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Remedial Action Plan

Identified Asbestos Contamination

Proposed Wet n' Wild Theme Park

Reservoir Rd, Prospect

Report Number 610.11873 R03

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Prospect Aquatic Investments Pty Limited
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Version: Revision 1

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Executive Summary

INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR Consulting) has been engaged by Prospect Aquatic Investments Pty Limited (the client) to prepare a Remedial Action Plan (RAP), to enable the remediation of identified asbestos contamination at the property identified as Lot 1 of DP1045771, located on Reservoir Rd, Prospect NSW (the site).

BACKGROUND

The site has been approved by the NSW Department of Planning and Infrastructure for the development of a water theme park (Wet 'n' Wild) with the client as the proponent. The approval is cited in the Director General's Report, attached in Appendix I. The site is unzoned under Clause 9 of the State Environmental Planning Policy (Western Sydney Parklands) 2009. The development of the water theme park is permissible with consent under clause 11(2) of the State Environmental Planning Policy (Western Sydney Parklands) 2009.

Based on discussions with the client, we understand the following background information relating to the identified contamination and proposed remediation:

- Previous Phase 2 contamination assessments, conducted by RCA Australia (RCA) in 2010, did not identify contamination issues that warranted remediation and stated that the site was appropriate for its intended redevelopment;
- Earthworks for the project commenced in late August 2012, at which point asbestos contamination was identified, warranting further investigation;
- Identified asbestos contamination included fragments of ACM as well as friable asbestos in the form of clumps of powdery, fibrous, crumbly ACM.
- Figure 4 (in Section 6.4.5) illustrates typical examples of asbestos encountered on the site;
- Figure 5 (in Section 6.4.5) illustrates the extent of contamination that has been identified; and
- In addition to the extent of contamination shown on Figure 5 in Section 6.4.5, there are a number of stockpiles, including a large stockpile of approximately 6,000m^3 (as estimated by WEM), of topsoil mixed with grass/vegetation that are deemed to be contaminated.

The site is now considered unsuitable in its current state for the proposed land use due to the type and extent of asbestos contamination identified. Remediation of the identified asbestos contamination is required to render the site suitable for the proposed land use. Based on the current understanding of site conditions, it is considered that the site will be suitable for the proposed land use following implementation of the remediation and validation strategy outlined below.

We note that a NSW EPA accredited Site Auditor has been engaged by the client to provide an independent audit of the investigation, remediation strategy and validation of the remediation works.

PROPOSED REMEDIATION STRATEGY

Onsite containment is adopted as the preferred remedial strategy for the identified asbestos contamination. The proposed onsite containment remedial strategy is summarised below:

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- All identified asbestos contamination will be excavated and placed in to appropriately designed and constructed containment cells. At this stage, two containment cells are proposed to be located in the north western corner of the site, in the vicinity of the area proposed to be occupied by the overflow car park, and one containment cell is proposed to be located in the south western portion of the site beneath the proposed asphalt car park.
- Measures to isolate the contained asbestos in the cells from the end users can be outlined as follows:
    - Following the placement of contaminated material to the containment cells under the supervision of the Friable Asbestos licensed contractor, a geo-fabric cover will be installed across the top of the placed contaminated material. This geo-fabric cover is intended to act as a marker layer to identify the top of the contaminated soil, and will be recorded by survey;
    - A layer of clean fill, with a minimum compacted thickness of 1m, will be placed above the geo-fabric cover to act as a capping layer. The top of this layer will be surveyed and recorded as the top of the containment cell; and
    - The proposed design of the containment cells will result in at least 1m of physical separation between the contained asbestos contaminated soils and the end site users. This separation thickness is also understood to be sufficient to install all underground services at the proposed car park, without having to disturb contained asbestos.
- All remediated areas will be subjected to detailed, visual clearance inspections, and sampling at an appropriate sampling density for asbestos testing;
- All suspected clean stockpiled material will also be validated through a process of visual inspection and analysis to assess suitability for re-use on site;
- The construction and the completion of the containment cell will be validated by visual observations, photographic records and survey;

Given that contaminated soils will be retained on site, a legally enforceable, long term site management plan (SMP) will be prepared and implemented to manage the asbestos contamination within the containment cells beneath the car park. The site management plan will need to be reviewed and approved by the site auditor prior to the issue of a Site Audit Statement.

VALIDATION

The remediation works will be validated in accordance with the provisions of this RAP the NSW EPA accredited site auditor's requirements. A validation report will be prepared in accordance with the NSW EPA (1997) *Guidelines for Consultant's Reporting on Contaminated Sites*. The validation report will be reviewed and approved by the site auditor.

A legally enforceable Site Management Plan will need to be prepared and implemented to appropriately manage the contained contamination. The Site Management Plan will need to be reviewed and approved by the site auditor.

Following the approval of the Validation Report and the Site Management Plan, the site Auditor will issue a Site Audit Statement declaring that the site is suitable for the proposed land use.

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CONCLUSION

SLR Consulting considers that if the asbestos contamination identified at the site is remediated in accordance with the strategy outlined in this RAP, AND no other contamination issues (apart from asbestos) are identified, the site can be made suitable for the proposed land use.

Any other contamination issues that require remediation, which may be identified during the proposed asbestos remediation works, will be addressed through addendums to this RAP. The site will be deemed suitable for the proposed land use only when all required remediation works have been completed, validated and approved by the site auditor.

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1 INTRODUCTION

1.1 General

SLR Consulting Australia Pty Ltd (SLR Consulting) has been engaged by Prospect Aquatic Investments Pty Limited (the client) to prepare a Remedial Action Plan (RAP), to enable the remediation of identified asbestos contamination at the property identified as Lot 1 of DP1045771, located on Reservoir Rd, Prospect NSW (the site).

This RAP has been prepared utilising the information available to date with regards to contamination, proposed development and remediation strategy. If information contrary to that presented in this RAP, or new information becomes available, such information will be incorporated to this RAP by way of revisions to this document and addendums.

This RAP has been prepared in accordance with the NSW EPA (1997) *Guidelines for Consultant's Reporting on Contaminated Sites.* For the ease of auditing, the section headings used in this RAP are generally consistent with NSW EPA (1997) Guidelines.

This document will be submitted to the EPA accredited Site Auditor for review, comment and subsequent approval.

1.2 Background

The site has been approved by the NSW Department of Planning and Infrastructure for the development of a water theme park (Wet 'n' Wild) with the client as the proponent. The approval is cited in the Director General's Report, attached in Appendix I. Further details of the proposed development are provided in the Director General's Report, attached in Appendix I.

The site is unzoned under Clause 9 of the State Environmental Planning Policy (Western Sydney Parklands) 2009. The development of the water theme park is permissible with consent under clause 11(2) of the State Environmental Planning Policy (Western Sydney Parklands) 2009.

Based on discussions with the client, we understand the following background information relating to the identified contamination and proposed remediation:

- Western Sydney Parks Trust (WSPT) owns the site and has leased it to the client on a 50 year lease to develop and operate a Wet n' Wild theme park;
- Following planning approval by the NSW Department of Planning under the Part 3A Major Projects approval process, earthworks for the project commenced in late August 2012, following which point, asbestos contamination was identified which subsequently warranted further investigation;
- Previous Phase 2 contamination assessments, conducted by RCA Australia (RCA) in 2010, did not identify contamination issues that warranted remediation and stated that the site was appropriate for its intended redevelopment;
- Initially, the client's representative NIX Management (NIX) had engaged Australian Safer Environment & Technology Pty Ltd (ASET) to assess the extent of asbestos contamination across the site; and
- SLR Consulting was engaged by the client to provide additional environmental consultancy services.
- SLR Consulting conducted an initial assessment that included test pits on a 50m by 50m grid, to assess if the contamination was widespread. SLR Consulting's sample locations, together with ASET's test locations are shown on attached Figure A3;

- Assessment and testing by ASET and SLR Consulting identified asbestos contamination present in isolated patches (typically 2m to 3m diameter) across a significant portion of the 25Ha site.. The lateral extent of contamination identified to date is shown on Figure 5 (in Section 6.4.5). Given that the contamination is generally present in isolated, small patches (less than $5m^2$ each), it is impractical to map each such isolated patch of contamination that has been observed;
- Identified asbestos contamination included fragments of ACM as well as friable asbestos in the form of clumps of powdery, fibrous, crumbly ACM;
- Figure 4 (in Section 6.4.5) illustrates typical examples of asbestos encountered on the site; and
- In addition to the extent of contamination shown on Figure 5 in Section 6.4.5, there are a number of stockpiles, including a large stockpile of approximately $6,000m^3$ (as estimated by WEM), of topsoil mixed with grass/vegetation that has been stripped from areas that may have been potentially contaminated. For the purpose of remediation, these topsoil stockpiles will be deemed to be contaminated and will require remediation/management.

The site is considered unsuitable in its current state for the proposed land use due to the type and extent of asbestos contamination identified. Remediation of the identified contamination is required to render the site suitable for the proposed land use. Based on the current understanding of site conditions, it is considered that the site will be suitable for the proposed land use following implementation of the remediation and validation strategy outlined below.

We note that a NSW EPA accredited Site Auditor has been engaged by the client to provide an independent audit of the investigation, remediation strategy and validation of the remediation works.

2 SCOPE OF WORK

The scope of this RAP is to outline the asbestos contamination identified to date and propose a strategy to remediate the identified contamination, such that the site can be rendered suitable for the proposed land use (recreational open space), as per the Part 3A Approval dated 8 September 2011 and the Director General's Report (Appendix I).

3 SITE IDENTIFICATION

Site identification details are provided in Table 1 below.

The site location is shown on the attached Figure A1 and the site layout following demolition of structures on site is shown on attached Figure A2.

Table 1 Site Identification Details

Street Address	427 Reservoir Road, Prospect NSW 2148
Lot and Deposited Plan Number	Lot 1 of DP 1045771
Geographic coordinates (approximate centre of site)	Lat: -33.807614 Lon: 150.910.810

4 SITE HISTORY

4.1 Zoning

The site is currently unzoned under State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009.

4.2 Proposed Land Use

The proposed site use is for a commercial leisure development

The site is currently under construction for the development of the proposed Wet n' Wild theme park. Approval for the proposed development had been granted by the Department of Planning under Part 3A Major Projects approval process.

4.3 Historical Land Use

The Phase 1 Environmental Site Assessment conducted by RCA (2009) (attached in Appendix A) indicated that the site was used for rural residential and agricultural land use until approximately the late 1980's or early 1990's. RCA does not specify the nature of agricultural land use.

Ten residential properties were reportedly present along the southern and eastern boundary of the site. RCA (2209) reports that buildings associated with the rural residential dwellings are located, though the extent and the location of these buildings are not specified. RCA does state that a large shed had been constructed on the western portion of the site.

RCA (2009) refers to a gradual decline in agricultural land use, though it does not specify whether this means demolition of buildings or cessation of operations.

SLR Consulting conducted a limited review of aerial photographs, including that of 1970, 1986 and 1994. The review indicated that a number of distinct sheds, possibly livestock sheds, were present in the western, south eastern and eastern portions of the site. The central portion of the site appeared to be utilised for cropping. By 1986, many of these sheds and buildings had been demolished and only four residential properties remained on the southern and eastern boundary of the site. Whether the demolished material was removed offsite could not be ascertained from the aerial photographs.

4.4 Areas and Chemicals of Environmental Concern

RCA (2009) identified the following chemicals and areas of environmental concern at the site:

- Asbestos – around areas of present and former buildings;
- Pesticides and herbicides – across the majority of the site;
- Hydrocarbons – in areas of present and former storage sheds and potential around present and former residential developments; and
- Heavy metals – across the entire site from past agricultural use and development activities on the site.

RCA (2009) states that the "site does not appear to have been filled in the past and it is expected that the subsurface soil will consist of natural soils. The surface soils are expected to consist of disturbed natural soil which was used for agriculture across the majority of the site". However, site observations by SLR Consulting indicate that fill material including building rubble is present in parts of the site, predominantly in the low lying areas in the central and southern portion of the site, but also on the elevated platforms on the western portion of the site (refer to Section 5).

RCA notes that it's Phase 1 ESA (2009) did not include a site walkover due to access restrictions, and that a walkover is required to assess the site condition and areas of environmental concern more accurately.

No other information pertaining to potential contamination on site has been presented in the RCA (2009) Phase 1 ESA.

5 SITE CONDITION AND SURROUNDING ENVIRONMENT

5.1 Surrounding Environment

The surrounding environment is described in Table 2 below. The site layout following demolition and trimming of grass is shown on the attached Figure A2.

Table 2 Surrounding Environment

Direction from the site	Land use
North of the site	M4 Motorway immediately to the north, followed by vacant land or grazing land
East of the site	Largely vacant with a rural residential property with potential agricultural use present, adjacent to the north eastern corner of the site. A number of rural residential properties are also located along the northern side of Reservoir Road, to the east of the site
South of the site	Reservoir Road immediately to the south, followed by bushland and Prospect Reservoir
West of the site	Vacant land to the west of the north western corner of the site. Commercial/industrial, possibly agricultural operation, is visible immediately adjacent to the south western portion of the site.

5.2 Site Condition

The site condition before demolition works, following demolition works and after initial earthworks (i.e. present condition) is summarised below. The site condition described below is a combined account of observations made by SLR Consulting, ASET, and WEM.

5.2.1 Prior to Demolition

The site topography is undulating with low hills located at the south western and south eastern corners of the site. The maximum elevation across the site is approximately 100m AHD. The central portion of the site was lower than the rest of the site (approximately 76m AHD), forming a gully. A number of old creeks are evident in the northern portion of the site in historical aerial photographs, though these were not visible in the more recent aerial photographs. The site was covered with what appeared to be tall grass, reasonably uniformly across the site, and no obvious signs of vegetation stress were evident in the aerial photographs.

In the recent past, prior to the commencement of demolition works in late 2011 or early 2012, the site comprised mostly vacant areas, with the exception of the following (refer to attached Figure A2A):

- Three rural residential properties along the southern boundary of the site, with another located mid way along the eastern boundary of the site;
- Two dams containing water located in the north western portion of the site and eastern portion of the site;
- At least two disused, in-filled dams in the central portion of the site;

- Two patches of moderately thick bush land (mature trees, possibly gum trees), in the north eastern corner of the site and south eastern corner of the site;
- A number of raised mounds covered with dense vegetation in the south western portion of the site, which appeared to be potential fill material; and
- A series of linear ground markings oriented approximately north-south in the western portion of the site and approximately east-west in the eastern portion of the site. These could possibly be indicative of former driveways or cropping demarcation lines.

