

28 August 2015

Mr Des Friedrich
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CC:- Aaron Blacker, Probuild (NT) Pty Ltd
Andrew Durand, Greencap

REVIEW OF PRELIMINARY SITE ASSESSMENT REPORTING PIONEER PARK RACECOURSE, ALICE SPRINGS, NT

This letter documents my review and comments on the report "Preliminary Site Investigation" (Greencap document J133974/01 dated August 2015). I am providing this review in my capacity as an Environmental Auditor (Contaminated Land) appointed by the Victorian EPA, which meets the requirements for an appropriately qualified person under the Waste Management and Pollution Control Act ('the Act') to provide certification services in relation to contaminated sites issues in the Northern Territory.

The Northern Territory Environment Protection Authority (EPA) has issued separate notices to Probuild and the Alice Springs Turf Club Incorporated to carry out an environmental audit program at the site. The notices require Probuild and the Turf Club to undertake a preliminary site assessment to evaluate the types, amount and distribution of waste by burial at the premises. The assessment must be conducted in accordance with the National Environment Protection (Assessment of Site Contamination) Measure. It is understood that although there have been separate notices issued, EPA has indicated that a coordinated approach by the two parties would be acceptable to respond to the notices.

I previously completed a review of the background information and sampling plan in a letter dated 10 July 2015, which confirmed the background information was generally sufficient for planning and conduct of the subsequent preliminary investigation works. The letter also confirmed my endorsement of the Sampling Plan.

This review relates to the reporting of the actual investigations completed at the site with regard to current guidance, primarily the National Environment Protection (Assessment of Site Contamination) Measure 1999 (as varied April 2013 – referred to hereafter as the ASC NEPM). The following pages include a critical review of the reporting and interpretation of the investigation. Overall, I am satisfied the report provides a good overall assessment and has been prepared broadly in line with the current guidance including the ASC NEPM. The different conditions in each sub area are discussed in a clear and logical manner, and the interpretation is considered sufficient to make an informed judgement on the nature and extent of wastes present as a result of historical disposal of wastes by burial on this property. Recommendations are included for longer term management / maintenance of the buried waste areas if they are to be retained on site.

Feel free to contact me if you have any queries in relation to these comments.

Yours sincerely,

A handwritten signature in black ink that reads "Steven Kirsanovs".

Steven Kirsanovs

Environmental Auditor appointed in Victoria pursuant to
Section IXD of the Environment Protection Act, 1970

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**REVIEW OF SITE INVESTIGATION REPORTING AND INTERPRETATION
(GREENCAP REPORT DATED AUG 2015)**

Aspect	General Requirements	Comments
<p>Overall Assessment, Remediation and Management Process</p>	<p>The investigative and management process for all sites (including those with suspected asbestos contamination issues or other wastes) follows the same sequence and form as for other contaminants as outlined in the ASC NEPM.</p> <ul style="list-style-type: none"> ○ Preliminary Site Investigation (PSI) ○ Detailed Site Investigation (DSI) ○ Site Management Plan (SMP), or in some cases an Asbestos Management Plan will need to be developed and implemented. It is expected that the SMP is included or prepared in conjunction with a Dust Management Plan (DMP). The proposed site remediation, validation and management strategy will need to be presented in a Site Management Plan (SMP), and the adopted strategy will need to be fully justified in the form of a comprehensive comparison with other options based primarily on health considerations. ○ Verification of works in form of a Site Management and Validation Report (SMVR). <p>A Sampling and Analysis Plan (SAP) will normally be prepared to support the investigations and also any validation sampling that occurs.</p> <p>The above title formats are used in the ASC NEPM and in most jurisdictions in Australia for convenience of reference, but other titles could also be used and possibly combined.</p>	<p>At this stage there has been a preliminary site investigation completed (PSI), in compliance with the Notices issued to Probuild and the Alice Springs Turf Club. The objective has been to undertake a preliminary site assessment to evaluate the types, amount and distribution of waste by burial at the premises.</p> <p>The need for further action is to be determined by NT EPA based on the findings of this report.</p> <p>The process thus far is in line with the recommended overall assessment and management process.</p>
<p>Experience of Practitioners</p>	<p>The investigations should have been conducted by suitably qualified professional with appropriate experience in the contamination issues being investigated.</p>	<p>The PSI report does not provide any specific experience of the field personnel or those involved in the reporting of this investigation.</p> <p>However, the Auditor is familiar with the personnel who were involved and can confirm both the field</p>

