coffey environments
SPECIALISTS IN LIVING AND WORKING PLACES

16 September 2008

Valad Property Group Pty Ltd
Level 9
1 Chifley Square
Sydney NSW 2000

Attention: Denis Ghersinich

Dear Denis

RE: Summary of Proposed Ikea Tempe Development at 630-726 Princes Highway, Tempe

The Director General of Planning (DGP) is requiring input that the Site can be made suitable for the proposed uses with respect to land contamination. The DGP is seeking a Site Audit Statement and a Summary Site Audit Report issued by an auditor accredited under the NSW *Contaminated Land Management Act* to demonstrate that the site can made suitable for the proposed uses. A Site Audit Report, Remediation Action Plan (RAP) for lots 200 and 201 (the former tip site) has been completed and is attached in Appendix A. A Site Audit Statement and Summary Site Audit Report for Lot A DP 399884, Lot B in DP 399884 and Lot A DP 385209 & Lot E DP 385210 (Ateco, Kennards and KAS Auto sites) is currently being prepared by Mr Graeme Nyland. This letter however, provides Coffey Environments' opinion as the environmental consultant responsible for the contamination assessment and/or validation of the land, that the amalgamated site can be made suitable for the proposed uses.

1 SITE LOCATION AND DESCRIPTION

1.1 Site location

The site is located on the southern side of Princes Highway, Tempe NSW. The site consists of four parcels of land, three of which are located on Princes Highway comprising:

- Lot A DP 399884, including 630 Princes Highway
- Lot B in DP 399884, including 632 Princes Highway
- Lot A DP 385209 & Lot E DP 385210, including 634-726 Princes Highway.

In addition to the land detailed above, part of the proposed development includes Area 1A and Area 1B of the Tempe Lands located at Bellevue Street, Tempe, NSW. Areas 1A and 1B comprise the following four lots:

- Lot A of DP382059
- Lot F of DP385210
- Lot C of DP385209
- Lot 40 of DP746918

1.2 Site Description

No. 630 Princes Highway comprises an automotive workshop (KAS Auto). The site is approximately 0.2ha in size.

No. 632 Princes Highway comprises Kennards Self Storage, a large storage facility consisting mainly of rectangular, galvanised sheeting, single and double storey buildings. The site is approximately 2ha in size.

No. 634 – 726 Princes Highway comprises a two storey brick warehouse structure that is currently occupied by a logistics company and tyre and alloy wheel storage facility. The site also has a Volkswagen garage to the rear. The site is approximately 2.9ha in size.

Areas 1A and 1B of Tempe Lands are irregular in shape and cover an area of 4.37ha and 1.21ha respectively. Remedial works were undertaken at Tempe Lands which included construction of a virgin excavated natural material (VENM) capping layer across the site.

1.3 Scope

This correspondence is primarily a summary of the Contamination Assessment undertaken at 630 - 726 Princes Highway, Tempe. In addition to the summary of works undertaken at this site, Areas 1A and 1B of Tempe Lands have also been briefly summarised due to the proposed commercial development covering areas of all of the aforementioned properties.

2 CONTAMINATION ASSESSMENT AT 630 – 726 PRINCES HIGHWAY

2.1 Summary of Contamination Assessment

Coffey Environments Pty Ltd undertook a Contamination Assessment in May/June 2008 which covered all Lots that are part of the proposed development. The assessment work and findings are documented in Coffey report titled "*Contamination Assessment 630 – 726 Princes Highway, Tempe (ref: ENVILCOV00315AH – R01 Sept 2008)*. The work was undertaken in general accordance with the relevant sections of the NSW Department of Environment and Climate Change (DECC, formerly EPA) document, "Guidelines for Consultants Reporting on Contaminated Land (1998)".

A site history study was undertaken to identify historical activities that have the potential to introduce terrestrial contamination at the site. The study shows that 630 (KAS Auto) was formerly a service station site with underground storage tanks (USTs) in the western portion of the site. 632 Princes Highway was formerly a brick works, with an associated brick pit where the Tempe landfill is located and 634 – 726 Princes Highway was formerly the Ateco car parts manufacturing facility.