5.2.2 Following Demolition

Following demolition of the residential buildings, except for one in the south western corner of the site, the site became largely vacant, noting the following:

- The site topography had not been altered, except for the spreading of a few small mounds of potentially asbestos impacted fill. The fill mounds appear to have been slightly spread around its original location, possibly in an attempt to characterise its contents and contamination status;
- The grass cover had been mowed across the site, with mowing lines visible in the September 2012 aerial photograph. A number of patches of visible fragments of asbestos containing materials were observed on the grass surface in the southern and eastern portions of the site;
- The two patches of moderately thick bush land mentioned above has been demarcated as tree protection zones;
- A hardstand area (crushed sandstone) has been established in the south eastern corner of the site, and appears to be the area where the official opening ceremony of the construction works commenced;
- Drainage channels have been cut to the two dams containing water to allow the dams to be emptied;
- Trenches had been excavated into in-filled dams to explore fill conditions and/or drain out any water that may be present. Fill material in these areas contained visible fragments of asbestos containing materials;
- Trenches had also been excavated across what appears to be fill platforms across the site, in an attempt to characterise fill materials. Fill material in these areas contained visible fragments of asbestos containing materials;
- The number of raised mounds of fill material (potentially asbestos impacted) in the south western portion of the site, mentioned above, had been either flattened or stripped of vegetation. The fill mounds appear to have been slightly spread around its original location, possibly in an attempt to characterise its contents and contamination status. Visible fragments of asbestos containing material was observed in these areas;
- An area along the eastern boundary of the site had been cordoned off, which we now understand was due to the initially identified friable asbestos contamination; and
- Apart from fragments of ACM observed on the surface of the site and in fill material, no other visible or olfactory evidence of contamination was observed on the site during SLR Consulting's work to date.

5.2.3 Following Initial Earthworks On the Western Portion of the Site

Following cordoning off of identified visible asbestos contaminated areas and progressive completion of test pit excavation and soil sample analysis for asbestos between 17th and 19th of September 2012), it was considered acceptable for WEM to commence initial land forming works in the western portion of the site. The initial land forming works included stripping the grass layer and topsoil. The site condition following the commencement of earthworks could be described as follows:

During stripping of topsoil in the south western portion of the site, clumps of powdery, crumbly, friable asbestos were identified directly beneath the grass layer in a number of areas. Refer to

- **Figure 4** in Section 6.4.5 for photographs of this friable asbestos;
- Exploratory works by WEM found further friable asbestos contaminated areas, predominantly in the southern portion of the site. These areas were cordoned off and SLR Consulting was notified in accordance with the *Unexpected Finds Protocol* prepared for the site (SLR Consulting, 2012a). The *Unexpected Finds Protocol* is attached in Appendix G;
- More fragments of ACM were also observed both on the grassed surface and beneath the grass surface during visual inspections and general walks across the site;
- By 2 October 2012, a significant portion of the site had been cordoned off due to identified patches of asbestos contamination. Figure 5 in Section 6.4.5 illustrates the identified extent of asbestos contamination;
- The topsoil and grass that was stripped as part of the preliminary earthworks, understood by SLR Consulting to be approximately 6,000m^3 in volume (as estimated by WEM), has been placed in a property adjacent to the north western corner of the site. SLR Consulting understands that this adjacent property is also owned by WSPT and that it should be returned to WSPT in the same condition that WEM found it prior to stockpiling stripped topsoil; and
- Apart from the asbestos contamination issue identified, no other visible or olfactory evidence of contamination was observed on the site. Laboratory results for other contaminants of concern tested by SLR Consulting have not indicated widespread contamination[1]. However, approximately 50 samples tested by RCA did not identify any contamination.

WEM was given approval by SLR Consulting to commence preliminary earth works (stripping of topsoil) in the north western portion of the site (except in some cordoned off areas), where asbestos was not reported in the test pits. WEM are presently continuing the cut and fill operations in this area.

[1] Reporting of this contamination assessment is currently underway. The results of this assessment indicate that the site does not contain widespread contamination with respect to contaminants other than asbestos. As such, this RAP will not be affected by the findings of the contamination assessment.

6 ASSESSMENT OF EXTENT OF ASBESTOS CONTAMINATION

A number of assessments and observations were utilised to assess the extent of the asbestos contamination subsequent to the RCA (2010a) Phase 2 Environmental Site Assessment (ESA). These subsequent assessments and observations are outlined here for the benefit of the reader. The RCA Phase 1 ESA and Phase 2 ESA reports are also summarised below to provide clarity.

SLR Consulting conducted extensive "grass stripping"[2] exploratory works to assess the extent of asbestos contamination across the site. The information collected in this assessment regarding asbestos contamination has been presented in Section 6.4 of this RAP. As mentioned above, this RAP only addresses the identified asbestos contamination.

6.1 RCA (2010a) – Phase 1 ESA

A number of potentially contaminating activities and consequently contaminants of concern were identified within the Phase 1 ESA report (RCA, 2009) including asbestos, pesticides, herbicides, hydrocarbons and heavy metals:

- Asbestos – in fill material from demolition activities and around areas of present and former buildings. Whilst no Phase 2 works were undertaken on the residential properties on the site at the request of the client, it was noted that all appeared to contain asbestos building products in their construction;
- Pesticides and herbicides – across the majority of the site from past agricultural use;
- Hydrocarbons – in fill material and areas of present and former storage sheds and potentially around present and former residential developments;
- Heavy metals – across the entire site from past agricultural use and development activities on the site.

The RCA Phase 1 stated that the site was unlikely to have been filled, though it concedes that a site walkover could not be conducted (due to access restrictions) to assess the site condition accurately.

6.2 RCA (2010a) – Phase 2 ESA

The RCA (2010a) Phase 2 ESA is attached in Appendix B. The main findings of this report are summarised below:

- At the request of the client, RCA's Phase 2 ESA was limited to the "vacant land at the site only and did not undertake any investigation of the residential properties on the site";
- RCA does not specifically state if a site walkover (which was not conducted during the RCA (2009) Phase 1) was conducted as a part of the Phase 2 ESA;
- Soil samples were collected from across the vacant parts of the site from 24 test pits and 16 shallow bores (to 0.5m depth);
- Five groundwater monitoring wells were also installed across the site;

[2] Given asbestos was observed predominantly directly beneath the grass, the grass and a minor quantity of topsoil was stripped in a systematic manner across a significant area of the site to assess the extent of visible asbestos contamination.

- All soil samples were tested for heavy metals, total petroleum hydrocarbons (TPH), and benzene, toluene, ethylbenzene, xylene (BTEX), while selected samples were also tested for polyaromatic hydrocarbons (PAH), organochlorine pesticides (OCP) and organophosphorous pesticides (OPP);
- The tested samples were collected from depths between 0.5-1.5m in the test pits, and between 0.1 and 0.2m in the "surface soil samples";
- Despite asbestos being identified as a contaminant of concern, no samples were analysed for asbestos;
- Groundwater samples were analysed for TPH, BTEX, metals and PAH;
- The subsurface conditions were described as shown in Table 3 below.

Table 3. Summary of Subsurface Conditions (extracted from RCA (2010a))

Typical Depth (m)		Material Type	Description/Comment
Top	Base		
0.0	0.2-0.4	Filling	Uncontrolled. Mixture of clay and topsoil, with occasional bricks.
0.2-0.4	0.4-0.6	Topsoil	Silty sand, wet, black. Typically 200mm thick.
0.4-0.6	1.0-1.2	Clay	Stiff becoming hard with depth. Moist, brown.
1.0-1.2	>1.5	Claystone rock	Highly weathered, friable, white.

- The fill material observed was present at "Reservoir Road extending in a northerly direction" and is illustrated on Drawing 1, Appendix A of the RCA (2010a) report, which is attached in Appendix B of this RAP.
- RCA notes that the proposed theme park is a commercial land use scenario and that the NEPM HIL 'F' (NSW DEC, 2006) is the applicable threshold concentrations to assess site contamination. However, it has compared analytical results to the HIL 'A' threshold concentrations for low density residential land use, noting that HIL 'A' is more conservative than HIL 'F'. TPH and BTEX concentrations were compared to the NSW EPA (1994) *Guidelines for Assessing Service Station Sites.* Metals concentrations were also compared against the provisional phytotoxicity investigation levels (PILs);
- Groundwater analytical results have been compared to ANZECC/ARMCANZ (2000) threshold concentrations and the NHMRC (2004) Drinking Water Guidelines;
- The results indicated that:
    - Concentrations of arsenic in three soil samples exceeded the PIL marginally. The ecological impact of this marginal exceedance was deemed to be insignificant;
    - All samples reported chromium concentrations above the exceeding the PILs. RCA had not commented on the potential ecological impact of these exceedances. It should also be noted that RCA has not conducted a chromium speciation test to ascertain if the reported chromium is Cr III or Cr VI;
    - All other concentrations of contaminants in soil samples analysed were less than the adopted conservative guidelines;
    - Concentrations of TPH and phenanthrene in the groundwater sample collected at well location EW1 exceeded the adopted assessment criteria;

- A "trace amount" of bonded asbestos was reportedly identified within a bulk sample taken from test pit TP7. No visible asbestos material was reported in any of the other test pits, and the extent of asbestos impact was deemed to be limited;

- Based on the analytical results, RCA concluded that "the site is appropriate for its intended redevelopment".

6.3 Various Assessments by ASET (2012)

ASET has conducted the following assessments, but have not completed reporting to date.

- Detailed sampling and analysis of a specified area (previously occupied by a residential property) along the eastern boundary. No report was prepared by ASET for this assessment. A figure showing the contaminated areas and the laboratory analytical reports, for the 401 samples collected, have been provided to SLR Consulting;
- Visual Assessment Carried out by ASET on 6 September 2012 (ASET, 2012); and
- Air monitoring works on the boundary of the above mentioned contaminated area along the eastern boundary of the site. No report was prepared by ASET for this assessment. The laboratory analytical reports for the air monitoring filter samples have been provided to SLR Consulting.

The findings of the above assessments by ASET are discussed below.

6.3.1 Detailed Soil Sampling Adjacent to Eastern Boundary

The area assessed by ASET, which was formerly occupied by a residential property, is shown below in Figure 1.

Following the observation of visible friable asbestos on the surface, ASET collected and analysed for asbestos, 401 surface soil samples on a grid pattern (grid spacing was reportedly 3-5m). The assessment found that the majority of the approximately 1Ha area is contaminated with friable (fibrous asbestos) and bonded asbestos.

The lateral extent of contamination is shown in a sketch provided by ASET, attached in Appendix C. The vertical extent of contamination has not been assessed by ASET. However, email correspondence with Brown Consulting indicates that ASET had suggested the removal of 100mm across the contaminated area, followed by validation, as a possible remediation strategy.

The laboratory analytical certificates are also attached in Appendix C.

Figure 1 Contaminated Area Identified by ASET Adjacent to the Eastern Boundary

6.3.2 Visual Assessment Across the site (ASET, 2012)

ASET observed 51 test pits excavated across the site for the presence of visible asbestos or asbestos containing materials (ACM). The pits were not excavated in any apparent grid pattern, and the rationale for the number of test pits and the test pit locations is unknown.

The results were reported in a letter report, which is attached in Appendix D. The ASET letter report indicated that visible ACM was observed in fifteen out of the 51 test pits excavated across the site. The locations where visible ACM was reported are shown in **Figure 2** below.

Figure 2 Visible ACM Observed by ASET Across The Site (ASET, 2012)

The report refers to a series of photographs, which have not been provided to SLR Consulting at this stage. These photos will be provided in this RAP when available.

ASET concluded the following:

- Most pits were "*free of any asbestos*", but ASET does note that the presence of asbestos in those pits beneath the exposed surfaces cannot be precluded;
- Former driveways extending north from Reservoir Rd in the southern boundary of the site have friable asbestos, though the nature of this friable asbestos is not discussed in the report. Presumably the asbestos was located beneath the driveway surface;
- ASET considered that the asbestos containing materials "*has been taken out from the driveways and have been disposed of in adjacent hinterlands long time ago. It is also possible that friable asbestos based materials had been dumped in this site many years ago, from some other source as well;*" and
- More asbestos contamination is likely to be uncovered when further excavations take place.

ASET also recommended further investigations to assess the extent of asbestos contamination, and the removal of identified friable asbestos as a priority, prior to removing the identified bonded asbestos.

6.3.3 ASET Air Monitoring Works (2012)

Given the presence of friable asbestos, ASET conducted air monitoring along the boundary of the contaminated area identified along the eastern boundary of the site to assess if asbestos fibres are mobilised to the air in significant quantities. The approximate air monitoring locations are shown on Figure 3 below. The air monitoring appears to have been conducted over 3 days from 6th to the 8th of September 2012.

The results of the air monitoring indicated that the fibre concentrations (total fibres – not necessarily asbestos only) were below the acceptable limits. The results are attached in Appendix E.

Figure 3 ASET's Air Monitoring Locations

6.4 SLR Consulting (2012) Investigations

To assess the extent of the asbestos contamination, SLR Consulting initially proposed the following intrusive assessment. The proposed scope of work was based on the findings of the RCA (2010a) Phase 2 ESA report, the RCA (2010b) Geotechnical Investigation and the brief provided by Brown Consulting.

- In areas where RCA identified potential fill material and in areas where the former residences were located, excavation of test pits on a 30m by 30m grid;
- In other areas, excavation of test pits on a 50m by 50m grid;
- Visual observation of the test pits by a qualified occupational hygienist to assess for the presence of asbestos;
- Collection of soil samples for analysis for asbestos from the surface (0-100mm depth) and near surface (200-300mm depth); and
- Analysis of samples for asbestos at a NATA accredited laboratory (ASET).