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	<p>With regard to asbestos investigations, a 'competent person' is considered to be a person who has acquired, through training, or experience and qualifications, the knowledge and skills to identify, investigate and assess asbestos in the context of an environmental site assessment. Refer to Section 11 in Schedule B3 of the ASC NEPM for further details.</p>	<p>personnel and those involved in the reporting / interpretation are appropriately qualified and experienced in these types of site investigations, including issues relating to asbestos impacts.</p>
<p>Sampling pattern, sampling density and depth of sampling</p>	<p>Investigation techniques and sampling techniques should be selected with regard to the nature of the impacts being assessed and the likely depth and distribution of impacts. Whilst most investigations will involve direct investigation and sampling via drilled bores, test pits or trenches, consideration should be given to the use of other indirect methods (such as geophysical methods or other field screening tools) to inform and/or supplement the direct investigation and sampling.</p> <p>Refer Section 7 in Schedule B(2) of the ASC NEPM for further guidance.</p>	<p>The investigation strategy was based on excavating test pits across areas of interest identified via the background information review and confirmed by an on site inspection accompanied by representatives of Probuild and the Alice Springs Turf Club.</p> <p>The rationale used to identify the areas to be subjected to intrusive investigations areas targeted was reasonable and appropriate.</p> <p>Ultimately five distinct sub areas were investigated via 40 test pits. The test pits were extended through any fill and into underlying natural soils.</p> <p>The test pits were excavated within the suspected waste burial areas as well as on the periphery to confirm the extent of these areas.</p> <p>Overall, the sampling pattern, sampling density, and depth of sampling is considered reasonable and appropriate to fulfil the objectives of this investigation.</p>
<p>QA/QC -Sampling methodology</p>	<p>Sampling methods should be selected with regard to the location/depth, and type of contamination being targeted, with the ultimate objective to collect data that is robust and representative of the relevant media.</p>	<p>Soil samples were collected via test pits excavated by an excavator under the direction and supervision of a Greencap field person. Test pitting was a reasonable and appropriate methodology for the depths, and nature of potential wastes and contamination being assessed.</p>
<p>QA/QC - Sample handling, storage and transport</p>	<p>The integrity of all samples must be considered, particularly when dealing with VOCs and SVOCs. Samples should be placed in appropriate decontaminated sample containers with gas tight, non-absorptive seals, allowing no headspace, and kept cool (preferably with ice bricks or a refrigerated cooler) until arrival at the laboratory.</p> <p>Chain of Custody (COC) documentation must be completed for each batch of samples submitted for analyses.</p> <p>A copy of the receiving laboratory's advice should be provided which</p>	<p>Soil samples were collected from a selection of pits where it was judged there was a higher potential for contamination to be associated with the buried wastes.</p> <p>The report indicates that sample handling, storage and transport protocols employed during the soil investigation works were appropriate.</p> <p>Completed COC forms and sample receipt advice forms accompanied each batch of soil samples, and the appended laboratory analysis reports include sample receipt advice to confirm that all samples were accounted for, in appropriate containers, and in accordance with preservation requirements.</p>

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	describes the condition the samples and COC documentation were received, container types, cross checking of sample ID numbers and paperwork, and confirmation of sample preservation method.	
QA/QC - Documentation	For all samples collected and analysed, there must be a complete set of field sampling records / sampling logs, chain of custody documentation, laboratory receipts, and analysis reports.	A complete set of documentation is included in the PSI report attachments for all samples analysed.
Field screening	Calibration records should be provided for any instruments used for field screening.	Field screening instruments were not used for this preliminary investigation.
Analyte selection	The analytical program should include assessment for an appropriate range of analytes based on the site's history and potential contamination sources, including any potential off site sources. Refer to guidance in ASC NEPM Schedule B(2) and AS4482.1.	<p>A selection of samples were collected and analysed from pits where there was judged to have been a higher potential for contamination to be associated with the wastes present. These pits were located in the area referred to in the report as the 'buried waste area'. This was an area of waste burial that predates the more recent waste burial by Probuild (the area referred to as the 'horseshoe trenches').</p> <p>It is agreed based on the descriptions of the wastes found in these areas that there was a greater potential for contamination in the 'buried waste area', and on this basis the selection of samples from this area for analyses seems reasonable and appropriate.</p> <p>The majority of samples were analysed for a general suite of metals/metalloids, and fuel and oil related contamination indicators (TPH, BTEX, PAH). One sample was subjected to analyses for a broader screen of inorganics and organics (an EPA Screen).</p> <p>These analyses seem reasonable and appropriate based on the descriptions of the wastes and soils encountered.</p> <p>Two samples of cement sheeting found in test pits in the same 'buried waste' area were collected and submitted for laboratory analyses for asbestos. It is agreed this was also an appropriate response to allow for determination of whether any asbestos containing wastes were likely present.</p>
Plans and bore logs	Plans and bore logs should be prepared to an appropriate standard. Refer AS4482.1 and NEPM Schedule B(2).	Soil sample location plans and test pit logs were completed to an appropriate standard in line with the current guidance.

