor and maintain compliance. Regular site audits every 8 weeks. 3.10.1 : Internal audits: The IMP will be reviewed every 3 months or unless changes are made prior by HSEQ Manager.	
		· Compliance with legal & other requirements	Yes	3.10.1: The objective of an Internal Review is to: Monitor the management system to seek further improvement and review generated documents, processes and procedures and for any legislative changes .	
		· External communications			
		· Environmental performance			
		· Complaints	Yes	5.5 Noise: 5.5.1: Compliance requirements: Include a pro-active and reactive strategy for dealing with complaints including achieving the construction noise goals, particularly with regard to verbal and written response. Refer to 2.3.2: Complaints Handling Procedure: All environment complaints received from the public and/or regulatory agency are investigated by the site HSEQ Manager. Any changes required to the HSEQ documentation are to be communicated to all relevant staff in a site tool-box discussion. The effectiveness of corrective and preventive actions taken will be reviewed by the onsite HSEQ Manager and Construction Manager.	
		· Follow up from previous reviews	Yes		
		· Recommendations for improvement	Yes	3.10.1: The objective of an Internal Review is to: • Monitor the management system to seek further improvement and review generated documents, processes and procedures and for any legislative changes. • Identify any action, process or procedure that may lead to or has caused a non-conformance or does not comply with current road laws and regulations. • Report any action, process or procedure that has or may cause a non-conformance to the Compliance Manager. • Investigate why a non-conformance happened / what was the root cause. On completion, the onsite HSEQ Manager will prepare and submit a report to the onsite Project Manager and Site Supervisor, detailing the findings (including any non-conformances) and list any actions to be taken.	
· Developments in legal requirements	Yes	3.10.1: Monitor the management system to seek further improvement and review generated documents, processes and procedures and for any legislative changes.			
		Does management review result in changes as appropriate to the policy, objectives, targets & other elements of the EMS? etc.	Yes	3.10.1: On completion of the actions to address Non-Conformances, the document is to be submitted back to the Systems Coordinator/Manager to be closed out, and the IMP updated and reissued.	Does not specify changes to policy.
		Are management reviews documented?	Yes	3.10.1: Internal audits: Record all findings in an Internal Review Report to declare the review has been conducted.	

Notes:

