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Environmental Reporting for Proposed Health Care Facility; 122-128 & 130 Pyrmont Bridge Road and 206 Parramatta Road, Annandale NSW

1 INTRODUCTION

EI Australia (EI) hereby submits a critique of the environmental reporting which shall be needed for the application to redevelop the above site into a health care facility.

It was understood that peer review of a previous environmental (contamination and hazardous materials) assessment report was required by The Trustee for MHA PBR Annandale Unit Trust, to establish the site's suitability for the proposed use and determine the data gaps that must be closed in order to gain development approval with Inner West Council.

1.1 SITE IDENTIFICATION AND HISTORY

The site is located at the intersection of Parramatta and Pyrmont Bridge Roads in Annandale NSW. It has a street address of 122-128 and 130 Pyrmont Bridge Road, Annandale and is further identified as comprising Lots 3-6 and 12 in Deposited Plan 976387, Lot 100 in Deposited Plan 1101482 and Lot 1 in Deposited Plan 539271, in the Parish of Petersham and County of Cumberland. It is a roughly trapezoidal-shaped block of land, covering an area of 2624m².

Most of the site area had been used for commercial / industrial purposes since the 1930s (at least); the activities which potentially could have resulted in land contamination included electroplating (1950-1961) and dry cleaning (1958-1972). The eastern portion was residential in nature up to 1961, at which time it was redeveloped for use as an on-grade parking area.

1.2 PROPOSED DEVELOPMENT

It was understood that the site is designated for redevelopment into an eight storey, health care centre (*Camperdown Medical Facility*), with two basements for vehicle parking. A development application (DA) shall be submitted to Inner West Council for this purpose and all environmental reporting will be included in the corresponding DA documentation. Refer to **Attachment A** for preliminary plans of the proposal.

2 REVIEW OF PREVIOUS ENVIRONMENTAL REPORT

2.1 AVAILABLE REPORT

The following environmental report relating to the site was made available to EI:

- JK Environments Pty Ltd (JK, 2021) *Report to MHA PBR Pty Ltd on Limited Environmental and Hazardous Materials Assessment for Due Diligence at 122-128 & 130 Pyrmont Bridge Road and 206 Parramatta Road, Annandale, NSW* (JK Reference E33770PArpt-DRAFT, dated 28 January 2021).

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2.2 SUMMARY

A summary of the JK (2021) report is presented in **Table 1**.

Table 1 – Summary of JK (2021) Environmental / Hazardous Materials Report

Stage / Section	Statement / Findings
Purpose	The purpose of this assessment was “to make a preliminary evaluation of site contamination and to assess the potential for hazardous building materials to be present on-site for due diligence purposes, prior to acquisition”.
Objectives / Scope	The primary objectives were “to identify the potential for site contamination, make a preliminary assessment of the soil and groundwater contamination conditions” and “identify hazardous materials within the site buildings”. The scope of work included: ▪ Review of background and history information relating to the site; ▪ A site walkover inspection; ▪ Presentation of a preliminary conceptual site model (CSM); ▪ The design and implementation of a soil and groundwater sampling and analysis plan; ▪ Evaluation of analytical results against the adopted acceptance criteria; and ▪ Report preparation.
Key Findings	The background, history review and walkover inspection components established that the site had been used for commercial / industrial purposes since the 1930s (at least), including electroplating (1950-1961) and dry cleaning (1958-1972). At the time of the assessment, parts of the site had retail tenancies (<i>Energy Shop Australia</i> and <i>Olde English Tiles</i>), as well as a music tutoring business. An on-grade parking facility comprised the eastern portion. Potential hazardous building materials were considered to be (asbestos) fibre cement sheeting panels (e.g. the ground floor of 206 Parramatta Road, amenities area ceiling), synthetic mineral fibre (SMF) insulation materials (e.g. in/as roof sarking, pipe and duct works, hot water tanks, boiler units and ceiling tiles) and R22 refrigerant gas (an ozone-depleting chlorofluorocarbon) in some of the split air conditioning systems. Soil sampling was performed at five separate borehole locations, two of which were converted into groundwater monitoring wells (BH1, BH2 / MW2, BH3 / MW3, BH4 and BH5). Fill was “encountered beneath the pavement in all boreholes”, extending to depths of 0.3-0.6m BGL. Except at BH2 (where residual, silty sandy clay was present), the fill lay directly over sandstone bedrock. In-field screening of headspace samples for volatile organic compounds (VOC) using a portable photoionisation detector (PID) indicated that concentrations of volatile contaminants in soils were “relatively low” (PID readings 0-1.2 ppm). Standing water levels in the monitoring wells at the time of the groundwater monitoring event were 2.12-2.35m BGL. The local groundwater was classified as slightly acidic (pH: 6.04-6.05) and fresh to slightly brackish (electrical conductivity: 606-682 µS/cm). Phase-separated product (i.e. light / dense non-aqueous phase liquid) was not detected in either well during the sampling. Based on the laboratory analytical testing of representative soil and groundwater samples: ▪ Friable asbestos fibres were identified in the near-surface fill at two locations (BH3 and BH4); ▪ Heavy metals (copper, nickel and zinc) exceeded the corresponding ecological criterion in the fill at three locations (BH3: zinc; BH4: copper, nickel and zinc; BH5: nickel); ▪ >C₁₆-C₃₄ (F3) total recoverable hydrocarbons (TRH) exceeded the corresponding ecological criterion in the fill at locations (BH2 and BH4); ▪ Dissolved heavy metals (cadmium, chromium, copper and zinc) exceeded the corresponding investigation level in groundwater from both wells (MW2: cadmium and zinc; MW3: chromium, copper and zinc); ▪ >C₁₀-C₁₆ (F2) TRH exceeded the corresponding investigation level in groundwater from both wells;