However, as preliminary earthworks (stripping of topsoil) commenced in the western portion of the site and progressed east, evidence of ACM, including friable asbestos, was observed in a number of areas within the site, predominantly in the south western portion of the site. The identified asbestos contamination was generally present beneath the grass layer and under a thin layer (a few centimetres) of topsoil, and was isolated and patchy in nature, typically spreading no more than $3m^2$ to $5m^2$. Based on these observations, it was considered that the test pits excavated on a 50m grid, to assess widespread contamination, were likely to be of limited use, given the patchy nature of the asbestos contamination.

Through observations onsite by various parties, including SLR Consulting, WEM, Lipman and Basset, it became apparent that the extent of asbestos contamination was greater than that indicated by the progressive results of SLR Consulting's test pits on a grid pattern and prompted a review of investigation strategy.

To assess the extent of the asbestos contamination that may be present beneath the grass, SLR Consulting commenced a "grass stripping" investigation exercise that involved the following:

- Excavation works being conducted by Basset (AS2 contractor) under the supervision of an AS1 contractor (Empire), with all the asbestos management measures deemed to be necessary by the AS1 contractor being implemented. SLR Consulting was involved in the process to conduct visual observations and testing as required;
- In areas where the grass cover is still intact, an excavator carefully and slowly stripped the grass to expose the soil beneath;
- Exposed soil surfaces were visually observed by the AS1 contractor, AS2 contractor and SLR Consulting for visible asbestos;
- Where visible asbestos was observed in the grass and topsoil being stripped, such material was formed into small stockpiles and deemed contaminated, to be remediated appropriately at a later stage;
- Stripped material that did not have visible asbestos was also formed into small stockpiles (less than $10m^3$ generally) and deemed "suspected clean", to be tested and validated at a later stage; and
- Where visible asbestos was identified, those areas were isolated and covered with plastic as appropriate, until such time that remediation works are conducted (refer to Section 10.5).

Results of the "grass stripping" exploratory works are discussed below in Section 8.

6.4.1 Sampling and Analysis Plan and Methodology

Test Pit Investigation

The initial assessment conducted by SLR Consulting (test pit investigation) was aimed at assessing the extent of asbestos contamination. However, given that the RCA Phase 2 ESA (2010a) failed to identify the significant asbestos contamination at the site, the level of confidence in its conclusions regarding other potential contaminants was considered to be low. In consultation with the client, it was agreed to extend the scope of the investigation to assess the presence of other potential contaminants (an Additional Contamination Assessment).

The sampling and analytical plan for the additional contamination assessment considered the analysis conducted by RCA (2010a). The additional analysis of samples conducted by SLR Consulting will supplement the RCA results.

Other than to note that the additional contamination assessment indicated that no contaminants other than asbestos require remediation at the site (to be reported separately), the sampling and analysis for contaminants other than asbestos will not be discussed in this RAP. This RAP is aimed at remediating the identified asbestos contamination.

Sampling for asbestos was initially conducted by SLR Consulting on an approximate grid of 50m by 50m as shown on the attached Figure A3. The rationale for this sampling plan was to assess the presence of widespread asbestos contamination at the site. However, it later became apparent that it was not sufficiently closely spaced to enable identification of small patches of contamination, which was later identified following stripping of grass.

Samples were collected from more than 100 test pits excavated across the site. Test pits were excavated using an excavator supplied by WEM. The test pits were excavated to a depth of 300mm into natural soils (red clay). The samples were collected from the surface within the topsoil (0-100mm depth) and from fill material or topsoil that may have extended to 200-300mm depth. The test pits were also carefully observed visually by a qualified occupational hygienist for the presence of visible asbestos. Where significant building rubble was observed, visible ACM was also generally observed. As such, all areas filled with building rubble were considered to be contaminated with asbestos.

A total of 130 samples were analysed for asbestos at a NATA accredited laboratory ASET. All 0-100mm samples were analysed for asbestos. Some samples collected from deeper topsoil or fill material at 200-300mm were also analysed.

Samples were collected using clean nitrile gloves, and were placed directly into labelled plastic zip lock bags. The samples were collected directly off the walls of the test pit.

Grass Stripping Works

During the grass stripping investigation, the site was divided to two areas – 1) the “northern portion” of the site and 2) the “southern portion” of the site. The division was based on the assumption that the southern part of the site was likely to be contaminated based on the former structures and activities that were apparent in the historical aerial photographs, and that the northern portion of the site was less likely to be contaminated with asbestos.

The extent of grass stripping conducted in the southern portion and northern portion were based on the considered potential for contamination to be present. Given the potential for contamination in the northern portion was considered to be low, grass stripping in this area was limited to strips of approximately 20m length by 1.5m wide. Approximately 20 such strips of grass/topsoil were excavated from the northern portion, with the majority of the strips being oriented in a north-south direction. The northern extent of asbestos contamination shown on Figure 5 (in Section 6.4.5) was determined largely based on the grass stripping works. The stockpiles that resulted from the grass stripping works in the northern portion were inadvertently placed in a stockpile of topsoil that was contaminated with asbestos (refer to Section 5.2.3).

The southern portion, where widespread patchy contamination was identified, was stripped of grass across the whole area. The stripping uncovered a number of long, narrow (5-20m long, with width ranging from 2-4m) broken “slabs” of friable asbestos in very weakly cemented matrix, generally oriented north-south. In many areas however, such slabs appeared to be crushed and reduced to clumps between 2 and 30 cm diameter (see **Figure 4** in Section 6.4.5).

6.4.2 Field Quality Assurance and Quality Control

The following field quality control and quality assurance (QA/QC) measures were implemented as part of the test pit investigation program:

- Sampling was conducted by a qualified occupational hygienist who is also trained in environmental soil sampling;

- No decontamination procedure was implemented as no re-useable equipment was used to collect samples;
- Samples were placed directly into plastic zip lock bags and sealed immediately and placed into a container, to be transported to the laboratory; and
- The lithology at each test pit location was recorded, along with photographs of the test pits.

The following QA/QC program was implemented during the grass stripping works:

- The grass stripping was conducted by excavator operators who are competent in working with asbestos (AS1 and AS2 licensed contractors);
- The excavation was conducted at an appropriately slow pace to enable observation of any asbestos present in the stripped grass/topsoil;
- The grass stripping works were observed by an SLR Consulting occupational hygienist, competent in identification of asbestos, and a representative from AS1 and AS2 licensed contractors;
- Stockpiles that were deemed to be “suspected clean” were again inspected by an SLR Consulting hygienist (surface only) for evidence of visible asbestos, prior to collecting samples for analysis at NATA accredited labs;
- Upon receipt of results, all identified contaminated stockpiles were removed and placed into the containment cell, under supervision by SLR Consulting personnel. The movement of those identified contaminated stockpiles (based on the laboratory results) were recorded on the material tracking form.

6.4.3 Laboratory Quality Assurance and Quality Control

The following laboratory QA/QC measures were implemented as part of the analytical program:

- Samples were analysed at two laboratories to increase the daily throughput of samples, but this also enabled a comparison of results between labs. No systematic bias was observed in the results for the labs;
- The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method;
- The analysis was conducted by Authorised Asbestos Identifiers;
- The detection limits used were consistent with the Australian Standard AS4964.

6.4.4 QA/QC Evaluation

Given the identification of isolated, small patches of contamination spread across large areas of the south western portion of the site, which became apparent following stripping of topsoil in that area, the probability of a test pit on a 50m by 50m grid identifying buried friable asbestos patches of the size encountered was considered to be very low. The test pit investigation conducted by SLR Consulting was considered inadequate to identify the extent of asbestos contamination that may be present on the site. This prompted a change in investigation methodology.

The field and laboratory QA/QC for the test pit investigation is however considered acceptable for the purpose of preliminary assessment of the extent of the asbestos contamination, considering that another phase of investigation (stripping of grass and visual observation of soils beneath the grass, followed by analysis at an appropriate sampling density) has been conducted.

SLR Consulting considers that the QA/QC program implemented during the grass stripping exploratory works is acceptable for the purpose of assessing the extent of asbestos contamination.

6.4.5 Results

This section presents the results available to date from 1) the intrusive assessment involving test pits, 2) the observations of asbestos by various project parties across the site, and 3) the grass stripping exploratory works.

Test Pit Investigation

SLR Consulting test pit locations are illustrated in the attached Figure A3. The laboratory analytical certificates are attached in Appendix F. The results of the test pit investigation by SLR Consulting indicated that:

- Visible ACM was observed in test pits 102 (adjacent to test pit), 105 and 107; and
- Asbestos was detected by the laboratory in samples collected from the topsoil and fill material in sixteen test pits (TP25, 51, 52, 53, 55, 63, 66, 74, 75, 76, 77, 89, 99, 102, 106, and 107). Asbestos was identified within the central and southern portion of the site (refer to attached Figure A4). Minor asbestos contamination was also observed in the north eastern corner of the site.

Observations

In addition to the asbestos observed and detected within the test pits, as described in Section 5.2.3, the following observations of asbestos were made by the project team, including SLR Consulting, at numerous locations across the site:

- Fragments of ACM were observed, both on the grassed surface and beneath the grass surface, during visual inspections and general “walks” across the site; and

Clumps of powdery, crumbly, friable asbestos were identified directly beneath the grass layer in a number of areas in the southern portion of the site. Refer to

- **Figure 4** below for photographs of this friable asbestos.

Figure 4 Form and Nature of Asbestos Identified Beneath the Grass

Grass Stripping Exploratory Works

Grass stripping exploratory works identified asbestos contamination in the eastern and southern parts of the site. The asbestos was a combination of friable asbestos and bonded ACM, observed just beneath the grass layer.

Significant asbestos contamination, including significant buried waste (scrap metal, rubber, tyres, plastic, rags), was identified in areas identified by the following grid references (refer to the attached Figure A5 for the site Grid, established to assist reporting):

- N-P, 10-12;
- L-N, 11-14; and
- E-G, 6-10.

The limited grass stripping works conducted on the northern portion of the site, together with knowledge of potential contamination from review of historical aerial photographs and results of the SLR Consulting's test pits, indicated that the northern portion of the site is unlikely to contain significant asbestos contamination, other than a few fragments of ACM scattered (which were handpicked and removed). Earthworks by WEM commenced in the northern area based on the above info. However, an SLR Consulting Hygienist monitored the scraping and removal of topsoil (down to the natural clay) to assess if unidentified contamination was present in the topsoil layer. No such contamination was identified by SLR Consulting, and the earth works including cutting and filling to achieve design levels commenced.

Extent of Contamination

Based on the above mentioned assessments, the vertical extent of the asbestos contamination identified is considered to be as follows:

- Bonded asbestos was predominantly observed:
    - On the grass surface;
    - On the soil surface directly beneath the grass; or
    - Within the fill material containing building rubble. Asbestos is assumed to be present across the depth of the building rubble, unless shown otherwise by detailed testing; and
- Clumps and "slabs" of friable asbestos buried beneath a thin layer of topsoil to an approximate depth of up to 300mm.

The areas where asbestos was identified were progressively mapped. The outer extent of identified patchy contamination (including that identified by ASET, SLR test pits, general observations and grass stripping exploratory works) is illustrated below on Figure 5.

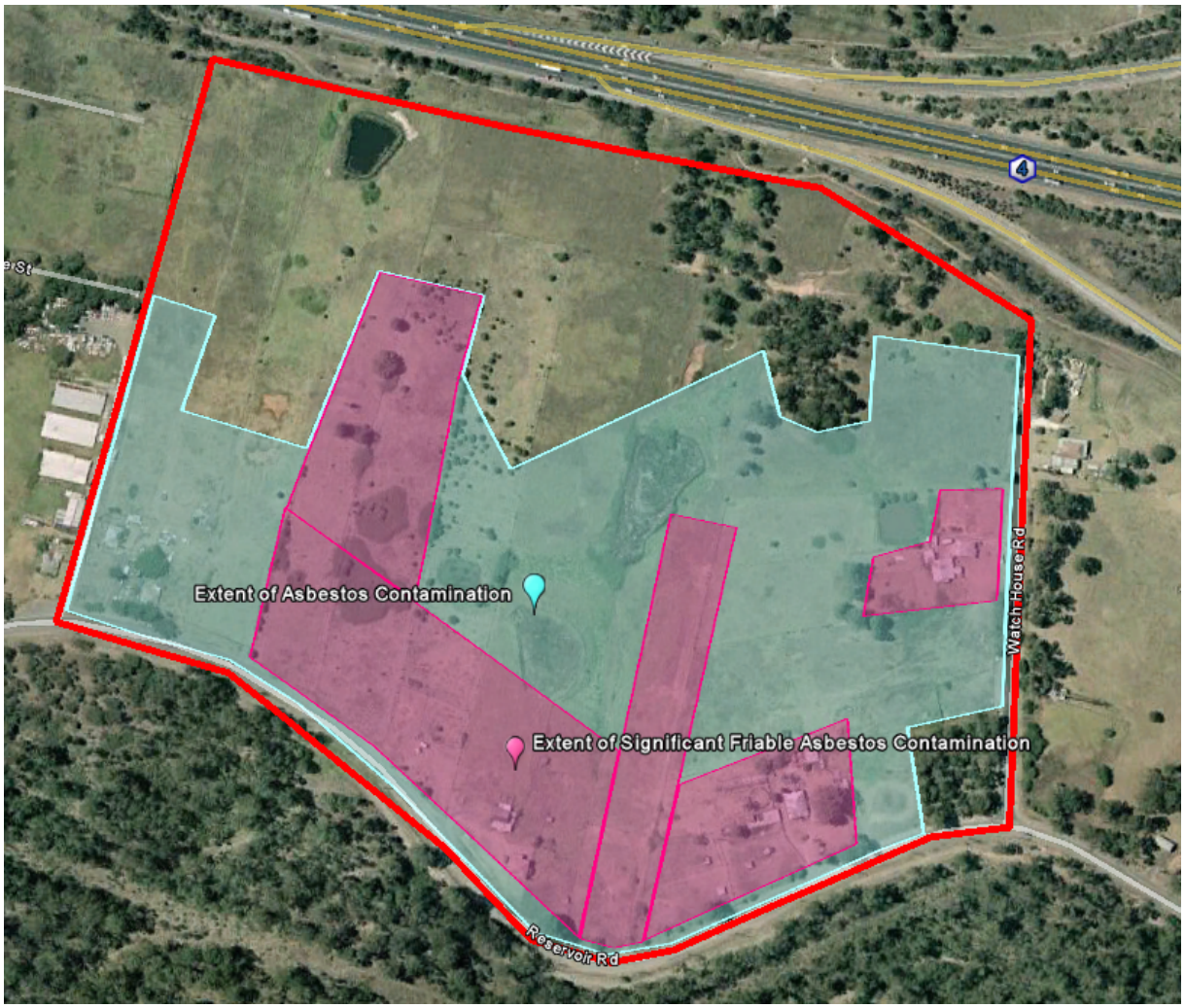


Figure 5 Identified Outer Extent of Patchy Asbestos Contamination

7 ASSESSMENT CRITERIA

There are currently no assessment criteria endorsed by NSW EPA for the assessment of asbestos. Given the proposed land use that would potentially provide public access to site soil, we have adopted “no asbestos detected” as the assessment criteria for the investigation stage.