Sampling across the site was undertaken to target potential areas of concern, whilst giving a reasonably uniform coverage of the site. Likely chemicals of concern identified during the site history review were included in the analysis scheduling of the soil samples collected.

A total of fifty one boreholes were drilled on site. Environmental samples were collected from the near surface, at each layer of fill/natural soil encountered, and also at 1m intervals within the fill and within the natural substrate. In total, 137 primary soil samples were selected for a range of laboratory analysis to assess the subsurface conditions. Fourteen groundwater monitoring wells were installed in boreholes to a maximum of 15m depth across the sites. The attached figure illustrates these sampling locations.

2.2 Overview of Contamination

2.2.1 Soil

Significant contamination was not identified within the soil samples tested. Heavy metals analysis returned results below the relevant investigation levels in all samples tested. TPH ($C_{10} - C_{36}$) concentrations were detected above the investigation criteria in four samples across the three sites, but the extent of impact appears to be localised. The primary area of impact is at 630 Princes Highway, which is a former service station site. The exceedance coincides with the area of USTs at the former service station. Further localised impact was noted at two locations at 632 Princes Highway. The first, in the south eastern portion of the site, displays impact at depth which is most likely due to presence of hydrocarbon containing material in the landfill material (i.e. waste) identified in this area. A second localised hotspot area is present in shallow fill in the centre of the site. It could be associated with a minor fuel/oil spill or historical activities undertaken at the brickworks in this location.

BTEX, benzo(a)pyrene, PCBs and OCPs (Aldrin and Dieldrin) were not detected above the relevant HILs in the samples tested.

Asbestos, in the form of fibre bundles and /or fragments of fibre-cement sheeting was detected by the laboratory in two out of fifty soil samples analysed.

2.2.2 Groundwater

Heavy metal concentration in the groundwater samples were, in general, above the adopted investigation level, however it is considered the levels generally consistent with background levels expected in the local area of industrial and commercial development. TPH was detected above the LOR in two samples. There is no investigation level established for TPH in water so the LOR is adopted as the default investigation level.

Ammonia was at concentrations exceeding the investigation levels in three groundwater samples within the southern portion of the site. This is considered to be due to the presence of some landfill material present in the area. The groundwater flow is in a general southerly direction, towards the Tempe landfill, which has been found to contain groundwater/leachate containing ammonia well in excess of the investigation levels.

3 REMEDIATION AND VALIDATION AT AREAS 1A AND 1B, TEMPE LANDS

Remediation works undertaken at Tempe Lands included the construction of a VENM capping layer to at least 0.5m thickness and compacted 100%. The remediation works were undertaken on Areas 1A and 1B by MCE between January 2005 and November 2005. It is considered that the earthworks undertaken in Areas 1A and 1B have been adequate for constructing a VENM cap in accordance with the RAP which will provide a barrier between contaminated landfill material and future users of the site. Based on the cap construction and the findings of ongoing landfill gas investigations, it is considered that the site is suitable for commercial/industrial uses subject to the implementation of a Site Environmental Management Plan (SEMP). The SEMP noted several conditions, two of which are relevant to the proposed IKEA development include:

- Any buildings and structures constructed on the land should be done with due consideration of landfill gas presence and adequate provision being made to mitigate the impacts of landfill gas on the buildings and structures; and
- Where the VENM cap, which acts as a barrier is breeched, the VENM cap is either reconstructed or a barrier that provides the same net effect is provided.

It is important to note that Mr Graeme Nyland, a site auditor accredited under the CLM Act has issued a site audit statement and a site audit report stating that the site is suitable for commercial/industrial uses subject to the provisions of the SEMP.

4 CONCLUSIONS

Heavy metals were not detected above adopted investigation levels in soil samples tested from the Princes Highway sites. Petroleum hydrocarbon contamination is predominantly present within the north eastern portion of the three sites ate 630 Princes Highway (KAS Auto) and is likely to be residual contamination associated with the former service station infrastructure in the area. Contamination is considered to be highly localised hotspots. Asbestos, in the form of fibre bundles and /or fragments of fibre-cement sheeting was detected by the laboratory in two out of fifty soil samples analysed. The extent of asbestos contamination is seemingly not widespread.