Stage / Section	Statement / Findings
	and Traces of several VOC were detected in the groundwater from well MW3 (benzene, toluene, xylene, chloroform, <i>cis</i>-1,2-dichloroethene, trichloroethene and tetrachloroethene), although no concentration exceeded the corresponding investigation level.
Conclusions	JK (2021) concluded the risks from the asbestos, heavy metal and TRH contamination in soils "to be low in the context of the existing land use / site layout as there is currently no complete exposure pathway". However, "a potential pathway exists in relation to exposure to vapours from volatile contaminants in soil and/or groundwater", which "warrants further investigation".
Recommendations	JK (2021) made a series of recommendations in their report, including: - Completion of a detailed hazardous materials survey (HMS), leading to the preparation of a hazardous materials register and management plan for each property comprising the site; - Completion of a detailed environmental site investigation (DESI), which should include soil vapour assessment (SVA), to determine the human health risks associated with vapour intrusion); - Completion of an acid sulfate soil (ASS) assessment for the site; - Preparation of a site- / work- specific asbestos management plan (AMP), detailing all asbestos control measures to be implemented "for any works across the site which require penetration of the concrete slab / pavement" and/or removal of asbestos-containing material (ACM); and - Conducting any demolition and soil excavation works in accordance with all HMSs / management plans and codes of practice, with clearance certificates to be issued upon their completion.

3 SITE SUITABILITY

3.1 EXTENT OF CONTAMINATION

Based on the findings of the JK (2021) assessment and with consideration of their statement of limitations (**Section 12** of the report), significant (gross / widespread) contamination does not exist at the site. Asbestos-, heavy metal- (copper, nickel and zinc) and TRH- impacted soils are present; however, they appear to be localised and limited to the near-surface filling layers ($\leq 0.6\text{m}$ BGL). Volatile (chlorinated) hydrocarbon contaminated groundwater is evident, but not to the extent that precluded commercial use of the land.

EI concludes that the site can be made suitable for the proposed (medical facility) development, in accordance with *State Environmental Planning Policy 55 (SEPP 55) - Remediation of Land*, assuming the recommendations stated by JK are implemented and appropriate remediation is carried out. Given that the proposed development requires bulk excavation in order to construct two basements, it is envisaged that the remediation strategy shall involve off-site disposal of (impacted) soils to EPA-licensed landfill facilities. The deep excavation shall also promote (accelerate) natural attenuation of VOC from shallow groundwater.