8 RESULTS

The investigation by ASET has indicated that the area shown on Figure 1 (in Section 6.3.1) is contaminated with isolated patches of bonded and friable asbestos. ASET has also identified visible asbestos at a number of locations across the site, as shown on Figure 2 (in Section 6.3.2).

SLR Consulting's investigations and observations identified isolated patches of bonded asbestos fragments across majority of the site, and patches of friable asbestos, observed just beneath the grass layer and buried to depths of up to 300mm, predominantly in the southern and eastern portions of the site. The outer extent of the isolated patches of friable and bonded asbestos contamination identified to date is shown above on Figure 5 (in Section 6.4.5).

9 SITE CHARACTERISATION

9.1 Asbestos

The asbestos contamination identified on the site can be characterised as follows:

- Isolated patches of friable and bonded asbestos, distributed across the areas indicated on Figure 5 in Section 6.4.5;
- Fragments of bonded asbestos cement sheeting were observed:
    - On the grass surface; or
    - On the soil surface directly beneath the grass; or
    - Within the fill material containing building rubble. Asbestos is assumed to be present across the depth of the fill material, unless shown otherwise by detailed testing; and
- Widespread friable asbestos was identified in the areas highlighted in pink. Friable asbestos was predominantly observed beneath the grass layer, buried beneath a thin layer of topsoil to an approximate depth of up to 300mm within the topsoil. Friable asbestos identified comprised clumps of powdery, crumbly, friable asbestos.

Unless properly managed, the identified asbestos contamination has the potential to cause health impacts to the site workers, neighbouring residents and workers on adjacent properties. The exposure route for asbestos is inhalation. Asbestos could be inhaled through the inhalation of dust containing asbestos fibres or the inhalation of free fibres present in the friable asbestos found on site. Inhalation of asbestos fibres could potentially cause asbestosis and/or mesothelioma.

The following measures have been implemented to date to minimise the potential for inhalation of asbestos fibres by site workers and the potential for offsite migration of asbestos fibres:

- All areas where asbestos has been identified have been demarcated to avoid further disturbance by site vehicle traffic, earth works or foot traffic;
- All areas where friable asbestos has been identified have been covered with plastic sheeting by an AS1 licensed contractor, until the remediation works are conducted;
- Water spray has been used across the rest of the site to minimise generation of dust; and
- All WEM employees involved in the project have been provided with Asbestos Awareness Training to assist in identifying asbestos, safe management of asbestos and protecting themselves from asbestos impacts;
- As a precautionary measure, earthworks in areas where the grass has not been stripped have been postponed until the “grass stripping” investigations by SLR Consulting are completed and an “Asbestos Clearance Certificate” is issued by an SLR Consulting; and
- Even following the issue of an “Asbestos Clearance Certificate”, the excavation/stripping of the topsoil by WEM will be supervised by SLR Consulting’s qualified occupational hygienist to assess if buried asbestos is present and subject to the procedures detailed in the *Unexpected Finds Protocol* (Appendix G).

Based on the above mentioned asbestos contamination, the site is considered unsuitable for the proposed land use. Remediation will be required to enable the site to be deemed suitable for the proposed land use. Proposed remediation strategy is presented in Section 10 below.

9.2 Other Contaminants

The contamination assessment by RCA (2010a) did not identify unacceptable levels of contamination. SLR Consulting's additional contamination assessment (to be reported separately) also did not identify unacceptable levels of contamination.

If contamination other than asbestos is identified through the asbestos remediation works, the remediation of such contamination will be addressed through an addendum to this RAP.

10 REMEDIAL ACTION PLAN

10.1 Remediation Goal

The current remediation goal is to remediate the identified friable and bonded asbestos contamination to a satisfactory level to render the site suitable for the proposed land use and to enable safe conduct of the required bulk earth works.

10.2 Extent of Remediation Required

The outer lateral extent of isolated patchy contamination identified to date is shown on Figure 5 (in Section 6.4.5). Given that the contamination is generally present in isolated, small patches (less than $5m^2$ each), it is impractical to map each such isolated patch of contamination that has been observed. For the purpose of this RAP, the lateral extent of remediation required will be deemed to be the identified extent of contamination shown on Figure 5 (in Section 6.4.5). The isolated patches or small areas within the identified contaminated areas that require remediation will be determined by observations by SLR Consulting and the AS1 licensed contractor.

The vertical extent of remediation required is dependent on the depth to which asbestos is present in the identified contamination areas. Investigation results to date have indicated that:

- Fragments of bonded asbestos are generally limited to the site surface or present within identified fill material containing building rubble; and
- Friable asbestos has been observed to be buried to depths of up to 300mm within topsoil material.

It is possible however, that asbestos contamination may be present at greater depths where waste has been buried in pits.

The volume of asbestos contaminated soil cannot be determined with the information available to date. SLR Consulting considers that additional investigations to assess the true vertical extent of contamination is somewhat unnecessary as all identified contamination, regardless of depth, is intended to be remediated. To date, at the time of preparing this document on 23 November 2012, approximately $26,000m^3$ of asbestos contaminated soil has been contained in the containment cells. The final volume of contaminated soil is expected to slightly exceed $30,000m^3$.

Where fragments of ACM are present on the surface, such isolated patches of contamination will be removed from the surface, and as such, the extent of remediation will be limited to the surface. Where building rubble is present, all fill material containing building rubble will be assumed to be contaminated with asbestos, and the vertical extent of remediation required will be deemed to be the entire depth of the fill material. Where friable asbestos is present, the vertical extent of remediation will be 300mm or 50mm beneath the depth of visible asbestos, whichever is greater.

As discussed above in Section 5.2.3 and Section 6.4.1, the grass and topsoil stripped from the western portion of the site, parts of the southern portion and strips from the northern portion of the site has been stockpiled in a property adjacent to the north western corner of the site. SLR Consulting understands that the volume of this stockpile is approximately $6,000m^3$. This stockpile is deemed to be contaminated with asbestos. This stockpile will also require to be remediated. Additionally, any other stockpiles of topsoil material that are deemed to be contaminated with asbestos will require remediation.

10.3 Possible Remediation Options

The following remediation options are available to remediate the identified contamination, to 1) enable safe conduct of bulk earthworks and 2) render the site suitable for the proposed land use:

- Alter the current design levels of the proposed theme park such that excavation of the contaminated areas could be avoided, allowing in-situ capping of the asbestos contamination (in-situ capping option);
- Excavation and offsite disposal (to a facility licensed to receive such waste) of the identified asbestos contaminated material (offsite disposal option); or
- Excavation and placement into a containment cell, to be capped appropriately and constructed over (onsite containment option).

These options are evaluated below in Section 10.4.

10.4 Consideration of Remediation Options

Consideration of the above possible remediation options is presented below in Table 4.

Table 4 Advantages and Disadvantages of Possible Remediation Options

Remediation Option	Advantages	Disadvantages
In-situ Capping	• Minimal disturbance to asbestos contamination • Isolation of contamination from end site users • No offsite disposal costs	• Will require significant changes to design, which are costly and time consuming to obtain approval • Will require significant volume of fill material to be imported to site at a significant cost • Capping works will need to be conducted under controlled conditions over a wide area and supervision by AS1 licensed contractors, with potentially significant cost and programme impacts • Contamination is retained across majority of the site, at depths that could require disturbance in the future for installation of services or construction works making on-going management problematic and costly. • Will require the implementation of a long term site management plan

Remediation Option	Advantages	Disadvantages
Offsite Disposal	• Contamination will be removed offsite, eliminating the risk of harm to end site users • No need for implementation of a long term site management plan	• Significant cost of offsite disposal of contaminated soil, could potentially make the project financially unviable • May require significant volume of fill material to be imported to site at a significant cost • Excavation and disposal works will need to be conducted under controlled conditions and supervision by AS1 licensed contractors, at potentially significant cost
Onsite Containment	• Elimination of significant offsite disposal costs • Isolation of contamination from site end users • May not impact on the fill balance	• Excavation and containment works will need to be conducted under controlled conditions and supervision by AS1 licensed contractors, at potentially significant cost • Will require the implementation of a long term site management plan[3]

10.5 Preferred Remedial Option

Partly in consideration of the advantages and disadvantages outlined in Table 4 and partly in discussions with the client, onsite containment was adopted as the preferred remediation strategy.

Details of the proposed onsite containment remediation strategy are presented below. All remediated areas will be validated as detailed in Section 10.6 below.

10.5.1 Regulatory Compliance and Approvals

NSW WorkCover and NSW EPA should be notified of the asbestos contamination identified on site.

An application should be lodged to WorkCover by the AS1 licensed contractor for the proposed remediation of friable asbestos. All conditions contained within the approval should be adhered to.

EPA should be notified of the identified contamination and the proposed remediation strategy. An implied, in-principal approval (in the form of a “No Objections” letter) for the proposed remediation strategy has been received from the EPA. We note that the volume of contaminated soil contained within the cells exceed 30,000m^3, a landfill license may be required for the site.

[3] The contained contamination and the site management plan will be noted on the property titles and Section 149 Certificates. Additionally, the requirement to implement the site management plan will also be listed as a condition on the lease agreement.

As the regulatory authority for the development, Department of Planning should also be notified of the identified contamination and the proposed remediation and validation works. At present, planning approval in the form of a modification of the existing Part 3A approval is being sought from the Department of Planning and Infrastructure.

In-principal approval of the proposed remediation strategy by the EPA and Department of Planning are deemed by NSW WorkCover to be pre-requisites for WorkCover's approval of the remediation works.

The RAP should also be approved by the site auditor, typically before the commencement of remediation works. However, given the time constraints for this project, SLR Consulting considers that the auditor's concurrence with the remediation strategy will be adequate for the commencement of the remediation works. The RAP will be reviewed and commented on by the auditor prior to the validation stage, such that the auditor's comments could be addressed.

10.5.2 Remediation of Visible Fragments of ACM on the Surface

Where visible fragments of ACM (bonded asbestos) are present, these fragments, together with no more than 50mm of soil beneath the fragments, will be excavated/scraped, transported appropriately and placed in the proposed containment cells. The excavation will continue until all visible fragments of ACM, as identified by the AS1 licensed contractor and qualified hygienist, in each identified isolated patch within the identified contaminated areas, have been excavated/scraped.

Details of control measures for handling of asbestos contaminated material are provided further below in Section 10.5.6. Details of the proposed containment cells are also presented further below in Section 10.5.7.

10.5.3 Remediation of Visible Fragments of ACM Within Fill Material

All fill material containing evidence of building rubble will be deemed to be contaminated with asbestos and thus will be remediated. Fill material containing building rubble will be excavated, transported appropriately and placed in the proposed containment cells. If visible fragments of ACM are present on the excavation surface following excavation of fill material, these fragments as identified by the AS1 licensed contractor and qualified hygienist, together with no more than 50mm of soil beneath the fragments, will also be excavated/scraped, transported appropriately and placed in the proposed containment cells.

Details of control measures for handling of asbestos contaminated material are provided further below in Section 10.5.6. Details of the proposed containment cells are also presented further below in Section 10.5.7.

10.5.4 Remediation of Friable Asbestos

Isolated patches and areas of friable asbestos contamination present across the identified contamination areas, as identified by the AS1 licensed contractor and qualified hygienist, together with no more than 50mm of soil beneath the visible friable asbestos, will be excavated/scraped, transported appropriately and placed in the proposed containment cells. The excavation will continue until all visible friable asbestos, in each identified isolated patch within the identified contaminated areas, have been excavated/scraped.

Details of control measures for handling of asbestos contaminated material are provided further below in Section 10.5.6. Details of the proposed containment cells are also presented further below in Section 10.5.7.

10.5.5 Remediation of Topsoil Contaminated With Asbestos

Any stockpiles of topsoil/grass deemed to be contaminated with asbestos will be transported appropriately and placed in the proposed containment cells.

SLR Consulting understands that the compaction requirements of the topsoil/grass material have been considered by the project geotechnical consultant, and will not be addressed in this RAP. The potential to generate gas through the biodegradation of vegetation is currently being considered by SLR Consulting. Gas mitigation measures may require to be implemented if such assessments indicate significant potential to generate gas. The potential to generate gas will be conducted as a separate assessment, and any required gas mitigation measures to be implemented on the containment cells will be specified in an addendum to this RAP.

Details of control measures for handling of asbestos contaminated material are provided further below in Section 10.5.6. Details of the proposed containment cells are also presented further below in Section 10.5.7.