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Accreditation of laboratories	Laboratories should hold NATA accreditation for analyses conducted.	Analytical reports indicate that the laboratories were NATA accredited for the analyses undertaken.
Adherence to holding times	Samples should be analysed within recommended holding times. Refer to Vic EPA IWRG 701 (Sampling and Analysis of Waters, Wastewaters, Soils and Wastes).	The report documents that all samples were analysed in accordance with recommended analyte holding times.
Analytical detection/reporting limits	Reporting limits for analyses should be below comparable assessment criteria.	The laboratory reporting limits were below the nominated assessment criteria in all instances.
Field QA/QC samples – blind field replicate samples	An appropriate number and type of blind field replicate samples should be collected and analysed (AS4482.1 requires 1 replicate sample per 20 samples).	Duplicate samples were collected and analysed as part of the investigation program. Results were not indicative of any significant data quality issues.
Field QA/QC samples – blanks	An appropriate number and type of blank samples should be collected and analysed (AS4482.1 requires 1 rinse blank per piece of sampling equipment per day). It is also generally regarded as good practice to collect 1 trip blank sample per day per sample container. Other blank samples (such as field blanks) should be collected as required.	1 trip blank was collected and analysed. No elevated results were reported.
Laboratory internal QA/QC reporting	There should be an appropriate level of internal QA/QC reported in each laboratory report (refer AS4482.1 and ASC NEPM Schedule B(2)).	Laboratory internal QA/QC reporting is considered appropriate for both the primary and secondary laboratory used for the soil analyses and is not indicative of any significant internal laboratory QA/QC issues.
Results interpretation – subsurface conditions	The report should provide a discussion which conveys a reasonable understanding of the subsurface conditions, and anomalies or contamination indicators, including any impacts/observations from an aesthetic viewpoint.	The reporting conveys a reasonable understanding of the subsurface conditions across the areas investigated. The investigation considered 5 separate sub areas based on different circumstances such as the locations, but also the age and types of filling suspected to be present based on interviews and the site inspections and on-site interviews with the Turf Club and Probuild representatives. The five sub areas were all located in the south eastern portion of the property inside the race track and included:- <ul style="list-style-type: none"> ○ The 'horseshoe trenches'. The report indicates these are the trenches where demolition rubble from the former drive in site was deposited by Probuild under an arrangement with the Turf Club. The

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		<p>trenches measure in total approximately 150m in length, 6-8m wide, and up to 3m deep. The wastes found in these trenches were described as construction and demolition wastes including concrete fragments, crushed rock, plastic pipes, and minor amounts of green waste. No suspected asbestos containing materials were noted.</p> <ul style="list-style-type: none"> ○ The 'spoil area'. This is an area where it has been interpreted spoil from the 'horseshoe trenches' was spread in a relatively thin layer (0.3-0.5m thick) across an area covering approximately 6,000 m². The spoil layer was found to be mainly reworked natural soils with minor amounts of green waste. No other wastes or suspected asbestos containing materials were noted. ○ The 'buried waste area'. This is an area to the east of the 'spoil area' covering approximately 800 m². The areas of disturbance are visible in this area in aerial photographs dating back to 2004, but the actual date the wastes were deposited here is uncertain. Wastes identified buried in this area included metal fencing and posts, concrete fragments, bricks and besser brick blocks, empty 44 gallon drums, wood fragments, disused paint tins, large tree branches, plastic and metal pipes, and corrugated iron sheeting. The wastes were found to be buried from just below the surface to approximately 2m depth. This was the area where a selection of soil samples were collected to assess potential chemical contamination. Two fragments of cement sheeting were also found and collected for laboratory analysis to determine if they included asbestos. ○ The 'narrow gully area'. This was noted to be a narrow gully extending east about 30-40m from the 'buried waste area'. It was found to be approximately 2m wide and 1.5m deep, and included green waste, large tree branches, and metal racecourse railings. Besser brick blocks, tree branches and horse manure were also noted simply dumped on the ground in this area. No suspected asbestos