3.2 DATA GAP CLOSURE

The JK (2021) assessment report provides a suitable, initial reference point for defining the environmental status of the site. The proposed preliminary and then revised CSM was considered to be appropriate and well conceived. Nonetheless, further (more detailed) investigation is required, as acknowledged by JK itself.

EI agrees with the recommendations stipulated by JK (2021); however, EI hereby takes this opportunity to make some suggestions that will assist data gap closure.

- The DESI should include soil sampling at four additional sampling locations (at least), so that the final (combined) sampling strategy complies with the minimum density stipulated in Table A of the EPA (1995) *Sampling Design Guidelines* for an area of 2624m^2 . As asbestos is a contaminant of concern, further locations may be necessary to achieve a double density sampling frequency (WADOH, 2009).

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2. The soil vapour and ASS assessments can be integrated into the DESI.
3. Improved delineation of the asbestos impact, as well as the SVA, should be considered priorities for data gap closure. Such information will inform the remediation action plan (RAP) for the site.
4. The RAP must detail all asbestos control measures to be implemented during the site remedial (excavation) works. This will at least partly satisfy the requirement for a site- / work- specific AMP.
5. It is anticipated that any site remediation will commence with removal of the asbestos hotspots (fill) in the vicinities of boreholes BH3 and BH4. Other hotspots may need to be remediated as part of this stage, depending on the findings of the DESI.
6. Asbestos validation should include surface inspections and clearance by a licensed asbestos assessor, in addition to soil validation testing in areas where asbestos-impacted soils were remediated.
7. Soils to be removed from site as part of any remediation, basement excavation and/or foundation works, including *virgin excavated natural material* (VENM), are to be classified prior to off-site disposal in accordance the EPA (2014) *Waste Classification Guidelines* and the *Protection of Environmental Operations Act 1997*.
8. Once appropriately classified, all waste materials are to be transported to EPA-licensed waste facilities by the appointed waste contractors.
9. Any soil material to be imported to the site (i.e. for backfilling and/or landscaping purposes) must be confirmed by documentary evidence as suitable for the proposed land use. In the absence of such evidence, the material will require sampling and laboratory analysis to confirm that it is free of contamination and suitable for the intended land use, in accordance with EPA guidelines.
10. A Construction Environmental Management Plan (CEMP) should be prepared for the proposed development, describing mitigation controls for potential exposure pathways to receptors during works.

4 LIMITATIONS

This critique has been prepared for the exclusive use of The Trustee for MHA PBR Annandale Unit Trust, whom is the only intended beneficiary of EI's work. No other party should rely on this document without the prior written consent of EI. EI undertakes no duty, nor accepts any responsibility or liability, to any third party who purports to rely upon this document without EI's approval.

EI has used a degree of care and skill ordinarily exercised by reputable members of the environmental industry in Australia, as at the date of this document. No other warranty, expressed or implied, is made or intended. Each section of this critique must be read in conjunction with the whole of the document, including its attachment.

The conclusions presented in this critique are based on work done by others, with specific sampling locations chosen to be as representative as possible under the given circumstances.

EI's professional opinions are reasonable and based on its professional judgment, experience, training and results from analytical data. EI may also have relied upon information provided by the client and other third parties to prepare this document, some of which may not have been verified by EI.

For and on behalf of EI AUSTRALIA



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Attachment

Attachment A – Plans of the Proposed Development

References

DEC (2006) *Guidelines for the NSW Site Auditor Scheme* (2nd Edition). New South Wales Department of Environment and Conservation, DEC 2006/121, April 2006.

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EPA (2020) *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines*. Environment Protection Authority of New South Wales, EPA 2020P2233, April 2020.

NEPC (1999) *National Environment Protection (Assessment of Site Contamination) Measure 1999*. National Environment Protection Council, December 1999.

NEPC (2013) *Schedule B1 Guideline on Investigation Levels for Soil and Groundwater, Schedule B2 Guideline on Site Characterisation and Schedule B4 Guideline on Site-Specific Health Risk Assessments*, in the *National Environment Protection (Assessment of Site Contamination) Amendment Measure*, National Environment Protection Council, April 2013.

WADOH (2009) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*. Western Australian Department of Health, May 2009.