10.5.6 Control Measures for Handling Asbestos Contamination

The following control measures for handling asbestos contaminated material should be undertaken to minimise risks to site workers and offsite properties, and to minimise the risk of contamination of clean areas of the site and recontamination of remediated areas:

- All remediation works (excavation, transport and containment of contaminated soil) will be conducted by an AS2 licensed contractor (Basset), under the supervision of an AS1 licensed contractor (Empire);
- The work will be conducted under the requirements of NSW WorkCover, which will be specified in the asbestos removal permit that will be issued by WorkCover;
- Control measures for remediation of friable asbestos will likely include, but not be limited to those detailed below. The actual requirements will be determined by the AS1 licensed contractor in accordance with the NSW WorkCover requirements:
    - Dust suppression using targeted water spray at excavations, loading of trucks, and placement into containment cells;
    - Air monitoring for asbestos at all remediation areas as well as the site boundaries;
    - Air monitoring within operator's breathing zone, and within the cabins of machinery, as appropriate;
    - Wearing appropriate PPE and appropriate decontamination procedures during breaks and completion of each day's work;
    - Decontamination of equipment and machinery before moving to potentially clean areas of the site;
- The remediation works will only be conducted in defined portions of the site, fenced/demarcated from the rest of the site. No other works by other parties will be permitted to be conducted within or immediately adjacent to the designated remediation areas. A safe distance from the remediation works for other site works will be determined by the AS1 licensed contractor;
- The trucks used to transport contaminated soil to the containment cells will be covered, in accordance with NSW WorkCover requirements;
- Decontamination of vehicle tyres and tracks will be required if travel across clean or remediated areas cannot be avoided;
- The trucks will use a designated route to transport contaminated material from the designated remediation areas to the containment cell. Appropriate transport corridors should be determined in consultation with the earthworks and construction contractors and the remediation contractors. All transport corridors will be regularly visually inspected, and identified visible asbestos will be removed to minimise potential for cross contamination. The designated routes will also be appropriately tested, remediated if required and validated following completion of other remediation works;

- All remediated areas will be validated, and an asbestos clearance certificate issued to specified areas, prior to the commencement of earthworks in those areas; and
- Excavation of shallow soils, including topsoil, in the areas approved for earthworks will be conducted under supervision by SLR Consulting to assess the potential presence of asbestos.

10.5.7 Design of the Containment Cell

At this stage, two containment cells are proposed to be located in the vicinity of the north western corner of the site, in the area proposed to be occupied by the overflow car park, and one containment cell is proposed to be located in the south western portion of the site beneath the proposed asphalt car park. The location and the invert levels of the two containment cells in the overflow car park area are shown the survey plans attached in Appendix H. A survey of the third cell in the south western portion of the site will be provided when available.

Measures to isolate the contained asbestos in the cells from the end users can be outlined as follows:

- Following the placement of contaminated material to the containment cells under the supervision of the AS1 licensed contractor, a geo-fabric cover will be installed across the top of the placed contaminated material. This geo-fabric cover is intended to act as a marker layer to identify the top of the contaminated soil, and will be recorded by survey;
- A layer of clean fill, with a minimum compacted thickness of 1m, will be placed above the geo-fabric cover to act as a capping layer. The top of this layer will be surveyed and recorded as the top of the containment cell.

The proposed design of the containment cells will result in at least 1m of physical separation between the contained asbestos contaminated soils and the end site users. This separation thickness is also understood to be sufficient to install all underground services at the proposed car park, without having to disturb contained asbestos.

Additionally, we note that approximately 90% of the area of the two containment cells in the overflow car park area in the north western corner of the site is located under the proposed car park, adding a further 0.5m of physical separation (sub-grade and asphalt) between the contaminated soil and site users. The approximately 10% of the area of the containment cell 1 that is located outside of the overflow car park will be isolated from public access due to the proposed planting of dense shrub.

SLR Consulting considers that the proposed design of the containment cell to retain asbestos contamination is appropriate in consideration of the end site use and that is unlikely to pose a risk to the environment or human health if properly managed in the long term.

Details of the location and lateral and vertical extent of the containment cell (top of the marker layer and top of the capping layer) should be surveyed and recorded in a legally enforceable long term site management plan (SMP).

10.6 Validation Of Remediation Works

The remediation works will be separated to different areas as necessitated by the remediation works or validation works. The remediation works will likely be broken up as “Lipman Areas” 1 and 2 (for remediation works), and “SLR Areas” 1 to 20 for validation works. These areas are not defined at this stage, and will be shown in the progress and final validation reports.

The validation requirements for the remediation works are outline below.

10.6.1 Validation of Suspected Clean Stockpiles from Grass Stripping Works

The validation of the "suspected clean[4]" stockpiles created by the grass stripping exploratory works will involve the following:

1 A person competent in identification of asbestos will carefully inspect the surface of each stockpile for visible evidence of bonded and friable asbestos;

2 If the visual inspection identified any asbestos, the stockpile will be deemed contaminated and be placed into the containment cell;

3 If the visual inspection does not identify asbestos, soil samples will be collected from the near surface soils of the stockpile, to be tested for asbestos, as follows:

- No less than 3 samples per stockpile that has a volume of no more than $10m^3$;
- Where the volume of the stockpile is greater than $10m^3$, the sampling density will be at least 1 sample per $10m^3$, with no less than 3 samples from each stockpile;

4 All stockpiles will be identified by tags fixed to the stockpile;

5 If the laboratory analysis indicates that asbestos is present in any of the samples collected from a stockpile, that entire stockpile will be deemed to be contaminated; and

6 Following the above multi staged validation process, any stockpiles that do not report asbestos in the analytical results will be deemed suitable for unrestricted use within the site.

The fate of all "suspected clean" stockpiles will be tracked until they are deemed suitable for unrestricted use or they are placed into the containment cell. The material tracking information will be provided as part of the final validation report.

10.6.2 Validation of Remediated Areas

Validation of the ground surface in the remediated areas will involve the following:

7 All remediation excavations and scraping of asbestos contaminated material and asbestos will be carefully supervised by an AS1 licensed contractor;

8 Following the removal of all visible asbestos contamination and building rubble (assumed to be contaminated with asbestos), SLR Consulting's occupational hygienists will conduct a detailed visual clearance inspection across each of the delineated "SLR Areas". Areas where any visible asbestos is identified will be re-excavated;

9 Following the re-excavation of any identified asbestos, the detailed visual clearance inspection will be repeated across the entire "SLR Area" – not just the re-excavated areas. This increases the level of confidence associated with the detailed visual clearance inspection;

10 If no further visible asbestos is observed through the repeated detailed visual clearance inspection, validation samples will be collected as follows:

- In areas where the topsoil and fill material has been excavated to expose a surface of natural clay, with no evidence of fill or topsoil present, samples will be collected from the surface at the rate of 1 sample per $400m^2$ (on a 20m by 20m grid);
- In areas where there is evidence of topsoil or any fill material, samples will be collected at the rate of 1 sample per $100m^2$ (on a 10m by 10m grid).

11 All sample locations will be identified by tags fixed to the ground surface;

12 All collected samples will be analysed for asbestos;

---

[4] Note that stockpiles are considered suspected clean following careful observation of the material being stripped and stockpiled by AS2, AS1 and SLR Consulting personnel.

13 Where asbestos is reported in any of the surface soil samples, and area of 5m diameter around the failed sample location will be excavated a minimum of 100mm;

14 The excavated hotspot area will be visually inspected for evidence of visible asbestos. The excavation will be extended as required to remove all visible evidence of asbestos;

15 Following the completion of excavation of the hot spot area to the satisfaction of SLR Consulting's hygienist, further validation samples will be collected as follows:

- One samples will be collected if the 5m diameter excavation has exposed the natural clay surface across;
- Three samples will be collected if the 5m diameter excavation contains topsoil or fill material;

16 Items 13, 14 and 15 will be repeated until no asbestos is reported; and

17 All soil excavated to removed identified contamination will be placed into the containment cell.

10.6.3 Validation of the Containment Cell

The construction and completion of the containment cell will be validated as follows:

18 The full lateral extent of the placed asbestos contamination should be covered by the geo-fabric marker layer and the 1m clean fill capping layer;

19 The extent of the contained asbestos contamination and the capping layer should be surveyed and recorded;

20 The thickness of the capping layer should be checked during placement and compaction and should also be confirmed (by survey or other appropriate means) to be at least 1m;

21 The containment cell should be confirmed to be located within the footprint of the proposed car park;

The cells are proposed to be built in the vicinity of the areas that are proposed to be developed into sealed asphalt car parks. Whilst the asphalt provides an additional barrier between the contaminated materials and the end site user, the sub-grade and the asphalt are not deemed to be components of the containment cell, and as such, will not need to be validated as part of the validation of the containment cell. The validation of the containment cell will be limited to the 1m of clean fill (capping layer) placed above the geo-fabric, as specified in Section 10.5.7.

Excavations into the 1m thick capping layer should be avoided where possible. Any excavations to install underground services that may potentially extend in to the capping layer should be managed by an AS1 licensed contractor, and be reinstated to such an extent that the marker layer is replaced and the minimum amount of clean cover is retained. Details of any installed underground services above or in the vicinity of the containment cell should be recorded on the long term site management plan (SMP).

10.6.4 Progress Reporting on Validation Works

Asbestos clearance certificates will be issued progressively for specified areas that have been remediated and successfully validated. These clearance certificates will be included in the validation report.

The remediated areas will be mapped using hand held GPS devices.

10.6.5 Validation Report

Following the completion of all remediation activities and issue of all required asbestos clearance certificates, a validation report will be prepared by SLR Consulting, in accordance with the NSW EPA (1997) Guidelines for Consultants Reporting on Contaminated Sites. The report should be reviewed and approved by the site auditor.

10.7 Remediation Contingency Plan

The following contingencies should be considered in the event the volume of identified contamination exceeds the nominated cut/fill balance.

- Revise design of the containment cell, including reducing the capping thickness, increasing the invert depth, and increasing the lateral extent, to increase the capacity of the containment cells;
- Consider additional containment cells with the excavated clean materials being disposed off site or beneficially re-used offsite as virgin excavated natural material;
- Consider, above ground containment of asbestos contamination in appropriately located and purpose built, stabilised, landscaped mounds, with sufficiently engineered surface cover to provide the necessary physical separation between the contamination and the end users. Additionally, such mounds could be located on areas of the site that will not be accessible by public;
- Revising the assessment criteria from the present “no asbestos detected” to some level of asbestos contamination that could be tolerated, as agreed between the developer and the site auditor; or
- Offsite disposal of the excess contaminated soil that cannot be contained on site.

11 LONG TERM SITE MANAGEMENT PLAN

Given that asbestos contamination is proposed to be contained onsite in containment cells in the vicinity of the proposed car park, a long term site management plan (SMP), also referred to as an environmental management plan (EMP) will need to be prepared and implemented to minimise the risk of accidentally disturbing the contained contamination, and to minimise risks to those who need to undertake works that may disturb the contamination.

The SMP should be prepared by SLR Consulting and be reviewed and approved by the site auditor.

The SMP should be legally enforceable, and may be incorporated into the lease contract for the site. It should also be noted in the property title and Section 149 Certificate.

The site operator will be responsible for the implementation of the SMP.

The SMP will address the following:

- Describe the contained contamination including nature, location and depth of the contamination;
- Describe measures required to maintain integrity of the containment cell, and the physical separation that is required between end site users and the contamination;
- Describe the frequency of checks and observations required to assess the integrity of the containment, including regular inspections of the area of the containment cell 1 that is located outside of the overflow car park area;
- Assign responsibilities for the implementation of the SMP;
- Procedure for ensuring appropriate restoration of the cap, and protection of the health and safety of the workers, in the event that the containment cell cap needs to be breached; and
- Specify a timeframe for the review of the SMP.

12 INTERIM SITE MANAGEMENT PLAN

The following measures should be implemented to minimise the risk of cross contamination of clean areas, the potential for exposure to asbestos and the potential for offsite migration of asbestos, until such time that the remediation works are conducted:

- Access to the site should be controlled, with proper fencing around the perimeter;
- Appropriate signage should be erected around the site perimeter, in accordance with NSW WorkCover requirements, indicating that the site contains asbestos;
- Persons entering the site should be appropriately inducted by the principal contractor;
- All areas where asbestos contamination is identified should be fenced/demarcated to prevent vehicle and foot traffic;
- Any areas where friable asbestos is identified should be covered with polythene by an AS1 licensed contractor and weighted down with clean fill to avoid wind disturbance;
- Contaminated stockpiles of grass/topsoil should be covered with polythene by an AS1 licensed contractor and weighted down with clean fill to avoid wind disturbance;
- Air monitoring for air borne asbestos should be conducted daily at appropriate locations as determined by SLR Consulting based on site activities; and
- Use a water sprayer regularly across the site to minimise dust generation.

13 SITE MANAGEMENT PLAN DURING REMEDIATION WORKS

13.1 Risk Management

Risk management involves managing scenarios to achieve an appropriate balance between realising opportunities for gains while minimising losses. The management of risks is an integral part of good management, and benefits are maximised by applying the risk management process from the outset. The main elements of the risk management process, as detailed in AS/NZS 4360.2004 *Risk Management* (Standards Australia and Standards New Zealand, 2005) are as follows:

- Communicate and consult with external stakeholders at each stage of the risk management process;
- Establish the context – establish the criteria against which risk will be evaluated should be established and structure of analysis defined;
- Identify risks;
- Analyse risks – determine consequence and probability and hence the level of risk;
- Evaluate risks against pre-established criteria and consider benefits and adverse outcomes;
- Treat risks – develop and implement specific cost-effective strategies and action plans for increasing the potential benefits and reducing the potential costs; and
- Monitor and review effectiveness of risk management process and effectiveness of treatment measures to ensure continuous improvement.

Risk is not just interpreted in terms of hazards or negative impacts, but is concerned with risk as exposure to the consequences of uncertainty, or potential deviations from what is planned or expected. Additional to the standard construction and earthworks site risks the contractor should consider addressing the following potential risks as a minimum, during the proposed remediation:

- Compliance with State/Federal legislation (subject to advice from an appropriate legal advisor);
- Occupational exposure;
- Environmental contamination;
- Public exposure;
- Community concern and public fallout;
- Unintentional import of contaminated fill;
- Further site remediation; and
- Ongoing liability for land use.

13.2 Community Consultation

Community consultation can be an essential factor to be addressed prior to the commencement of the remediation. The Remediation Contractor will inform landowners/residents located adjacent to the site about the remedial works.

Communication and complaints received for the site will be reported to the client. All communications and complaints will be assessed and an appropriate response, corrective and/or preventative action implemented (as necessary).

A communication and complaints register will be operated on site to ensure that concerns of local residences and businesses are recorded and addressed.

13.3 Restricted Access

The site must be nominated as a construction area and as such the site needs to be securely fenced to prevent public access. Access must be restricted to authorised staff and contractors who have appropriate personal protective equipment, induction and training.

13.4 Hours of Work

The remediation works should be conducted between the hours of 7AM to 5PM Monday to Friday and 8AM to 1PM on Saturdays, if required. No work should be conducted on Sundays, public holidays or outside the hours specified above.

