

**Charter Hall UWS Trust
Level 20/1 Martin Place
Sydney NSW 2000**

Project 86185.02
14 June 2019
86185.02.R.001.Rev0
KDP:mm

Attention: Jessica Borella

Email: Jessica.Borella@charterhall.com.au

Dear Jessica

**Peer Review of Site Audit Report
Proposed Property Purchase
University of Western Sydney - Westmead Campus, Westmead**

1. Introduction

This report describes a peer review of a site audit statement (SAS) and site audit report (SAR) undertaken by Douglas Partners Pty Ltd (DP) in relation to the University of Western Sydney - Westmead Campus, Westmead. The review was conducted in accordance with DP's email dated 12 June 2019 and acceptance received from Charter Hall UWS Trust dated 13 June 2019.

The purpose of this review was to comment on the suitability of the site based on the findings of the SAR as it relates to the proposed childcare centre on Level 1 of the proposed development.

The SAR was entitled *Site Audit Report, 0503-1607, Lot 2 in Proposed Sub division PPN DP 1202362 Western Sydney University, Cnr Hawkesbury and Darcy Roads, Westmead NSW*, 21 October 2016, 51370/104871, JBS&G Australia Pty Ltd. The SAR was accompanied with a SAS by Mr Andrew Lau dated 21 October 2016.

2. Comments

2.1 Supplied Drawings

The drawings provided to DP as part of the review included DA0998 to DA1002, DA1004, DA1005, DA1007 to DA1009 and DA1011 (Revision A of each).

Based on the drawings provided it is understood that the proposed development will include the following features:

- The proposed building is 10 storeys high with a lower ground floor and mezzanine level;
- The lower ground and mezzanine will include parking and one retail space;
- The ground floor will be occupied by retail units and open space;

- The first floor will be occupied by a childcare centre and commercial (tertiary education) facilities;
- The second and third floors will be occupied by commercial facilities including tertiary education;
- The fourth to sixth floors will be occupied by commercial facilities;
- The seventh floor will be occupied by commercial facilities including tertiary education;
- The eight and ninth floors will be occupied by commercial facilities;
- The tenth floor will be occupied by plant rooms and facilities; and
- The rooftop will be a terrace.

2.2 SAS

The SAR stated that the site is suitable for residential land use with minimal opportunity for access to soil including units, parks, recreational open space and commercial / industrial.

The SAS excluded residential land use with access to soil, day care, preschools, primary schools and secondary schools, however that it was not the purpose of the audit to determine if the site was suitable for these land uses as they were, at time, not included in the potential final land use/s.

It is noted that the relevant human health investigation levels (HILs) and health screening levels (HSLs) per the *National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 2013*, National Environment Protection Council (NEPC 2013) are determined by the adopted land use on the ground floor level (where no basements / lower ground floor levels are proposed / included). NEPC (2013) states that for multistorey buildings where non-residential land uses (including commercial / retail / car parking) are proposed in a basement level or ground floor level that the category D (commercial / industrial) HSLs should be applied.

In this regard the proposed inclusion of a childcare centre on the first floor would not impact the adopted investigation levels / the appropriate land uses as it relates to the land use categories in NEPC (2013), i.e. the appropriate land use category is commercial / industrial (one of the stated suitable land uses in the SAS).

2.3 SAR

As it relates to the proposed childcare facility the SAR report notes the following:

- *Based on the proposed mixed development of the campus, the consultant adopted stringent HIL A criteria applicable to more sensitive residential with gardens/ accessible soil landuse (in the datagap assessment, GPL 2016b). The consultant did not consider direct contact exposure to site soils and made no reference to the NEPC 2013 TPH management limits. However consistent with the above, all detectable levels of impact have been removed from the site and no aesthetic indicators of contamination of site soils were reported at the completion of the works;*

- *Based on the site observations and analytical results reported by the consultants no remediation/validation works were required at the subject 'site';*
- *The auditor notes that remediation and validation works have been completed in Remediation Areas 1-8 relating to heavy metals, PAHs and/or asbestos contamination issues identified in soil in lots 1, 4, 5 and proposed roadways at the campus accordance with the RAP (GPL 2012c), with works documented in the validation report (GPL 2016c). These areas are subject to separate site audits; and*
- *In the validation assessments (PCA 2016 and GLC 2016c) (for Areas 1 to 8, which are outside of the proposed building, the subject site) the consultant, in consideration of a proposed mixed land use adopted the most conservation HIL / HSL in NEPC (2013) for residential landuse with accessible soils (HIL A / HSL A) which includes childcare facilities.*

The conclusions of the SAR were as follows:

- *Site Assessment activities (Coffey 2008, GPL 2012b and GPL 2016b) are considered to have met the requirements of the Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (2nd Edition) (DEC 2006);*
- *There were no levels of contaminants of potential concern (i.e., metals, TPH, BTEX, PAHs, VOCs, OCPs, PCBs and asbestos) in soil and groundwater identified at the subject site, which require remediation or management under the proposed residential with minimal soil access, commercial and open space landuse;*
- *The sampling frequencies adopted by the consultants were in accordance with relevant EPA guidelines and therefore meet the requirements of the site audit;*
- *here is no evidence of migration of contaminants from the site which is likely to result in any unacceptable risks to surrounding human or ecological receptors;*
- *The site is considered suitable for the proposed landuse (i.e., residential with minimal soil access, commercial and open space) as defined in Section 3 of Schedule B7 NEPC 2013; and*
- *The landuse suitability is not subject to any ongoing monitoring or management requirements.*

Based on the above it is considered that the site is suitable for the proposed land use. The investigation levels / land use category adopted in the SAS / SAR were appropriate for the assessment of the site despite the inclusion of a childcare centre on the first floor. Moreover, the site investigations and validation assessments undertaken in GPL (2016a, 2016b and 2016c) as stated in the SAR adopted the more conservative investigation levels for residential sites with accessible soils including childcare centres (Category A) (which would be appropriate to adopt if the childcare centre was on the ground floor). Therefore, the site was considered to be suitable (in GPL (2016a, 2016b and 2016c) for residential land use with accessible soils including childcare centres at the completion of the (remediation) works.