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		<p>containing materials were noted.</p> <ul style="list-style-type: none"> o The 'large excavation area'. This area includes an excavation estimated to measure approximately 25m by 25m by 2.5-3m deep. Pits excavated in this area did not identify any wastes or suspected asbestos containing materials. <p>The different conditions in each sub area are discussed in a clear and logical manner, and the interpretation is considered sufficient to make an informed judgement on the nature and extent of wastes present in these areas.</p>
Assessment criteria	<p>Results for any chemical / laboratory analyses should have been compared against applicable investigation and screening levels specified in the ASC NEPM, or alternate criteria having due regard to their applicability and relevance.</p> <p>Use of waste classification criteria for determining the suitability of a site for use is unacceptable to EPA.</p> <p>Refer to the relevant EPA guidelines and the ASC NEPM.</p>	<p>The soil assessment criteria were based on applicable investigation levels in the current version of the ASC NEPM. The health investigation levels were based on commercial/industrial land use exposure scenario. Investigation levels based on public open space might also have been appropriate but in any case all results were below those investigation levels as well so this is not considered a significant problem with the results interpretation. It is noted there is no public access to the site in any case so strictly speaking these areas are not public open space areas.</p> <p>The derivation of the EIL values was completed using the spreadsheet from the ASC NEPM Toolbox website. The adopted pH and CEC values were justified appropriately and it is agreed these were reasonable and conservative values for this purpose.</p> <p>Overall the adopted assessment criteria are considered to be sufficiently conservative to have identified any potentially significant chemical impacts in soils in the areas investigated.</p>
Identification of chemicals/substances of concern	<p>Contaminants of interest should be identified in a clear and transparent manner. This should include tabulation of results exceeding adopted assessment criteria, and also any results above reporting limits that do not have assessment criteria.</p>	<p>Results for the soil investigation are summarised in tables attached to the PSI (against the nominated ecological and human health screening criteria).</p> <p>All results were below their respective screening criteria. The auditor notes results would also have been below investigation levels based on more sensitive land uses such as residential or open space land uses.</p> <p>Overall it is agreed the results are not indicative of any chemical impacts in soils that might be of concern with regard to the current and ongoing use of the site as a horse racing track.</p>
Risk evaluation and	Data should be presented and	The report has confirmed there are wastes

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<p>impact assessment for chemicals/substances of concern</p>	<p>discussed in a manner that conveys a clear understanding of the nature and extent of impacts, and the significance of the results with respect to the beneficial uses of land to be protected, as defined in the SEPP Prevention and Management of Contamination of Land. The assessment and interpretation should be based primarily on the ASC NEPM, but additional guidance for information to be included in a site assessment report is provided in Appendix 2 of EPA Publication 759.2 (<i>Guidelines for issue of certificates and statements of environmental audit</i>).</p> <p>Information should be provided for each chemical of concern for its toxicity, mobility, availability, likely fate, physical characteristics, form or species present, potential exposure pathways, potential harm to humans, plants, animals and structures, and any detriment to any beneficial uses to be made of the site. The potential for adverse off-site effects should also be considered.</p> <p>Risks should have been evaluated by either comparison against investigation levels or via appropriate site specific risk assessment.</p> <p>An evaluation of the risks presented by contamination should consider impacts on all beneficial uses of the site. Evaluation of risk by comparison with health investigation levels only is unacceptable, and use of waste classification criteria for determining the suitability of the site is also unacceptable.</p> <p>Refer to the ASC NEPM for further guidance.</p> <p>For sites with asbestos impacts, the EPA requires auditors to have regard to the prevailing guidance for asbestos – in particular <i>'Management of asbestos in the non-occupational environment'</i> (EnHealth Council, 2005) and in the ASC NEPM.</p>	<p>present in the areas investigated. These have been described as mainly construction / demolition wastes, but also include varying proportions of green waste. Some empty 44 gallon drums and disused paint tins were found in one area ('buried waste area').</p> <p>As noted in this review, the PSI has not identified any chemical impacts in soils that might be of concern with regard to the current and ongoing use of the site as a horse racing track. In addition, no evidence of any asbestos containing materials has been noted in the areas investigated.</p> <p>As has also been noted previously, the different conditions in each sub area are discussed in a clear and logical manner, and the interpretation is considered sufficient to make an informed judgement on the nature and extent of wastes present in these areas.</p> <p>Overall, the results of the PSI indicate the wastes buried under this portion of the Pioneer Park Racecourse pose a low risk to human health and the environment. The following factors are considered relevant:-</p> <ul style="list-style-type: none"> ○ There is no public access to the areas in question; ○ The wastes found were generally construction / demolition wastes with some green waste; ○ No evidence of hazardous waste items including asbestos materials was identified; ○ No evidence of any chemical contamination was identified; ○ There are no sensitive environmental areas in the immediate vicinity of the racecourse (the Todd River at its closest point is approximately 350m to the north east of the area in question); <p>If the EPA deems it acceptable for the wastes to remain buried at the site, it is recommended that this be subject to appropriate ongoing management which includes provisions for more appropriate capping and landscaping of the areas (including protection in the event of flooding / inundation), preventing any unauthorized excavation and disturbance, provisions for reinstatement of the areas after any excavation / disturbance, as well as long term maintenance of the capping and landscaping.</p>