

Project No. 85573.00

21 July 2016

JMN:jlb

Attn: Coco Simonian
c/o JPR Architects Pty Ltd
Level 4, 50 Stanley Street
East Sydney NSW 2010

Attn: Mr Yogesh Sane

By Email: ys@jpra.com.au

Dear Sirs

**Interim Advice – Statutory Site Audit
Under Part 4 of the Contaminated Land Management Act 1997 (CLMA)
175-177 Cleveland and 1-5 Woodburn Streets, Redfern New South Wales**

I refer to the statutory audit for the above site as notified to NSW EPA on 7 July 2016 (Audit No. DP/106) and specifically to the Stage 1/Stage 2 investigation report by Geo-Environmental Engineering (GEE), dated 25 May 2014 (GEE, 2014), the Detailed Site Investigation by Environmental Investigations (EI), dated 18 September 2015 (DSI, 2015), the Remediation Action Plan by Environmental Investigations, dated 14 March 2016 (RAP, 2016) and a response to comments document from EI dated 20 July 2016.

The referenced reports indicate that the site, located in the City of Sydney Council area, occupies some 0.11 ha and has previously been used for commercial and industrial purposes, including a printing works. The site is now scheduled for redevelopment comprising a multi-storey residential apartment and commercial building with a two level basement covering the entire site footprint.

Previous testing by GEE and EI involved a total of 14 bores and included related soil sampling predominantly in filling which is of variable depth. Three groundwater wells were also installed.

The reports identified soil contamination within the ashy filling materials (>3.3 m) from a range of metals, total recoverable hydrocarbons (TRH), polycyclic aromatic hydrocarbons (PAH) and traces of organo-chlorine pesticides (OCP) above the adopted site assessment criteria. In addition some elevated levels of certain metals (copper and zinc) were identified in groundwater. Potential asbestos containing material was also identified in at least one test location and may be present elsewhere in the filling. Asbestos was also reportedly identified in built structures on site.

EI noted that the impacted fill material would be removed (excavated) under the provisions of the RAP as part of the proposed site redevelopment (which involves bulk excavation to form the proposed basement levels) with subsequent off-site disposal to a licensed landfill.

EI also noted in the RAP, 2016 that the objective of the proposed validation works (and report) was to:

- Remediate the impacted fill and soil materials;
- Validate remediated areas to a standard acceptable for the intended land-uses;

- Provide strategies for conducting site remediation and validation assessment works in a manner which minimises impacts on both human health and the environment and with due regard for the safety of site workers and the general public.

EI proposed that a further round of soil sampling and groundwater monitoring be undertaken to further characterise soil and ground conditions (post demolition), that pesticide and PAH hotspots be removed, that all fill soils be excavated on the basis of an in situ waste classification, and that following the preparation of an RAP addendum (taking into account the results of further testing) that validation of the remedial excavations be undertaken and that any further remediation be undertaken. EI further noted that subsequently, as part of site formation, virgin natural materials beneath the filling would be excavated as part of the proposed development.

Accordingly, and on the basis of the recommendations of the RAP, and in order to facilitate further testing, it likely to be necessary to allow site demolition to take place before any remedial work or bulk excavation commences. In this regard EI proposed that a hazardous building material survey should be undertaken (prior to demolition).

EI also included an unexpected finds protocol in their RAP which addresses the possibility of encountering unknown contaminants, including further asbestos materials, finding underground tanks and other buried structures, and/or identifying soil vapours.

Groundwater is reported at depth of 2.4 - 4.2 m below ground level (bgl). EI also made provisions in the RAP to classify excavated soils for off-site disposal and to undertake further testing in the form of soil testing (for waste classification purposes) and groundwater testing as well as environmental monitoring and management during remediation. The RAP also made provisions for the protection of worker health and safety (as well as adjacent land-users) during remediation.

The auditor, generally agreed with the findings of the RAP (2016), but noted that some potential groundwater contaminants which were implied in the site history, were omitted in the conceptual site model (CSM) and have not been adequately addressed. The suite of potential contaminants in question comprises a range of solvents and other substances used in the commercial printing industry and further testing will be required to address this data gap. EI have indicated that these contaminants will be included in the proposed further testing regime and that a sampling analysis and quality plan will be drawn up as part of this process.

From the review of previous reports groundwater depths were reported ranging from 2.4 to 7.3 m bgl. However, EI are of the view that significant dewatering is unlikely to be required during construction despite excavations extending to approximately 7 m bgl as part of the proposed site formation. Further testing as proposed by EI should better inform this situation.

Accordingly, based on my review of the RAP, 2016 and prior investigation reports by EI and GEE, and subject to appropriate further testing as outlined above (giving the opportunity to amend the RAP accordingly), followed by waste classification, remediation and validation, the auditor considers that the site can be made suitable for the proposed land-use (mixed residential apartments and commercial land use with two levels of basement).

The auditor also agrees with EI that the site should be subject to a hazardous building materials survey and the appropriate and lawful removal and disposal of such materials.

Ultimately, following implementation of the RAP (or amended RAP), a site validation report (SVR) must be provided for audit review. The SVR should provide appropriate waste classification information and confirmation of legal disposal of excavated materials, as well as providing site validation data together with a statement that the site has been made suitable for the proposed land use.

Furthermore, the SVR should confirm that any remaining on-site contamination, including soil, soil vapour and groundwater, does not pose a risk to future land-users, and that in the unlikely event of any off-site migration of contaminants that this has been notified to the appropriate authority and is being suitably managed.

Under such circumstances it would then be appropriate for the auditor to issue a Section A site audit report and accompanying site audit statement to confirm that the site has been made suitable (is suitable) for the proposed land use.

If you require any clarification please contact the undersigned.

Yours faithfully

Douglas Partners Pty Ltd



J M Nash
Principal

Please note that the above information, interim advice and opinions do not pre-empt the eventual site audit findings nor do they constitute a site audit as defined under Part 4 of the Contaminated Land Management Act, 1997.