13.5 Vehicle Decontamination

Loading of contaminated soils to trucks must be carried out in the designated remediation areas in order to prevent cross contamination. The loads on all trucks are to be sealed appropriately prior to transportation of the waste to the containment cells along designated routes.

Excavators and associated attachments need to be decontaminated in the wash down area prior to moving into potentially clean or remediated areas. The wash down area should be lined with geo-fabric or a similar material, such that the accumulated sediment can be removed and disposed of to the containment cell as contaminated sediment after the final decontamination.

13.6 Dust

Dust may be generated during excavation. Works must comply with the requirements listed in Schedule B(9) of the NEPM (1999), NSW WorkCover and the NSW EPA. Dust control measures, such as dampening the soil and covering stockpiles, are to be in place to ensure dust levels are kept to a minimum. Air monitoring at the site perimeter and the remediation areas should be conducted each day.

Dust barriers including shade cloth may be required to be erected along the site boundaries to minimise potential for offsite migration of dust.

13.7 Noise

Some noise may be generated during excavation activities when using machinery such as trucks and excavators. These activities will be short term but may impact on the neighbouring residential properties, though unlikely given the size of the site. The contractor should keep noise levels to a minimum and levels should not exceed limits indicated in AS 2436 1981. Noise monitoring to current NSW EPA Guidelines should be undertaken if warranted. The contractor is to comply with the statutory requirements regarding noise and the works on site will be restricted to normal working hours.

13.8 Surface Water and Seepage Management

Given that the site slopes generally towards the centre of the site, offsite contamination due to surface water flow is deemed unlikely. Care should be taken to manage hazards associated with erosion, landslip, subsidence and land stability due to the site's landscape characteristics. Surface run-off control measures including silt fencing material and/or straw bales need to be installed at the site. Such measures may require to be installed in remediated and validated areas, or potentially clean areas, to prevent recontamination through surface water flow over friable asbestos contaminated areas.

All contaminated stockpiles are to be covered with plastic sheeting to prevent off-site migration and mobilisation of asbestos to air and water. Any additional drainage control works are to be constructed should such needs arise.

The remediation contractor should establish appropriate sediment and erosion control measures prior to the commencement of remediation activities. The measures should be reviewed by SLR Consulting for adequacy.

13.9 Groundwater management

It is not anticipated that groundwater will be intersected across the site during asbestos remedial works.

13.10 Traffic

Movement of excavation equipment and trucks to and from the site is to be strictly controlled, restricted to a minimum and only take place during normal working hours. The remediation works is unlikely to significantly increase traffic flow to and from the site.

Vehicular traffic within the site should be limited to designated corridors only during remediation and validation works, to prevent cross contamination of remediated areas. The designated corridors for traffic during various stages of the remediation works will be determined by WEM and Lipman together with the remediation contractors.

13.11 Erosion Protection

The topsoil observed at the site may be prone, when exposed, to the effects of erosion during extended or severe periods of inclemency. The asbestos contamination, particularly friable asbestos, presents an additional risk to the surrounding environment. Consequently, it is recommended that construction works are, where possible, planned to avoid such weather periods and are conducted in a single continuous operation to ensure there are no extended periods of soil exposure.

The remediation contractor should implement appropriate sediment and erosion control measures prior to the commencement of remediation activities. The measures should be reviewed by SLR Consulting for adequacy.

13.12 Duties of the Onsite Environmental Consultant

At least one SLR Consulting occupational hygienist or an environmental scientist will be present on site full time to observe the remediation works. The duties of the on-site environmental scientist/hygienist include:

- ensure adherence to the Remediation Action Plan;
- monitor the excavation of contaminated material undertaken at the site;
- ensure environmental compliance of contractors;
- inspection of the integrity of the operational phase site management controls placed around the site;
- immediately report actual or potential non-compliances to the client’s representative (NIX), who will report those to appropriate regulatory bodies if required;
- note weather conditions, approximate temperature, direction and velocity of the wind, and rainfall at the commencement of work, at about midday and at the end of the day;
- conduct visual inspections for asbestos clearance;
- collect samples for validation or other purposes;

- maintain a site diary which will record the following information:
    - date
    - weather conditions
    - details of materials excavated during the remediation works
    - details of areas remediated
    - details of actions taken if unexpected materials are encountered
    - details of accidents, near misses or incidents, which may have resulted in injury, and the actions taken to prevent their recurrence
    - details of environmental issues, which may result in environmental incidents and measures taken to correct them
    - details of visitors to the site or other matters relating to environmental or health issues.

14 HEALTH AND SAFETY PLAN (HASP)

The provisional health and safety plan (HASP) below address the following:

- Hazard Assessment, including hazards associated with the identified contaminants of concern (heavy metals, TPH, PAH, potential asbestos);
- General and Specific Health and Safety Requirements including measures to minimise exposure to the above mentioned contaminants of concern (dust monitoring and management to minimise potential for inhalation, wearing appropriate clothing and PPE (including dust masks as indicated by the AS1 licensed contractor) to minimise potential for dermal adsorption, practicing good hand hygiene to minimise potential for ingestion, and appropriate decontamination);
- Emergency Response Procedures, including in events of contamination release to the environment and exposure to contaminants; and
- Safety Responsibilities of Project Personnel including SLR Consulting Personnel.

The provisional HASP below should be adhered to by the remediation contractor. The contractor should also prepare a HASP for the remediation works and should identify any other risks not outlined below and ensure that those risks are appropriately managed. The contractor's HASP should address all requirements of NSW WorkCover and appropriate regulations[5]**.**

14.1 Site Hazards

14.1.1 Contamination Risks

The site soils are contaminated with asbestos. The mode of exposure for the identified asbestos contamination is inhalation of contaminated dust or free fibres.

Measures outlined in this HASP must be adhered to, to minimise potential for exposure to these contaminants.

14.1.2 Other Hazards

Other hazards at the site include:

- Impact by heavy machinery;
- Slips, trips and falls;
- Fall into deep excavations;
- Instability of excavation walls;
- Potential manual handling;
- Sun exposure.

[5] Asbestos is regulated by WorkCover NSW under the *Work Health and Safety Act* (NSW) 2011, the *Work Health and Safety Regulation* 2011 and National Occupation Health and Safety Committee (NOHSC) Asbestos Codes of Practice.

14.2 Hazard Controls

14.2.1 Site Induction

Any personnel entering the remediation areas must receive a site-specific safety induction conducted by the AS1 licensed contractor. Induction documents and records must be controlled by the contractor. Induction should cover a discussion of the contamination status of the site, as outlined in this RAP.

The contractor should ensure that all site workers including visitors to the site are wearing the appropriate personal protective equipment.

14.2.2 Tool box meetings

Tool box meetings should be conducted each morning prior to commencing works, to identify the work proposed to be conducted, and to assess the site specific risks associated with each task. These meetings should be appropriately documented.

14.2.3 Excavations

All active remediation excavations should be barricaded at the end of each day's work. During the days work, designated walking areas/paths need to be made available and clearly identified at the tool box meeting.

Specialist geotechnical advice should be sought regarding the stability of excavations including the containment cell. Excavations will be stabilised as required.

No worker is to enter unsecured excavations greater than 1.2m in depth, where there is a potential for instability of the excavation walls.

14.2.4 Personal Protective Equipment

In consideration of the contamination identified on the site, the following PPE should be worn and be made available for any person involved in the remediation works:

- Disposable bright coloured coveralls;
- Appropriate gloves;
- Appropriate class of dust masks to minimise exposure to asbestos.

The following PPE are required to be worn to manage earthworks related risks:

- Hard hats;
- Safety boots.

14.2.5 Personnel Decontamination

Personnel working at the site are required to be decontaminated at the end of each work shift, including before morning tea, lunch and afternoon tea and at the end of the work day. An appropriate decontamination facility will be established at a readily accessible site location by the AS1 licensed contractor. The decontamination facility must meet the requirements of NSW WorkCover. A clean water source for decontamination should also be available in the facility.

Work boots that are worn at the site shall be washed clean in the facility before exiting the site.

All coveralls, masks and gloves should be disposed to the containment cell as contaminated waste.

14.2.6 Worker Facilities

Facilities for workers at the site must be supplied in general accordance with the Work Health and Safety Regulation 2011.

14.2.7 Emergency Response

An emergency muster point will be established at the entrance to the site on Watch House Road, Prospect, to assemble workers in the event of an emergency. This muster point should be communicated to all workers and visitors during the induction.

15 SITE CONTACTS FOR REMEDIATION WORKS

The following information will be clearly identified and available in the site office and the AS1 Contractor's HASP at all times during the remediation works.

Table 5 Site Contacts

Client's Representative	Andrew Parker of NIX Management	Mobile: 0412 001 204
Site Superintendant	Peter Fagan of Brown Consulting	Mobile: 0488 028 692
Environmental Consultant	Nalin De Silva of SLR Consulting	Mobile: 0407 117 562
AS1 Licensed Remediation Contractor	Steve Simpson of Empire	Mobile: 0413 936 785
AS2 Licensed Remediation Contractor	Steve Basset of Basset	Mobile: 0418 227 741
WEM Representative	David Gardener	Mobile: 0417 466 272
LIPMAN Representative	Jason Todd	Mobile: 0418 864 840

16 REMEDIATION SCHEDULE

The schedule of works proposed for the remediation works is outlined below. The dates shown are dependent on receipt of approvals from WorkCover and EPA, and the volume of contamination requiring remediation.

Table 6 Schedule of Remediation Activities

15 October 2012	Receive in-principal approval from the appointed site auditor for the proposed remediation strategy Commencement of review of the Draft RAP by the auditor Receive in-principal approval for the remediation work from the EPA. EPA could also potentially impose conditions or requirements for the remediation works.
17 October 2012	Receive approval from NSW WorkCover
18 October 2012	Commence remediation works. Remediation works will be conducted in two or three areas concurrently.
22 October 2012	Receive Auditor comments on the RAP, to be incorporated to remediation works
25 October 2012	Commence validation works
Early 2013	Likely completion of remediation works
Early 2013	Likely completion of validation works
First Quarter 2013	Likely completion of validation report

17 CONCLUSION

SLR Consulting considers that if the remediation works and site management requirements during remediation works are implemented as specified in this RAP, the identified asbestos contamination will be remediated to a satisfactory level that would enable the site to be deemed suitable for the proposed land use.

As mentioned earlier, if contamination other than asbestos is identified through the ongoing investigations, remediation of such contamination will be incorporated to this RAP as an addendum to this RAP. A validation report for the site will only be prepared following completion of all required remediation works, including for contaminants other than asbestos (if required).

Upon site auditor's approval of the validation report, a site audit statement will be issued by the site auditor, stating that the site has been appropriately remediated, and is suitable for the proposed land use.

Given that asbestos contamination will be contained onsite in containment cells in the vicinity of the proposed car park, a long term site management plan (SMP), also referred to as an environmental management plan (EMP) will need to be prepared and implemented to minimise the risk of accidentally disturbing the contained contamination, and to minimise risks to those who need to undertake works that may disturb the contamination. The SMP should be legally enforceable, and may be incorporated into the lease contract for the site. It should also be noted in the property title and Section 149 Certificate.

18 REFERENCES

ASET, 2012. *Asbestos Contamination – Visual Assessment Carried out on 6 September 2012 – Report* (dated 7 September 2012), (ref: ASET30805/ 33985)

NSW DEC, 2006. *Guidelines for the NSW Site Auditor Scheme (2nd edition)*

NSW EPA, 1994. *Guidelines for Assessing Service Station Sites*

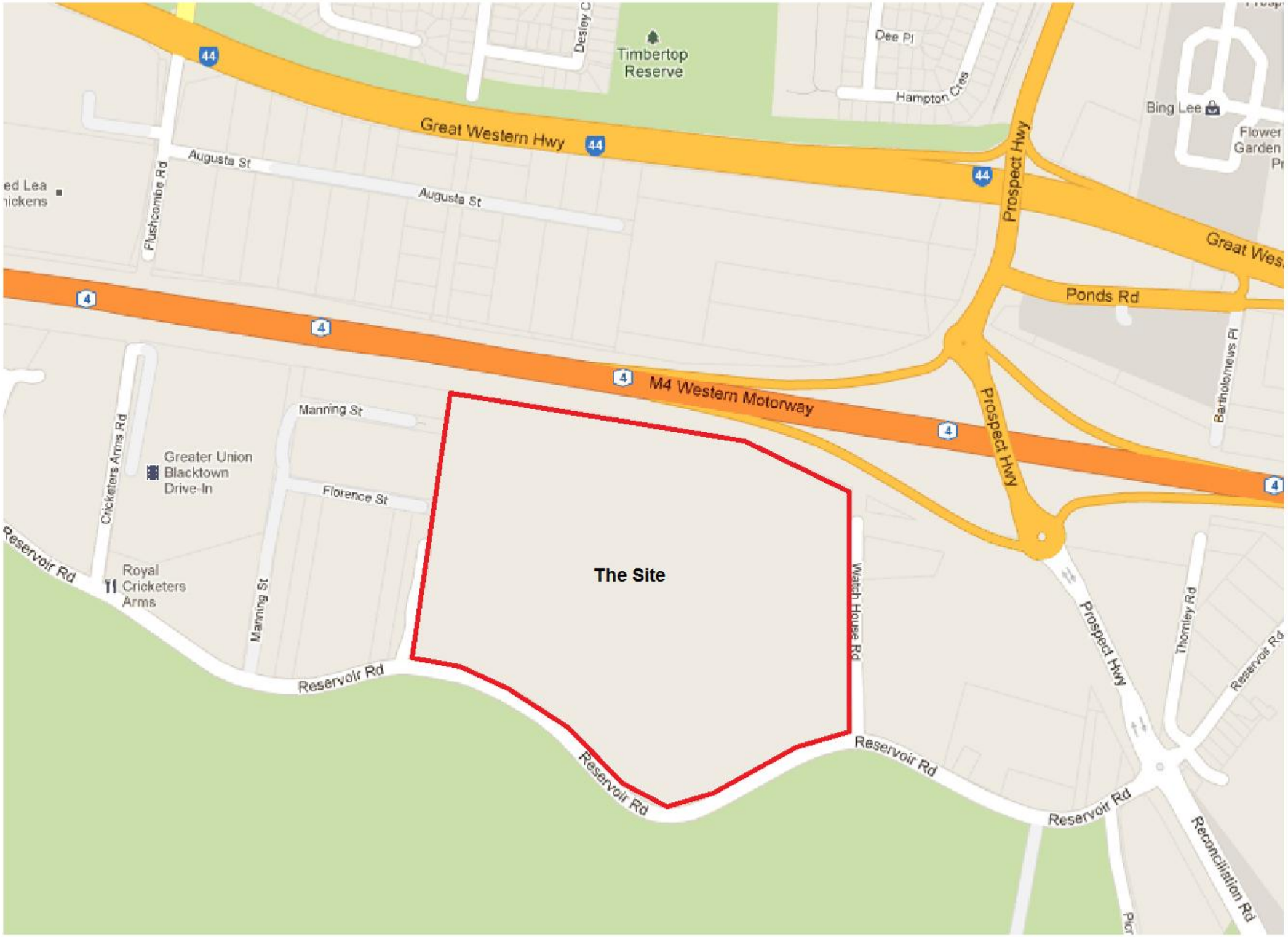
RCA Australia, 2009. *Phase 1 Environmental Site Assessment, Sydney Wet 'N' Wild, Prospect, NSW* (ref: 7600-401/0)