3. Conclusion

Based on the information provided in the drawings and the SAS / SAR the following conclusions can be drawn:

- The adopted site HILs and HSLs in the SAS / SAR are / were appropriate for the proposed land use, despite the inclusion of a childcare centre on the first floor;
- The conclusions of the SAS /SAR are still valid;
- The site is suitable for inclusion of a childcare centre on the first floor from a contamination perspective; and
- As the adopted HILs / HSLs in the investigation and validation assessments (GPL 2016a, 2016b and 2016c) were the more conservative values for residential land use (which includes childcare centres), regardless of the location of the childcare centre the site would be suitable for this land use.

4. References

- *Environmental Site Assessment, University of Western Sydney, Hawkesbury Road, Westmead*, Coffey Environments Pty Ltd, 13 February 2008 (Coffey 2008).
- *Sampling Analysis and Quality Plan, UWS Westmead Campus Redevelopment Project, Lot 1 in DP107785, 158-164 Hawkesbury Road, Westmead*, Geotechnique Pty Ltd, 10 February 2012 (GPL 2012a).
- *Supplementary Environmental Site Assessment, UWS Westmead Campus Redevelopment Project, Lot 7 and Part Lot 8 in DP107785, Cnr Hawkesbury and Darcy Roads, Westmead*, Geotechnique Pty Ltd, 2 August 2012 (GPL 2012b).
- *Remedial Action Plan, UWS Westmead Campus Redevelopment Project, Lot 7 and Part Lot 8 in DP107785, Cnr Hawkesbury and Darcy Roads, Westmead*, Geotechnique Pty Ltd, 11 October 2012 (GPL 2012c).
- *Waste Classification, WSU Westmead Campus Redevelopment Project Lot 7 and Part Lot 8 in DP1077852 Corner Hawkesbury and Darcy Roads, Westmead*, Geotechnique Pty Ltd, Report No 12619/2-L1, 10 February 2016 (GPL 2016a).
- *Additional Contamination Assessment, WSU Westmead Campus Redevelopment Project, Lot 7 and Part Lot 8 in DP 1077852, Cnr Hawkesbury and Darcy Roads, Westmead*, Geotechnique Pty Ltd, Report No 12619/2-AA, 9 March 2016 (GPL 2016b).
- *Validation Report Following Removal of Asbestos Impacted Soil, Western Sydney University Westmead Campus Hawkesbury Road, Westmead NSW*, P Clifton & Associates Pty Ltd, 31 May 2016 (PCA 2016).
- *Validation, WSU Westmead Campus Redevelopment Project, Lot 7 and Part Lot 8 in DP 1077852, Corner Hawkesbury and Darcy Roads, Westmead*, Geotechnique Pty Ltd, Report No 12619/3-AAR1, 9 June (GPL 2016c).

5. List of Acronyms

A list of the common abbreviations used throughout this report and the references above include:

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| As | Arsenic |
| AST | Aboveground Storage Tank |
| Cd | Cadmium |
| Cr | Chromium |
| Cu | Copper |
| BTEX | Benzene, Toluene, Ethylbenzene and Xylenes |
| B(a)P | Benzo (a) pyrene |
| EPA | NSW Environment Protection Authority |
| DO | Dissolved oxygen |
| DPE | NSW Department of Planning and Environment |
| DQO | Data Quality Objectives |
| DP | Deposited Plan |
| EC | Electrical conductivity |
| EH | Redox potential |
| EPA | New South Wales Environment Protection Authority |
| Hg | Mercury |
| HIL | Health Based Investigation Level |
| LOR | Limit of Reporting |
| MAH | Monocyclic Aromatic Hydrocarbon |
| Ni | Nickel |
| OCP | Organochlorine Pesticide |
| SAR | Site Audit Report |
| SAS | Site Audit Statement |
| PAH | Polycyclic Aromatic Hydrocarbons |
| Pb | Lead |
| PIL | (Provisional) Phytotoxicity Based Investigation Level |
| PCB | Polychlorinated Biphenyls |
| QA/QC | Quality Assurance/Quality Control |
| RPD | Relative Percentage Difference |
| TPH | Total Petroleum Hydrocarbons (C6-C9 and C10-C36) |
| UST | Underground Storage Tank |
| Zn | Zinc |

6. Limitations

Douglas Partners (DP) has prepared this report for this project at University of Western Sydney - Westmead Campus, Westmead in accordance with DP's proposal email dated 12 June 2019 and acceptance received from Charter Hall UWS Trust dated 13 June 2019. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Charter Hall UWS Trust for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written

consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

DP's advice is based upon the provided drawings provided and SAR. The accuracy of the advice provided by DP in this report may be the information provided for this review. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the (geotechnical / environmental / groundwater) components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully
Douglas Partners Pty Ltd



Kurt Plambeck
Senior Associate

Reviewed by



pp **Paul Gorman**
Principal