

Stockland Development Pty Limited
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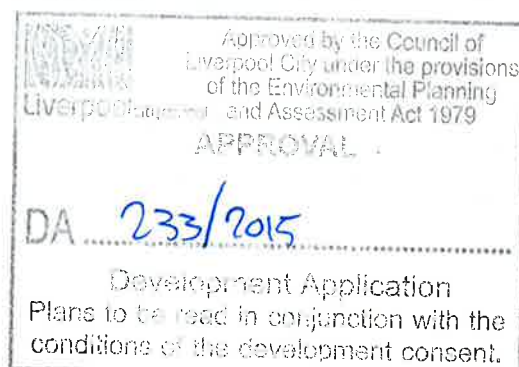
Project 84377
12 August 2015
PG:jljb

Attention: Mr Rick McArdle

By Email: Rick.McArdle@stockland.com.au

Dear Sirs

**Proposed Warehouse Development
Cooper's Paddock, Warwick Farm
Detailed Site Investigation**



Douglas Partners Pty Ltd (DP) prepared the *Report on Contamination Investigation, Part Coopers Paddock, Governor Macquarie Drive, Warwick Farm*, Project 84377, October 2014 (DP, 2014) that concluded that the site is compatible from a contamination standpoint for the proposed warehouse development (per DA-233/2015) subject to the recommendations below.

The report was prepared on the basis of a site history review, site walkover and soil and groundwater sampling and testing from eight bores spaced across the site. The bores identified a profile of topsoil / fill overlying variable clays and sands, then sandstone bedrock. Groundwater was found in two of the monitoring wells at depths of greater than 6 m below ground level.

The report recommended further rounds of groundwater sampling and testing due to the minor concentrations of Total Recoverable Hydrocarbons (TRH) and Polycyclic Aromatic Hydrocarbons (PAH) detected (minor exceedance of the threshold level), considered likely to be due to the drilling process; additional soil sampling and testing to provide more confidence in the results reported, validation of the building footprints, once demolished, together with a survey of hazardous building materials. These recommendations are appropriate to be implemented as part of the clearing and demolition process (as opposed to being completed prior to commencing the demolition and clearing process), in advance of any planned civil or construction works.

It should further be noted that the NSW EPA (1995) sampling design guidelines recommends for a 10 hectare site at least 110 sampling locations for site characterisation, however, under the National Environment Protection Measure 1999, as amended 2013 (NEPM, 2013), Schedule B2, no specific sample numbers are recommended. Instead, under Sections 6.3 and 6.4 it is recommended that a sampling plan be developed on the basis of numerous factors including the distribution of proposed site uses, the site history, the likely heterogeneity of fill, soil properties that affect contaminant migration, and likely receptors.

In consideration of the soil analytical results reported in DP (2014), the relatively low potential for significant contamination based on the site history, the nature of the proposed land use (i.e. industrial, being low sensitivity), and development (i.e. large warehouses and expansive hardstand) and the planned cut to fill balance at the site (i.e. minimal soils removed from the site) it is considered that a



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sampling density reduced from that recommended in EPA (1995) is appropriate for a detailed site investigation. It is therefore proposed that the following sampling plan be implemented during clearing and demolition:

- Adopt a sample spacing of approximately 50-60 m across the site area (i.e. a total of about 35 sampling locations);
- Recover and analyse samples of the various soil horizons encountered at each location; and
- If contaminants are identified above threshold levels consider an increased sample density for delineation purposes at that location.

In addition to the above, and in accordance with DP (2014) groundwater will be purged, sampled and analysed from the three existing groundwater monitoring wells. Once the clearing and demolition is complete additional soil samples will be recovered and analysed from beneath the demolished buildings on site.

Should you have any queries regarding this letter please contact the undersigned.

Yours faithfully

Douglas Partners Pty Ltd



Paul Gorman

Senior Associate / Sydney Environmental Manager



Tim Wright

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