RCA Australia, 2010a. *Phase 2 Environmental Site Assessment, Sydney Wet 'N' Wild, Prospect, NSW* (ref: 7600-403/2)

RCA Australia, 2010b. *Geotechnical Investigation, Lot 1 DP1045771, Reservoir Road, Prospect* (ref: 7600-404/0)

SLR Consulting, 2012a. *Unexpected Finds Protocol, Bulk Earthworks, Proposed Wet n' Wild Theme Park, Reservoir Rd, Prospect* (ref: 610.11873 R02)

Figure A1 **Site Location Plan**



LEGEND

Site Boundary

NOTES

Scale Not Provided

Sourced from Google Maps Whereis(R), Sensis Pty Ltd

SLR

2 Lincoln Street
Lane Cove
NSW 2066
Australia
T: +61 2 6287 0800
F: +61 2 6287 0801
www.slrconsulting.com

Project Name:
Remedial Action Plan,
Wet n' Wild, Prospect

Prepared for:
Prospect Aquatic Investments Pty Ltd

Project No: **610.11873**

Scale	Date
N/A	02-Nov-2012
Drafted	Approved: Nalin De Silva

Figure A2

Current Site Layout

LEGEND

Site Boundary

N

NOTES

Scale Not Provided

Sourced From Near Map

Date photographed - 8 September 2012

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Wet n' Wild, Prospect

Prepared for:
Prospect Aquatic Investments Pty Ltd

Project No: **610.11873**

Scale	Date
N/A	02-Nov-2012

Drafted	Approved
	Nalin De Silva

Figure A2A

Site Layout Prior to Demolition Works

LEGEND

NOTES

Sourced from Google Earth Whereis

Photograph Date - 30 September 2009

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Remedial Action Plan,
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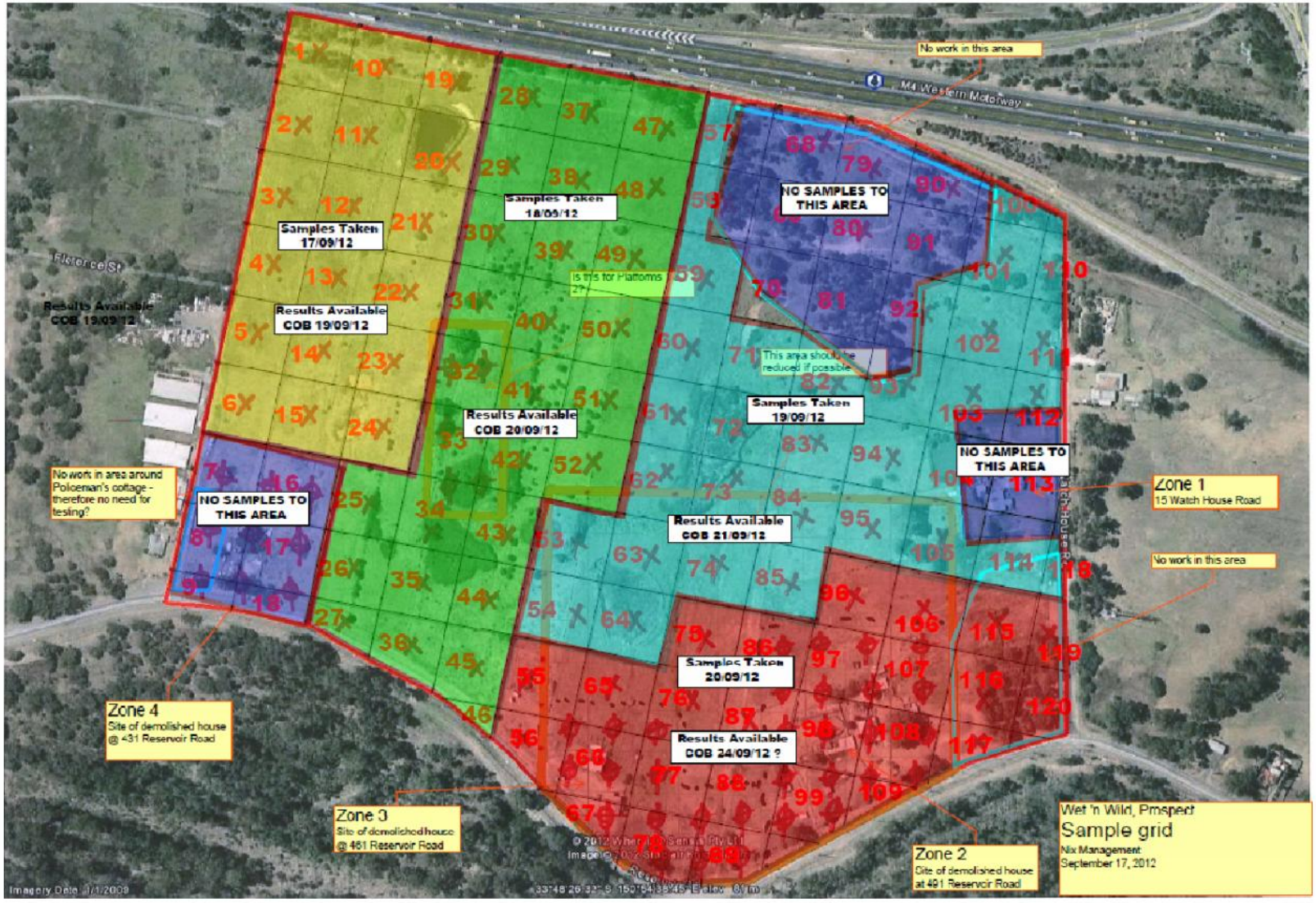
Prepared for:
Prospect Aquatic Investments Pty Ltd

Project No: **610.11873**

Scale	N/A	Date	02-Nov-2012
Drafted		Approved	Nalin De Silva

Figure A3 **SLR Test Pit Locations**



LEGEND

47 Test Pit Locations on a 50m Grid

89 Test Pit Locations on a 30m Grid

Colours indicate staging (dates) of the sampling work

NOTES

Not all test pits were excavated, and nor were they in the exact locations shown, due to various site constraints

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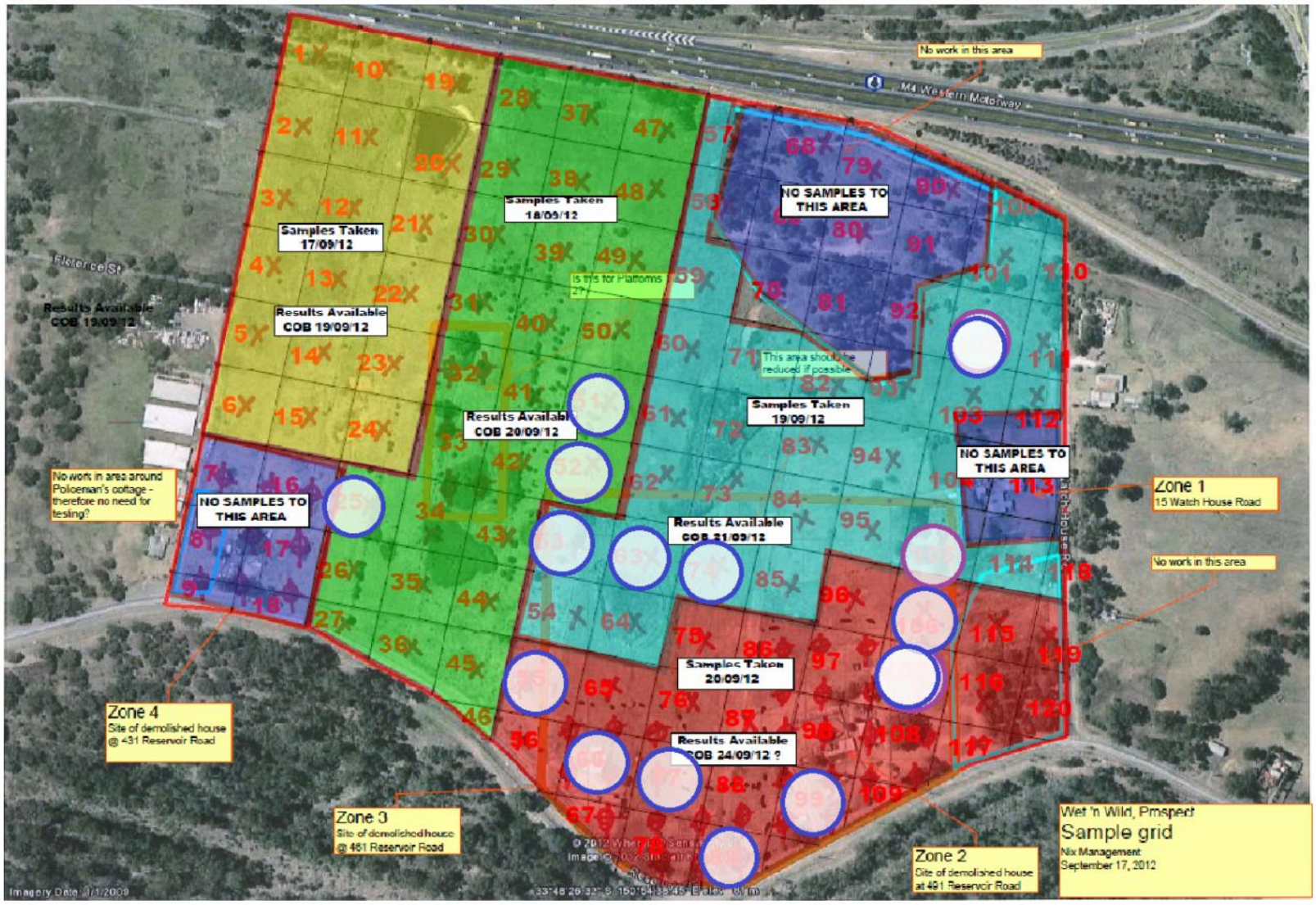
Prepared for: Prospect Aquatic Investments Pty Ltd

Project No: 610.11873

Scale: N/A | Date: 02-Nov-2012

Drafted | Approved: Nalin De Silva

Figure A4 **Asbestos Reported in SLR Test Pits**



LEGEND

- 47 — Test Pit Locations on a 50m Grid
- 89 — Test Pit Locations on a 30m Grid
- Colours indicate staging (dates) of the sampling work
- ACM Observed in test pit
- Asbestos detected in samples

NOTES

Not all test pits were excavated, and nor were they in the exact locations shown, due to various site constraints

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Project Name: Remedial Action Plan, Wet n' Wild, Prospect

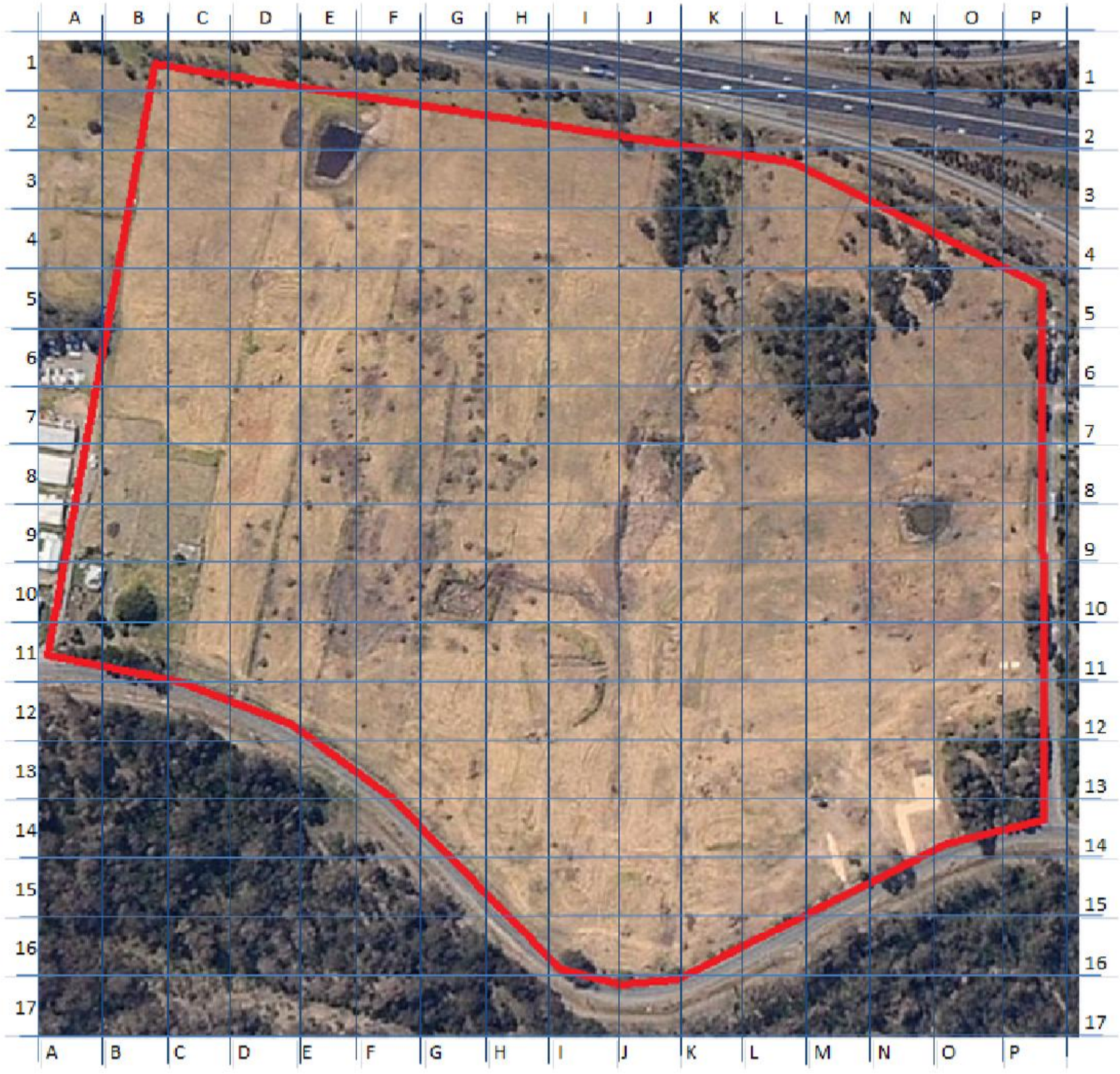
Prepared for: Prospect Aquatic Investments Pty Ltd