Compliant

Non-compliant

Recommending further information



TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations
B40. Construction Environmental Management Plan (CEMP)			
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:			
a	<p>describe the relevant stages and phases of construction including work program outlining relevant timeframes for each stage/phase;</p> <p>1.10: <i>Construction Staging & Timeframe</i> project consists of three stages: <i>Stage 1 – Roadworks – Week 1 to Week 26</i> <i>Stage 2 – Roadworks – Week 8 to Week 26</i> <i>Stage 3 – Bulk Excavation to A1 – Week 23 to Week 40.</i></p>	Yes	
b	<p>describe all activities to be undertaken on the site during site establishment and construction of the development;</p> <p>1.9: <i>Scope of Works</i>: describes all activities to be undertaken during site establishment and construction activities.</p>	Yes	
c	<p>include a Dust Management Plan, incorporating the mitigation measures outlined in the Air Quality Assessment, prepared by WSP, dated October 2018.</p> <p>5.4.2: <i>Dust and debris mitigation and control measures</i>: the mitigation measures outlined in the Air Quality Assessment as detailed in 5.4.2.</p>	Yes	
d	<p>clearly outline the stages/phases of construction that require ongoing environmental management monitoring and reporting;</p> <p>See point 'a' above. 5: <i>Environmental Management</i>: • <i>Table 5.1: Environmental objectives and targets</i> lists the following environmental aspects for the project: soil and water control, dust, noise and vibration, hazardous materials, contaminated materials, construction waste management and complaints. The ongoing environmental monitoring of the above environmental aspects are detailed in the following sections of the IMP: • 5.7: <i>Soil and water management plan</i>. • 5.7.6: <i>Erosion and sediment control inspection checklist</i>. • 5.8: <i>Air quality and odour management plan</i>. • 5.8.8: <i>Contingency management strategies</i> - this section details strategies for control of dust, odour, asbestos fibres and plant. • 5.5 <i>Noise (and vibration) management plan</i>. • 5.6: <i>Construction waste management plan (CWMP)</i>. • 5.6.2: <i>Requirements for managing construction waste types / streams</i>. • 5.6.7.4: <i>Management Practices</i> : for hazardous waste. • 7.7: <i>Speeding Management</i> - Heavy Vehicle Risk Register.</p>	Yes	
e	<p>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;</p> <p>1.8: <i>Legal and other requirements</i>, Table 1.8 details Commonwealth Laws, National Codes of Practice, NSW Legislation, NSW Codes of Practice and other Legislation and Guidelines. Table 1.8 updated to include codes of practice and guidelines for management of asbestos.</p>	Yes	
f	<p>be prepared in consultation with Council and include specific consideration of measures to address any requirements of Council during site establishment and construction;</p> <p>See point 'd' above.</p>	Yes	
g	<p>describe the roles and responsibilities for all relevant employees involved in the site establishment and construction of the works;</p> <p>1.13: <i>Roles, responsibilities and authorities</i> - responsibilities of onsite Project Manager, Health, Safety, Environment & Quality (HSEQ) Manager, Senior Project Engineer, Site Engineer, Site Supervisor and offsite Director and Construction Manager.</p>	Yes	
h	<p>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;</p> <p><i>Table 5.1: Environmental Objectives and targets</i> identifies the following environmental impacts / aspects: soil and water control, dust, noise and vibration, hazardous materials, contaminated materials, construction waste management and complaints. The procedures to address the environmental impacts / aspects are detailed in the following sections: • 5.7 <i>Soil and water management plan</i>. • 5.4: <i>Dust management</i>. • 5.8: <i>Air Quality and odour management plan</i>. • 5.5: <i>Noise (and vibration) management plan and separate CNVMP report (refer to Condition B42 below)</i>. • 5.6: <i>Construction waste management plan (CWMP) and 5.6.7 Hazardous waste</i>. • 2.3: <i>Complaints</i>. • <i>Section 6: Traffic management plan (TMP) and Table 6.0: Traffic Sources and Mitigation Methods</i>.</p>	Yes	

TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations	
B40. Construction Environmental Management Plan (CEMP)				
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;	5.7.4: <i>Construction site rainwater testing, treatment and discharge:</i> Groundwater entitlement is not expected to flow into the excavation zones. According to <i>Douglas Partners Groundwater Monitoring</i> 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.	Yes	
j	management of groundwater during construction;	<i>Table 5.7.2: Stormwater and/or infiltrated groundwater (considered unlikely due depth of excavation) .</i> Water management: control measures include pH and turbidity testing prior to discharge.	Yes	
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	Refer to point 'h' above.	Yes	
l	include arrangements for community consultation and complaints handling procedures during construction.	2.3.2: <i>Complaints Handling Procedure:</i> All environment complaints received from the public and/or regulatory agency are investigated by the site HSEQ Manager. <i>Appendix E: Mainland Civil Site Rules:</i> Any comments, suggestions or complaints from the public in regard to safety and environmental issues in or around the site are to be reported to the Site Supervisor.	Yes	

TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations
B42. Construction Noise and Vibration Management Plan (CNVMP)			
Prior to the commencement of any works, a Construction Noise and Vibration Management Plan (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 requirements of, Council and the EPA. The CNVMP shall address (but not be limited to):			
a be prepared in accordance with the EPA's Interim Construction Noise Guideline	Mainland Civil Pty Ltd (2020), <i>Construction Noise and Vibration Management Plan for Ivanhoe Estate - Macquarie Park, Frasers Property</i> (dated 19/11/2020, Revision A) (the 'CNVMP' report). The CNVMP report was prepared in accordance with • Department of Environment & Climate Change (DECC) (2009), <i>Interim Construction Noise Guideline</i> (DECC, 2009); and • German Standard DIN4150-3:1999 <i>Structural vibration Part 3: Effects of Vibration on Structures</i> .	Yes	Please identify the suitably qualified person, experience and credentials to demonstrate compliance to B42
b identify nearby sensitive receivers and land uses;	<i>Section 6 of the CNVMP: Nearest Receivers</i> - seven receivers identified and land uses listed.	Yes	
c identify the noise management levels for the project;	<i>7: Noise monitoring plan - Table 11 : Summarised Noise Emission Criteria</i> - noise levels for residential and commercial land uses. Residential day time noise level objective of 48 dB(A)Leq (15 min) is well below the <i>highly noise affected 75 dB(A)Leq (15 min)</i> as recommended in DECC (2009). Commercial noise objective of 63 dB(A)Leq (15 min) is below the LAeq (15 min) 70 dB(A) for offices, retail outlets as recommended in Section 4.1.3 of DECC (2009).	Yes	
d identify the construction methodology and equipment to be used and the key sources of noise and vibration;	<i>4: Construction Activities:</i> details plant and activities required to complete works. <i>8: Vibration Management Plan : Mainland Civil works that are expected to cause vibration include:</i> • <i>Excavation of sandstone;</i> • <i>Hammering and sawing sandstone; and</i> • <i>Anchoring (drilling) in sandstone.</i>	Yes	
e details of all reasonable and feasible management and mitigation measures to be implemented to minimise construction noise and vibration;	<i>7: Noise monitoring plan:</i> Noise control measures. <i>8: Vibration Management Plan</i> - vibration control measures.	Yes	
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	<i>6: Nearest Receivers</i> - details the nearest properties likely to be affected from the report <i>Acoustic Logic (2020), Master Plan for Ivanhoe Estate, Macquarie Park – Additional Noise Monitoring 30/1/2020.</i>	Yes	
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	<i>5: Communication Tools:</i> "Prior to the commencement of site works, notice will be provided to nearest receivers via letter drop informing of the upcoming works, the expected noise levels, durations and contact details of the community liaison officer".	Yes	Mainland Civil / Frasers to provide example of letter issued.
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.	<i>7 : Noise monitoring plan:</i> A full time noise monitor will be installed at monitoring location #3 for the duration of Stage 1A works. Periodic noise monitoring will be conducted at other locations as required. In the event that a noise complaint is received then the monitoring frequency may be increased following a formal review. <i>8: Vibration Management Plan : Mainland Civil works that are expected to cause vibration include:</i> • <i>Excavation of sandstone;</i> • <i>Hammering and sawing sandstone; and</i> • <i>Anchoring (drilling) in sandstone.</i> As these works have been identified as high risk activities for vibration, a full time vibration monitor shall be installed at the same location as the noise monitor.	Yes	

TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations	
B43. Air Quality and Odour Management Plan (AQOMP)				
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:				
a	staged excavation to limit the surface area of exposed odorous material;	5.8.1: Sequencing and staging of works will be geared to minimise the area of excavated surfaces open concurrently for extended periods of time and therefore minimise the impact of potential odours.	Yes	
b	application of odour suppressants;	5.8.2: <i>Material Classification and Odour Suppressants</i> - in consultation with environmental consultant. Two options for odour suppression and control are provided.	Yes	
c	effective covering of stockpiles and truckloads of excavation spoil; and	5.8.3: <i>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 2m in height. If there is a requirement to go higher due to space/loading requirements, material stockpiles will need to wetted during the day and covered over night. All trucks carting material off site will cover their loads prior to leaving the site.</i>	Yes	
d	expedited removal of odorous material from the development to a facility legally able to accept those wastes.	5.8.2: <i>Once waste classification for the odorous material is obtained, the material will be removed and transported to a facility licenced to accept the waste.</i>	Yes	
	The AQOMP must include proactive and reactive management strategies, key performance indicators (KPIs), monitoring measures, record keeping, response mechanisms, contingency and compliance reporting measures.	5.8.5: <i>Proactive/Reactive Management Strategies & Response Mechanisms.</i> 5.8.7: <i>Compliance protocol.</i> 5.8.8: <i>Contingency Management Strategies includes KPIs.</i> 5.8.4: <i>Onsite Monitoring and Recording and Table 5.8.6: KPIs.</i>	Yes	

