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18 August 2021

Tom Hemmett
Richard Crookes Constructions Pty Ltd
Level 3, Broadcast Way
Artarmon NSW 2064

Via email: HemmettT@richardcrookes.com.au

Dear Tom,

Re: Interim Advice 2 (IA02) Review and Endorsement of Addendum to Preliminary and Detailed Site Investigation Reports for Proposed Mulgoa Rise Public School at 1-23 Forestwood Drive, Glenmore Park NSW

1 Introduction

Richard Crookes Constructions Pty Ltd (RCC) has appointed Rebeka Hall of Geosyntec Consultants Pty Ltd (Geosyntec), a NSW EPA Auditor accredited (No. 0802) under the Contaminated Land Management (CLM) Act 1997, to conduct an Audit of the land proposed for the Mulgoa Rise Public School at 1-23 Forestwood Drive, Glenmore Park NSW ("the site").

The site occupies approximately three hectares and is identified as Lot 1663 in DP1166869. The site is currently vacant.

The aim of the engagement is to enable a site audit statement (SAS) and associated site audit report (SAR) to be prepared that confirms the suitability of the site for proposed redevelopment as a primary school. The Audit is being conducted in accordance with the requirements outlined in the NSW EPA (2017) Contaminated Land Management Guidelines for the NSW Site Auditor Scheme (3rd edition).

The Audit is non-statutory in nature as it is not triggered by any planning instrument or development consent at this point in time.

2 Scope of Audit and Nature of Interim Advice

NSW EPA (2017) describes the site assessment and audit process as:

1. *Consultant is commissioned to assess contamination*. The contaminated site consultant designs and undertakes the site assessment and, where required, all remediation and validation activities to achieve the objectives specified by the owner or developer; and
2. *Site auditor reviews the consultant's work*. The site owner or developer commissions the Auditor to review the consultant's work. The Auditor then prepares a SAR and SAS at the conclusion of the review, which are given to the owner or developer.

Therefore, the contaminated land consultant and other relevant parties should be satisfied that the work to be conducted conforms to all appropriate regulations, standards and guidelines and is suitable based on the site history and the proposed land use.

3 Current Interim Advice

During the course of the Audit, the Auditor has reviewed the following reports related to land contamination assessment:

- JK Environments(JKE) (18 August 2021) Addendum to Preliminary and Detailed Site Investigation reports Proposed New Primary School in Mulgoa Rise 1-23 Forestwood Drive, Glenmore Park, NSW (Ref: E33177Plet-ADDrev1);
- JKE (5 November 2020) Detailed Site Investigation (DSI) for Proposed Mulgoa Rise Public School at 1-23 Forestwood Drive, Glenmore Park, NSW, reference: E33177Prpt3-DSI Final.
- JKE (3 June 2020) Preliminary Site Investigation (PSI) – Contamination for Proposed Mulgoa Rise Public School at 1-23 Forestwood Drive, Glenmore Park NSW, reference: E33177PArpt Final.

The purpose of the current IA is to document Auditor findings following the review of existing information related to site conditions and to endorse any works required in verifying the suitability of the site for the intended future use as a primary school and to enable a Site Audit Statement to be prepared at the completion of those works.

4 Summary of Investigations

4.1 Proposed Future Use

JKG (November 2020) report that the proposed school would likely include the following:

- A two-storey administration and library building in the north-west corner of the site.
- A total of six classroom blocks, all of two stories, located to the south and east of the administration building.
- A single storey timber framed hall located towards the north-east corner of the site.
- A two-level walkway linking the administration block, classroom buildings, and hall.
- An on-grade carpark in the south-east corner of the site.
- Associated playground and landscaping work

4.2 Environmental Findings

Notable findings in the existing reports are summarised as follows.

4.2.1 JKE (2020) Preliminary Site Investigation

The preliminary investigation included a review of historical information which indicated the site was historically used for grazing, then from the mid-1980s was part of quarrying operations which included land to the north, south and west. The former quarry was rehabilitated sometime between 2000 to 2007 via importation of material and controlled filling. It has been vacant since.

Fieldwork comprised limited soil sampling from 12 boreholes and 10 test pits (with analysis for heavy metals, PAHs, TRH/BTEX, pesticides, 10L asbestos from testpits i.e., depth limited and five samples for asbestos 500ml). One groundwater well was installed and sampled with analysis comprising heavy metals, TRH, PAH, BTEX, VOC.

Soil samples were all below human health investigation levels (HIL A) however ecological investigations levels (EILs) had not been evaluated. Groundwater analytes were all below site

criteria aside from arsenic, nickel and zinc which were above ANZECC and were attributed to regional factors.

The report recommended a detailed site investigation be completed.

4.2.2 JKE (2020) Detailed Site Investigation

The scope of works comprised:

- Further soil sampling from 13 boreholes and 10 test pits (combined total of 45 locations including the PSI). Soil samples were analysed for heavy metals, TRH, BTEX, PAH (80), Pesticides, PCB, and Asbestos 500ml (13) and 10L Asbestos (43) from testpits only (limited depth).
- Further groundwater sampling from three monitoring wells which were installed at the site and analysed for heavy metals, BTEX, PAH, TRH.

The DSI identified fill material across the entire site from the surface to depths of approximately 11.2m below ground level (bgl) and 14.2m bgl where such depths could be achieved. All test pits ceased within fill material (to depths between 3 and 6 mbgl). The fill material was underlain by siltstone bedrock. The fill material typically comprised silty clay with inclusions of gravels indicative of natural clay and ripped bedrock used in a controlled filling exercise to rehabilitate the former quarry. Minor quantities of ash, and building rubble (bricks, steel, plastic, glass, terracotta, tile fragments) were encountered in some investigation locations. No stained soils or offensive odours were encountered during the intrusive works.

