

Toga Addison Pty Ltd
Level 5, 45 Jones Street
ULTIMO NSW 2007

Project 85151.00
18 December 2015
PMO

Attention: Mr Michael Calvi

Dear Sirs

Executive Summary for Report on Due Diligence Assessment – Contamination
Proposed Residential Development
137 – 151 Anzac Parade, Kensington

The due diligence assessment was undertaken to assess the potential contamination risks. For the purposes of this assessment it is assumed that the development will include a multi-storey residential unit building with one or more basement levels.

The development site is a near-rectangular shaped lot with average dimensions of approximately 90 m by 45 m. It is bounded by a 7-Eleven Service Station to the north, Anzac Parade to the east, and residential dwellings/units to the south and west. At the time of the assessment the site was occupied by numerous buildings including a four-storey residential unit building, single-storey dwelling/commercial premises, one and two-storey commercial buildings and a four-storey motel. None of the existing buildings are known to contain basement levels.

The *Sydney 1:100 000 Geological Series Sheet* indicates that the site is underlain by transgressive dunes which comprise medium to fine-grained marine sands with podsols. The groundwater table is likely to be relatively shallow and flow in a west to south-west direction towards Alexandra Canal and ultimately Botany Bay.

The site and adjacent sites are not identified as being significantly contaminated under the *Contaminated Lands Management Act 1997* as at 16 December 2015.

Three cone penetration tests (CPTs 1 to 3) were undertaken to depths of between 16.1 m and 20.0 m. Two boreholes (BH4 and BH5) were drilled to depths of 6.0 m and 7.0 m. The bores were converted into temporary groundwater monitoring wells at the completion of drilling by placing Class 18 uPVC screen and casing into the holes, backfilling the screened section with gravel, constructing a bentonite plug and installing steel covers flush with the ground surface.

Groundwater samples were obtained from both of the wells on 22 October 2015 following development and purging. Samples were also collected from two existing wells (X1 and X2) on 137 Anzac Parade which had presumably been installed as part of a monitoring programme for underground storage tanks (USTs) on the service station site immediately to the north.

The conditions encountered in the CPTs and boreholes can be described as follows:

- PAVEMENT – 100 mm to 130 mm thick concrete slab.
- FILLING – sand filling with some coarse gravel to a depth of 0.4 m in BH4.
- SAND – very loose to loose sand/silty sand to depths of between 0.5 m and 5.5 m, underlain by medium dense to dense sand/clayey sand to depths of between 2.3 m to 6.4 m. A relatively thick layer of very dense sand was then encountered to depths of 13.0 m to 13.4 m, underlain by bands of loose to very dense sands and very stiff to hard clays.

Groundwater was measured at depths of between 1.2 m and 3.0 m (RL 21.9 m to RL 22.4 m AHD) at the time of the field work. The flow direction appears to be to the south/south-west.

Four soil samples were sent to a NATA-accredited analytical laboratory and were analysed for a range of contaminants. Four groundwater samples obtained from both the current wells (BH4 and BH5) and the existing wells (X1 and X2) were sent to a NATA-accredited analytical laboratory and were analysed for a range of contaminants.

The groundwater contains significant concentrations of compounds associated with petroleum hydrocarbons which indicates that the USTs on the adjacent site are likely to be leaking product into the groundwater. As the basement is likely to be tanked to the surface, the quality of groundwater should not impact upon the proposed land-use. However the waterproofing membrane/system will need to be designed to prevent ingress of hydrocarbons in both the liquid-phase and vapour-phase.

Soil contamination from a land-use perspective is only likely to be an issue in areas of the site in which filling will remain (i.e. outside the basement footprint) and in areas of the site where the natural soils have been contaminated by hydrocarbons. Any accessible filling/soil that will remain on the site will need to be verified as having contaminant concentrations within relevant health-based and ecological-based limits. It is noted that only minor depths of filling were observed in the test locations.

Acid sulphate soils are not expected to be an issue on the site for the assumed excavation depth as the sands are Quaternary-aged dune sands which are of wind-blown origin.

It is noted that a more detailed contamination investigation will be required following development approval and a Remediation Action Plan (RAP) will probably be required to deal with the hydrocarbon contamination on the site. It is noted that from a technical perspective, the site can be remediated to a condition that is suitable for the proposed high-density residential development. The mechanisms for remediation cannot be determined until the detailed contamination investigation is undertaken.

The detailed results of the assessment are outlined in the *Report on Due Diligence Assessment – Contamination Rev0* for Project 85151.00 dated 16 December 2015.

We trust the above information meets your present requirements.

Yours faithfully,
Douglas Partners Pty Ltd



Peter Oitmaa
Senior Associate