The limited extent of contamination present across the Princes Highway sites will allow remedial activities to be undertaken as part of the development phase of the site. The localised hotspot areas can be excavated accordingly and impacted material disposed of to a suitable facility.

Slightly elevated concentrations of heavy metals in groundwater exceeding the adopted marine GIL are present in numerous groundwater samples from across the site. The source of the heavy metals detected in the groundwater is thought to be the fill material and the previous on-site activities. The exceedances are considered to be in keeping with background levels expected in the local area of industrial and commercial development and are considered unlikely to pose a constraint on the proposed or future development of the sites.

Ammonia was at concentrations exceeding the investigation levels in three groundwater samples. This is considered to be due to the presence of some landfill material present in the area. Again, the elevated levels are not considered to pose a constraint on the proposed development of the sites.

With regards to Areas 1A and 1B, it should be noted that a Site Audit Statement has already been issued for these sites which states that they are suitable for commercial/industrial land use albeit subject to certain conditions relating to maintenance of the existing landfill cap.

On the basis of the above, it is considered that the site can be made suitable for the proposed commercial uses with some remedial works that can be readily undertaken during or prior to the building works associated with the development.

It is important that this correspondence is read in conjunction with the attached sheet "Important Information About Your Coffey Environmental Report".

Should you require any further information regarding any of the above, please do not hesitate to contact the undersigned.

For and on behalf of Coffey Environments Pty Ltd

Benedict Smith
Environmental Scientist

Sam Gunasekera
Principal

Attachments: Important Information About Your Coffey Environmental Report
Site location figure
Sample location figure

Important information about your **Coffey** Environmental Report

Uncertainties as to what lies below the ground on potentially contaminated sites can lead to remediation costs blow outs, reduction in the value of the land and to delays in the redevelopment of land. These uncertainties are an inherent part of dealing with land contamination. The following notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report has been written for a specific purpose

Your report has been developed on the basis of a specific purpose as understood by Coffey and applies only to the site or area investigated. For example, the purpose of your report may be:

- To assess the environmental effects of an on-going operation.
- To provide due diligence on behalf of a property vendor.
- To provide due diligence on behalf of a property purchaser.
- To provide information related to redevelopment of the site due to a proposed change in use, for example, industrial use to a residential use.
- To assess the existing baseline environmental, and sometimes geological and hydrological conditions or constraints of a site prior to an activity which may alter the sites environmental, geological or hydrological condition.

Subsurface conditions can change

Subsurface conditions are created by natural processes and the activity of man and may change with time. For example, groundwater levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of the subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project and/or on the property.

Interpretation of factual data

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from indirect field measurements and sometimes other reports on the site are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how well qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of Coffey through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other problems encountered on site.

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Important information about your **Coffey** Environmental Report

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered with redevelopment or on-going use of the site. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. In particular, a due diligence report for a property vendor may not be suitable for satisfying the needs of a purchaser. Your report should not be applied for any purpose other than that originally specified at the time the report was issued.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other professionals who are affected by the report. Have Coffey explain the report implications to professionals affected by them and then review plans and specifications produced to see how they have incorporated the report findings.

Data should not be separated from the report

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel), field testing and laboratory evaluation of field samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

Contact Coffey for additional assistance

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to land development and land use. It is common that not all approaches will be necessarily dealt with in your environmental site assessment report due to concepts proposed at that time. As a project progresses through planning and design toward construction and/or maintenance, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

Responsibility

Environmental reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.