All soil results were all below criteria.

Groundwater was encountered during the drilling of boreholes BH101 to BH104 at depths between 3.8mbgl and 9mbgl., with standing water level gauged between 3.4 nd 4.4mgbl. Groundwater results met site criteria except for arsenic, nickel and zinc reported above the ANZECC criteria.

JKE considered the site is suitable for the proposed land use subject to the following:

- A Fill Import Protocol (FIP) is prepared for the site and implemented as part of the Construction Environmental Management Plan (CEMP) during redevelopment works. The FIP should include appropriate measures (including visual inspections and/or validation sampling) to ensure that all materials imported to the site (i.e., road-base and gravel, sandstone, general fill, topsoil, mulch etc) are free of contamination and are aesthetically suitable.
- Although there was a low potential for contamination-related unexpected finds to occur during the proposed development works, an Unexpected Finds Protocol (UFP) was recommended for adoption during site works and integrated into the CEMP as a conservative measure.

4.2.3 JKE (2021) Addendum letter

Following the issue of Site Auditor Interim Advice No.1 (17 May 2021) on the PSI and DSI, JKE conducted a site walkover on 23 July 2021. The purpose of the inspection was to observe and record the current site conditions, and to evaluate whether the site conditions had changed since the previous (2020) investigation.

A key outcome was that scattered fragments of fibre cement (suspected of containing asbestos) were observed in the north eastern/ eastern section of the site. The fragments were generally embedded into the ground surface in an area of approximately 5m by 5m and were confirmed to contain asbestos.

Based upon the presence of asbestos containing fragments JKE recommended:

- The site is secured by appropriate fencing to eliminate unauthorised access.
- A suitably qualified contractor/consultant is to undertake an 'emu pick' to remove any visible fragments of ACM/fibre cement from the ground surface in the north-eastern/eastern areas of the site (in accordance with the relevant codes of practice). Any fragments must be double bagged and disposed of lawfully as asbestos waste. A waste disposal docket is to be provided to the client to demonstrate compliance.
- Following the pick, a suitably qualified environmental consultant (e.g. a Licensed Asbestos Assessor) is to carry out a surface inspection and provide an asbestos clearance certificate.
- Subsequently, asbestos quantification sampling is to occur to verify the removal of the ACM and to confirm that impacts do not extend beneath the surface. This is to involve bulk sampling/screening utilising the same field methods as documented in the DSI. JKE recommend that sampling occurs on a 12m grid spacing.
- Samples are to be collected from the surface (0-0.05m depth interval) and from the subsurface at depths of approximately 0.5m and 1m, whilst ensuring that all distinct fill profiles down to the termination depth of the investigation are sampled/screened. These details should be outlined in a Sampling, Analysis and Quality Plan (SAQP) prior to the commencement of the investigation and the SAQP should be approved by the site auditor.
- A Supplementary Asbestos Investigation Report is to be prepared presenting the results of the investigation, along with a discussion/assessment of risk and any recommendations.

JKE maintained their recommendations from the DSI that a Fill Importation Protocol (FIP) should be prepared for the site and implemented as part of the CEMP during the proposed development. A Unexpected Finds Protocol (UFP) is also to be integrated into the CEMP.

A site inspection was conducted on 29 April 2021 by Zoic and representatives from RCC. The observations were generally consistent with those outlined in the JKE reports. Key observations included:

- The site was not fenced along Darug Avenue (western boundary) and Deerubbin Drive (northern boundary) which allowed access for vehicles.
- Several small stockpiles of soil, construction rubble and household waste (namely electronic devices) were observed across the site which appeared to have been fly tipped which could be the source of ACM fragments observed during JKE's inspection in July 2021.

5 Auditor Comments and Endorsement

The Auditor has reviewed the JKE reports against relevant guidelines made or approved by NSW EPA. All reports largely meet the EPA guidelines.

The Auditor confirms that the investigations have characterised the site, and show no widespread contamination issues, and the approach presented in JKE's addendum letter (2021) is appropriate to address the asbestos unexpected finds, subject to the following conditions:

1. A minimum of five samples is required within the designated remedial area (5m x 5m);
2. The Auditor expects the proposed 'SAQP' (as stated in section 6 of JKE 2021) to be a validation plan to confirm successful removal of asbestos containing fragments;
3. Following removal and validation of the asbestos unexpected find, the goal should be to prepare a validation report after appropriate clean up and confirmatory testing rather than a 'supplementary asbestos investigation report' (as stated in section 6 of JKE 2021);
4. In light of the recent identification of asbestos in surface fragments, a site-wide asbestos clearance should be conducted by an LAA as part of the validation process; and

5. The Auditor requires all fly tipped material to be removed prior to site sign off, and surface inspection and/or chemical testing completed (where appropriate depending on the nature/content of fly tipped material).

The above conditions are to be addressed by the environmental consultant in conducting validation and waste classification works.

6 Closure

This interim advice does not constitute a SAS or a SAR, but rather is provided to assist the Client in the assessment and management of contamination issues at the site. The information provided herein should not be considered pre-emptive of the final Audit conclusions. It represents the Auditor's opinion based on the review of currently available information.

Should you have any queries or wish to discuss any points, please do not hesitate to contact Joshua Lloyd or the undersigned.

Yours sincerely,

Rebeka Hall
NSW EPA Accredited Site Auditor
Geosyntec Consultants Pty Ltd