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations
B44. Construction Waste Management Plan (CWMP)			
Prior to the commencement of any works and prior to the issue of any Crown Building Works for each building, the Applicant must prepare a Construction Waste Management Plan (CWMP) in consultation with Council. A copy of the plan must be provided to the Certifier. The CWMP must include, but is not limited to, the following information:			
a the estimated volume or weight of materials that will be reused, recycled or removed from the site;	5.6.2: <i>Requirements for managing construction waste types / streams</i> and Table 5.6.2 details the estimated volume of material to be recycled and disposed offsite. 80,000m ³ of excavation material to be recycled offsite.	Yes	
b on-site material storage areas during construction;	5.6.1: <i>General: Identification of a designated area for the storage and collection of waste and recyclable materials to be provided on the site.</i> 5.6.7.3: <i>Onsite Management: storage of contaminated soil/ material onsite prior to disposal in an exclusion zone.</i> 5.7.5.1: <i>Spoil temporary stockpile location: Any spoil that is to be reused on site will be stockpiled in the temporary stockpile. Material stockpiled will be wetted down to minimise dust.</i>	Yes	
c materials and methods used during construction to minimise waste;	5.6.4 <i>Reusing and Recycling waste</i> : sand and rock, concrete, asphalt.	Yes	
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;	Table 1.8 updated to include codes of practice and guidelines for management and removal of asbestos. NSW EPA (2014) - <i>Waste Classification Guidelines - Part 1: Classifying Waste</i> also referenced in Table 1.8. • 5.3: <i>Unexpected Finds Protocol: If the contamination source is verified as asbestos, SafeWork NSW will be notified and approval obtained prior to handling and removal of contaminated material from site. Remediation is to be undertaken as per the Site Environmental Consultants' instruction, Asbestos Management Plan, Asbestos Removal SWMS in accordance with Protection of the Environment Operations (Waste) Regulation 2014.</i> • 5.6.7: details <i>Hazardous Waste</i> (including potential asbestos) under the following subsections: • 5.6.7.1: <i>Contaminated soil source, location, quantity and characteristics:</i> • 5.6.7.2: <i>Training requirements</i> • 5.6.7.3: <i>Onsite management: Engagement of hygienist to undertake fibre air monitoring. Dust suppression and wetting down of unknown finds/asbestos fibres.</i> • 5.6.7.4.: <i>Management Practices.</i> • 5.6.7.5.: <i>Waste tracking.</i> • 5.6.7.6: <i>Monitoring: All airborne fibre monitoring will be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust [NOHSCH:3003(2005)] and analysed at a NATA-accredited laboratory .</i> 5.6.7.7.: <i>Clearance inspection.</i>	Yes	
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	5.6.6: <i>Table 5.6.6a – Recycling and Disposal Facilities: lists the recycling and / or waste facility that are nominated to accept the various material types to be disposed offsite. Should the unexpected finds be classified as asbestos, this will disposed at licensed facility who can legally accept asbestos.</i>	Yes	
f identification within the CWMP of the responsibility for the transferral of waste and recycling bins within the property to the collection point.	5.6.6: <i>Recycling and disposal facilities - Table 5.6.6b – Personnel Responsible for waste transfer.</i>	Yes	

TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations
B45. Construction Soil and Water Management Plan (CSWMP)			
A Construction Soil and Water Management Plan (CSWMP) must be prepared to manage soil and water impacts during construction of the development. The CSWMP must be prepared in consultation with Council and a copy provided to Council, prior to the issue of a Crown Building Works Certificate for each building.			
The CSWMP must be prepared in accordance with the provisions of the "Blue Book" Part 1 [Landcom (2004) <i>Managing Urban Stormwater: Soils and Construction</i> , 4th edition]. The CSWMP must consider likely stages of the works and provide for appropriate control of sediment and erosion for each stage and include, but not be limited to:			
a	location and extent of all necessary sediment and erosion control measures for the site;	5.7: <i>Soil and Water Management Plan: Figure 5.7.2d – Erosion and Sediment Control Plan</i> shows the proposed location of the sediment basin. <i>Table 5.7.2: Soil and Water Sources and Mitigation Methods</i> - provides mitigation measures for soil (sand) management, sediment fines, import of bulk supplies of material and water management for works including excavation and service trenching.	Yes
b	catchment plan;	5.7.3: <i>Temporary sediment basin</i> .	Yes
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;	<i>Figure 5.7.2d: Erosion and Sediment Control Plan</i> shows the proposed location of the sediment basin. <i>Figure 5.7.3a: Basin Detail Plan</i> shows runoff from the entire site will be directly to the temporary sediment basin.	Yes
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 <i>Figure 5.7.3a</i> . Details of the sediment basin are included in <i>Section 5.7.3: Temporary sediment basin</i> : size 20 m x 35 m, depth / max ponding level 0.54 m, minimum volume of 1065 m ³ , outlet pipes with sieve-style filtration system. Refer to 5.7.4. for Flocculation methodology.	Yes
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;	5.7.4: <i>Construction site rainwater testing, treatment and discharge: Temporary sump pits will be excavated during the basement bulk excavation, with all water collected to be pumped to the temporary sediment basin. Treatment will occur within the basin prior to discharge.</i>	Yes
f	identification and management of any stormwater run-on to the site from adjacent sites;	5.7.4: <i>In the event that stormwater run-on from adjacent neighbours enters the site, an investigation will take place. This will involve determining the source of the run-on and creating a plan to effectively manage it.</i>	Yes
g	location of any temporary stockpiles (soil, spoil, topsoil or otherwise) and accompanying sediment and erosion control measures;	<i>Figure 5.7.2d - Erosion and Sediment Control Plan</i> shows indicative location of stockpile. <i>Table 5.7.2: Soil and Water Sources and Mitigation Methods</i> : provides mitigation measures for soil (sand) management, sediment fines, import of bulk supplies of material and water management.	Yes
h	location and details of all vehicle wash down bays and associated erosion and sediment control measures such as earthen bunds; and	<i>Figure 5.7.2d - Erosion and Sediment Control Plan</i> shows indicative vehicle washdown bay location. <i>Table 5.7.2: Soil and Water Sources and Mitigation Methods</i> .	Yes
i	a daily and weekly site inspection checklist consistent with IECA Best Practice Erosion and Sediment Control documents.	5.7.6: <i>Erosion and sediment control inspection checklist: These controls are also visually monitored daily by the site supervisor to ensure they comply. In conjunction with the above figure 5.7.6a, extract from the weekly HSE walk, Mainland will implement the Weekly site inspection checklist prepared by the International erosion Control Association (IECA). A copy of this form is located in Appendix C of this Report.</i>	Yes
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:			
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 Figure 5.7.3a.	Yes
b	using type D soils (unless otherwise demonstrated by an analysis of site soils by a qualified geotechnical);	<i>Figure 5.7.3a: General notes</i> : 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).	Yes
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		Recommending further information
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.	Cannot find reference to this. Please provide evidence that these events were factored for the sediment basin design. Yes

TABLE B - REVIEW OF DEVELOPMENT CONSENT CONDITIONS

Condition	Notes / Comments / Supporting Documentation	Rating / Compliant	Auditor Comments and Recommendations
B59			
Prior to the commencement of any works and following additional testing (Condition B55), an updated Unexpected Contamination Finds Protocol (UFP), prepared by a suitably qualified and experienced expert, shall be provided to the Certifier. The UFP must be implemented for the duration of construction works.	5.3 <i>Unexpected Finds Protocol:</i>	Yes	
B64			
The Applicant shall comply with any notification requirements to SafeWork NSW concerning the handling and removal of any asbestos.	<ul style="list-style-type: none"> Mainland Civil Pty Ltd (2020c), Asbestos Management Plan, Ivanhoe Estate – Stage 1, Ivanhoe Place, Macquarie Park, Frasers Property Pty Ltd (dated 11 December 2020, Revision A. 	Yes	
B65			
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’.	Part 7 of 2014 regulation details transport, disposal and management of asbestos waste. <i>Part 7 - Clauses 78 - 81 - are detailed in Section 9 of the AMP and Section 3 details the contravtors / consultants who will be engaged if asbestos is found onsite:</i> <ul style="list-style-type: none"> Asbestos Removal Licence Holder: Mainland Civil Pty Ltd, Friable Asbestos Removal License No. AD213265 Waste Disposal Site: Veolia, Horsley Park Waste Management Facility, 716-736 Wallgrove Road, Horsley Park, NSW, 2175 - Environment Protection Licence No. 11584. Cartage Contractor: Bulk Transport Solutions Pty Ltd. Licensed Asbestos Assessor: Guangzhou Ju – LAA001176 - Environmental Earth Sciences International. Asbestos Removal Supervisors: Brett Talbot, Mark Anderson – Mainland Civil. 	Yes	

Notes:

Complaint

Non-compliant

Recommending further information