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date	
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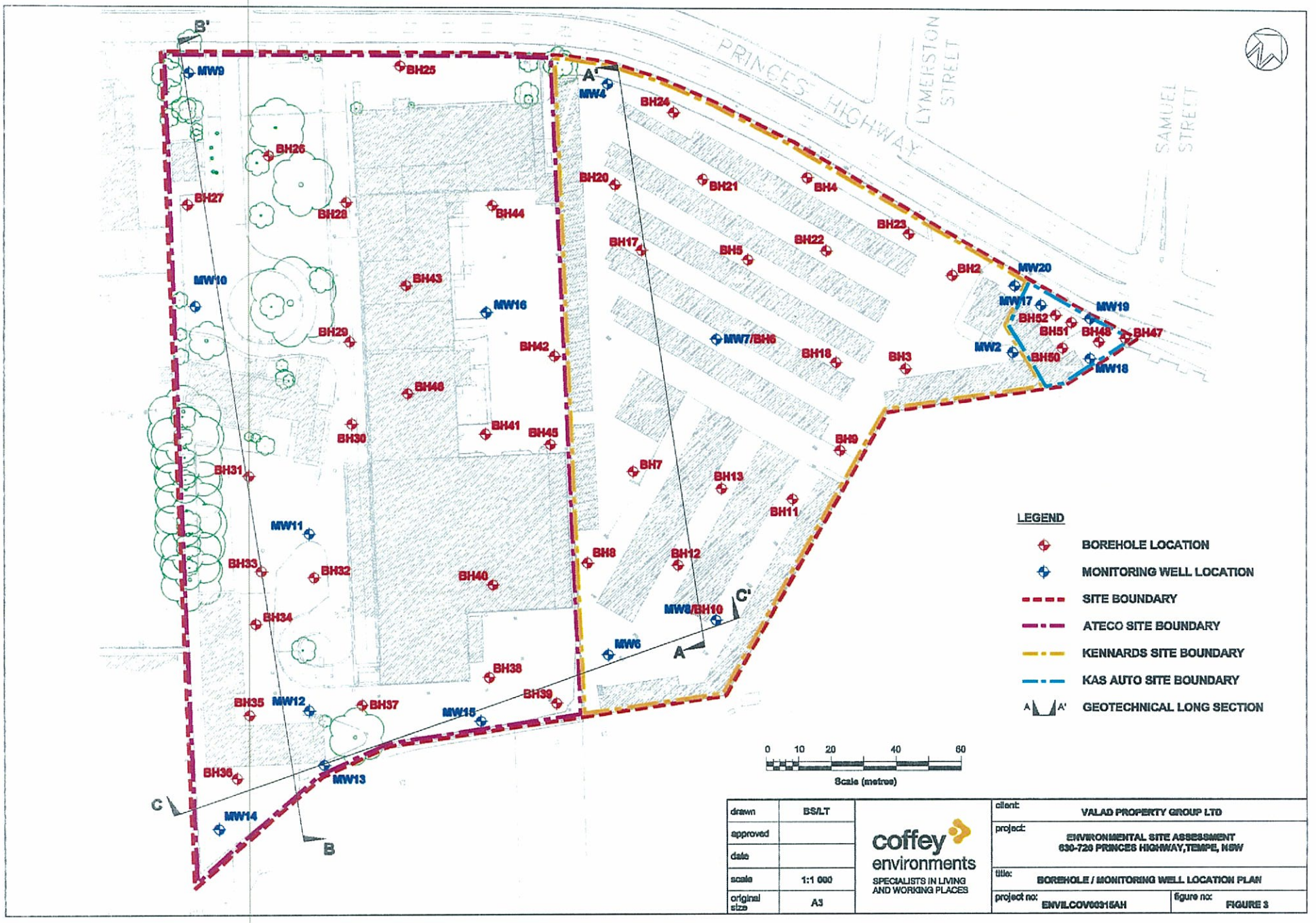
client: VALAD PROPERTY GROUP LTD

project: ENVIRONMENTAL SITE ASSESSMENT
630-726 PRINCES HIGHWAY,TEMPE, NSW

title: SITE LOCATION PLAN

project no: ENVILCOV00315AH

figure no: FIGURE 1



drawn	BS/LT
approved	
date	
scale	1:1 000
original size	A3

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client: VALAD PROPERTY GROUP LTD

project: ENVIRONMENTAL SITE ASSESSMENT
630-720 PRINCES HIGHWAY,TEMPE, NSW

title: BOREHOLE / MONITORING WELL LOCATION PLAN

project no: ENVILCOV60315AH

figure no: FIGURE 3