Project No: 610.11873

Scale: N/A | Date: 02-Nov-2012

Drafted: | Approved: Nalin De Silva

Figure A5 **Site Grid Established For Reporting Purposes**



LEGEND

Site Boundary

Arbitrary Grid for Reporting Purposes

N

NOTES

No Scale Provided

Grid established for reporting purposes only

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Project Name:
Remedial Action Plan,
Wet n' Wild, Prospect

Prepared for:
Prospect Aquatic Investments Pty Ltd

Project No: **610.11873**

Scale	Date
N/A	02-Nov-2012
Drafted	Approved: Nalin De Silva

Appendix A

RCA (2009) Phase 1 ESA *and* Aerial Photographs Reviewed by SLR

Proposed Wet n' Wild Theme Park
Reservoir Rd, Prospect
Report Number 610.11873 R03

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

- Geotechnical Engineering
- Engineering Geology
- Hydrogeology
- Contaminated Site Assessment
- Construction Materials Testing
- Environmental Monitoring

LOT 1 DP1045771 PROSPECT

Prepared for

KELLOGG BROWN & ROOT

Prepared by

RCA AUSTRALIA

RCA ref 7600-401/0

DECEMBER 2009

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				Name	**Signature**	**Date**
/0	Final	M Clark	G Mason	G Mason		16.12.09

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Rev No	**Copies**	**Format**	**Issued to**	**Date**
/0	1	Electronic (email)	Kellogg Brown & Root – Mr Wojtek Zborowski Wojtek.Zborowski@kbr.com	16.12.09
/0	2	Bound report	Kellogg Brown & Root – Mr Wojtek Zborowski	16.12.09
/0	1	Bound report	RCA – job archive	16.12.09
/0	1	Electronic report	RCA – job archive	16.12.09

Contents

RCA ref 7600-401/0

16 December 2009

KBR (Kellogg Brown & Root Pty Ltd)
201 Kent Street
SYDNEY NSW 2000

Attention: Mr Wojtek Zborowski

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

Geotechnical Engineering
Engineering Geology
Environmental Engineering
Hydrogeology
Construction Materials Testing

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1 DP1045771, PROSPECT

1 INTRODUCTION

RCA Australia (RCA) has been engaged by Kellogg Brown & Root to undertake a Phase 1 Environmental Site Assessment Lot 1 DP 1045771, Prospect NSW at the request of Mr Wojtek Zborowski.

1.1 OBJECTIVES OF THE INVESTIGATION

The objectives of the environmental assessment are to:

- identify all past and present potentially contaminating activities;
- identify potential contamination types;
- discuss the site condition;
- discuss any potential restrictions to development of the site based on environmental issues; and
- assess the need for further investigations.

The Phase 1 Environmental Site Assessment involved consideration of the following:

- Remote site inspection.
- Title Search.
- Historical aerial photograph search.
- Obtain information provided by local Council.

It is noted that no intrusive works were undertaken as part of this assessment.

The purpose of the work was to identify past and present potentially contaminating activities for the assessment of the site's suitability for future development of the site and any potential requirement for further investigations.

2 SITE DESCRIPTION AND LOCATION

The site is located at Reservoir Road, Prospect and is approximately 25.5ha in size. The site of this assessment is known as Lot 1 DP1045771. The site is bounded by bushland to the south, rural residential properties to the east and west of the site and the M4 Western motorway to the North (**Drawing 1** in **Appendix A**).

The site is approximately 25.5ha in size and is predominantly vacant, however it contains some residential development and associates buildings (sheds) around the southern and eastern areas of the site. The site is generally flat and vegetation includes a mixture of grasses and sparse trees. There is an area of denser vegetation in the northern area of the site and the south eastern corner of the site, around the residential development there.

The closest environmental feature is Blacktown Creek which appears to begin as a low catchment in the centre of the site and runs north. The creek is noted on **Drawing 1** in **Appendix A**. Prospect reservoir is located approximately 700m to the south of the site. The closest sensitive land use to the site is the Blacktown Happy Days Kindergarten, which is located approximately 2.5km to the north of the site.

3 SITE HISTORY AND BACKGROUND INFORMATION

3.1 ZONING

- The site is currently unzoned under State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009.
- In accordance with SEPP (Western Sydney Parklands) 2009 the following developments may be carried out without development consent, but only if it is carried out by or on behalf of a public authority: cafes, community facilities, entertainment facilities, environmental facilities, environmental protection works, function centres, information and education facilities, kiosks, landscaping, maintenance depots, public administration buildings, recreation areas, recreation facilities (outdoors), signage (for directional, informative, or interpretive purposes), ticketing facilities.
- Any development not specified in the above may be carried out in the Western Parklands only with consent.
- Development for the purposes of residential accommodation is prohibited in the Western Parklands.

3.2 TITLE SEARCH

The title search information proposed to be obtained would only indicate the current site owners and this information would not be considered to provide any additional information to assist in the site assessment. Current title search information was not reviewed for this assessment.

3.3 SECTION 149 CERTIFICATE

The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by schedule 4 of the Environmental Planning and Assessment Regulation 2000, and is applicable as of 11 December 2009. It is indicated by the Section 149 Certificate that as follows:

- The land does not include or comprise a critical habitat.
- The land is not within a conservation area.
- The land does not contain an item of environmental heritage under the protection of Blacktown Local Environment Plan 1988.
- The land is bush fire prone. Under the Rural Fires and Environmental Assessment Legislation Amendment Act 2008, the Lot has been identified on Council's Bush Fire Prone Map as being: *Within 100m buffer around Category 1*.
- The land is bound by State wide bush fire legislation that may restrict development.
- The land is not affected by the operation of Sections 38 or 39 of the Coastal Protection Act 1979.
- The land has not been proclaimed to be within a mine subsidence district.
- The land is not affected by road widening/road realignment.
- Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bush fire, tidal inundation, subsidence or the occurrence of acid sulfate soils.
- There are no mainstream or backwater flood related development controls adopted by Council that apply to the land subject to this Certificate.
- For the purposes of Section 27 of the Act, the corporation will be the relevant authority to acquire land reserved for certain public purposes if the land is required to be acquired under Division 3 of Part 2 of the Land Acquisition Act 1991.
- Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services.
- Item 10 to Schedule 4 of the Environmental Planning and Assessment Regulation 2000 has been repealed by the Contaminated land Management Amendment Act 2008.
- The land is not subject to a property vegetation plan under the provisions of the Native Vegetation Act 2003.
- The land is not the subject of an order made under the Trees (Dispute between Neighbours) Act 2006.
- The land has not been declared to be significantly contaminated land.
- The land is not subject to a management order.
- The land is not the subject of an approved voluntary management proposal.
- The land is not subject to an ongoing maintenance order.
- The land is not the subject of a site audit statement provided by Council.

Refer to **Appendix B** for Section 149 Certificate.

3.4 LAND USE

The site is currently utilised as rural residential land with some residential developments around the south and east edges of the Lot. The proposed site use is of a commercial nature.

3.5 SITE RESTRICTIONS

The Section 149 Certificate for the site details a number State Environmental Planning Policies, Regional Environmental Plans and Local Environment Plans that may affect development on site. At the date of the Section 149 Certificate, the land is not affected by Blacktown Development Control Plan 2006.

The State Environmental Planning Policies that apply to the land are shown in the Section 149 Certificate in **Appendix B**.

3.1 REVIEW OF HISTORICAL AERIAL PHOTOGRAPHS

Historical aerial photographs were obtained and reviewed for the years 1951, 1961, 1978, 1986, 1996 and 2005. The following represents a summary of the appearance of the site and its surroundings:

Aerial Photograph – 1951

The site is shown as rural residential Lots. The surrounding area is comprised of rural residential properties. The site is generally cleared of vegetation and appears to be used for agriculture. Approximately 10 rural dwellings and associated buildings are located on the site. The eastern portion of the site contains areas of dense trees. Prospect reservoir is noted to the south of the site.

Aerial Photograph – 1961

The site appears to be relatively unchanged from the 1951 photograph, however a significant portion of the remaining trees have been cleared from the site for agricultural purposes. The surrounding area appears relatively unchanged.

Aerial Photograph – 1978

Agricultural activity on the site appears to have declined since 1961. An additional dam has been built on the site in the northern portion of the site and the dam in the central portion of the site appears to have been filled in. A large shed has been constructed on the western portion of the site. Since 1961 the Great Western Highway has been built to the north of the site and a drive in cinema has been built to the west of the site.

Aerial Photograph – 1986

Since 1978 agricultural activity has appeared to have declined on the site, remaining only in a small portion on the east of the site. Buildings present on the site appear to remain unchanged. Large industrial/commercial development has appeared to the north west of the site.

Aerial Photograph – 1996

The large shed on the western area of the site has been removed and the site appears to be becoming grassed after the former agricultural activity on the site. The M4 Motorway has been constructed running parallel to the north boundary of the site since 1986. Industrial development has taken place to the east of the site.

Aerial Photograph – 2005

Industrial development to the east of the site has continued. The number of buildings on site appears to remain unchanged. Prospect reservoir remains to the south of the site.

The historical aerial photographs are attached in **Appendix C**.

3.2 GROUNDWATER BORE SEARCH

A groundwater bore search was undertaken by the Department of Natural Resources at the request of RCA. RCA is awaiting the information from this search, however it is not considered likely that there would be any information provided by a groundwater bore search which will create issues on the site.

3.3 REMOTE SITE INSPECTION

A site inspection was proposed to be undertaken during this investigation, however site access was not granted prior to the preparation of this report. Based on the historical aerial photographs it appears that the following potential contaminating activities have been undertaken on the site:

- Development of housing and associated buildings – there is potential for hazardous materials (such as asbestos) to have been used in the construction of buildings on the site.
- There is potential for past storage of chemicals and/or fuel on the site associated with agricultural activities.
- Agricultural activity – there is potential for residual contamination in shallow soils associated with the use of pesticides and herbicides.

The site does not appear to have been filled in the past and it is expected that the sub-surface soil will consist of natural soils. The surface soils are expected to consist of disturbed natural soil which was used for agriculture across the majority of the site.

Based on the information reviewed, the following contaminants of concern (COC) are provided:

- Asbestos – around areas of present and former buildings.
- Pesticides and herbicides – across the majority of the site.
- Hydrocarbons – in areas of present and former storage sheds and potential around present and former residential developments.
- Heavy metals – across the entire site from past agricultural use and development activities on the site.

Site inspection is considered to be required to make a more precise determination of the potential for contamination to exist on the site.

4 DISCUSSION

As described in the Section 149 Certificate provided by Blacktown City Council, the site is listed as bushfire prone land under the Rural Fires and Environmental Assessment Legislation Amendment Act 2002. The site has been identified on Councils Bush Fire Prone Land Map as being; *within 100m buffer around Category 1.* The Bush land surrounding Prospect reservoir poses significant bush fire threat and, as such, there may be limitations or requirements imposed on future developments within the buffer zone. Certain developments may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the Rural Fires Act 1997.

Review of historical aerial photographs has indicated there are areas of the site which have had buildings erected and removed. These areas would receive more investigation during any Phase 2 assessment of the site. There are also indications of potential site filling, particularly in areas where dams have been constructed. These areas would also be specifically targeted during any Phase 2 assessment of the site.

Due to the apparent past agricultural activities on the site there is considered potential for pesticide and herbicide contamination on the site.

While title search and groundwater bore search information has not formed part of this review, it is considered unlikely there would be any information contained within these documents which would alter the conclusions of this assessment.

5 CONCLUSIONS

RCA undertook a Phase 1 environmental site assessment at Lot 1 DP 1045771, Prospect.

RCA reviewed available historical aerial photographs and the current Section 149 Certificate for the site.

There were several areas of the site considered to require Phase 2 Assessment to assist in determining the suitability of the site for the proposed use of a Water Theme Park. These areas are as follows:

- Past agricultural activities across the majority of the site.
- Past and present developments on the site.
- Past and present dam locations on the site (including apparent filled dam areas).

It is considered that a Phase 2 environmental site assessment should be undertaken to address the potential contamination issues identified during this assessment and to determine the suitability of the site for the proposed development.

6 LIMITATIONS

This report has been prepared for Kellogg Brown & Root Pty Ltd in accordance with an agreement with RCA. The services performed by RCA have been conducted in a manner consistent with that generally exercised by members of its profession and consulting practice.

This report has been prepared for the sole use of Kellogg Brown & Root Pty Ltd. The report may not contain sufficient information for purposes of other uses or for parties other than Kellogg Brown & Root Pty Ltd. This report shall only be presented in full and may not be used to support objectives other than those stated in the report without written permission from RCA.

The information in this report is considered accurate at the date of issue with regard to the current conditions of the site. Conditions can vary across any site that cannot be explicitly defined by investigation.

Environmental conditions including contaminant concentrations can change in a limited period of time. This should be considered if the report is used following a significant period of time after the date of issue.

Yours faithfully

RCA AUSTRALIA

Matthew Clark
Senior Environmental Scientist

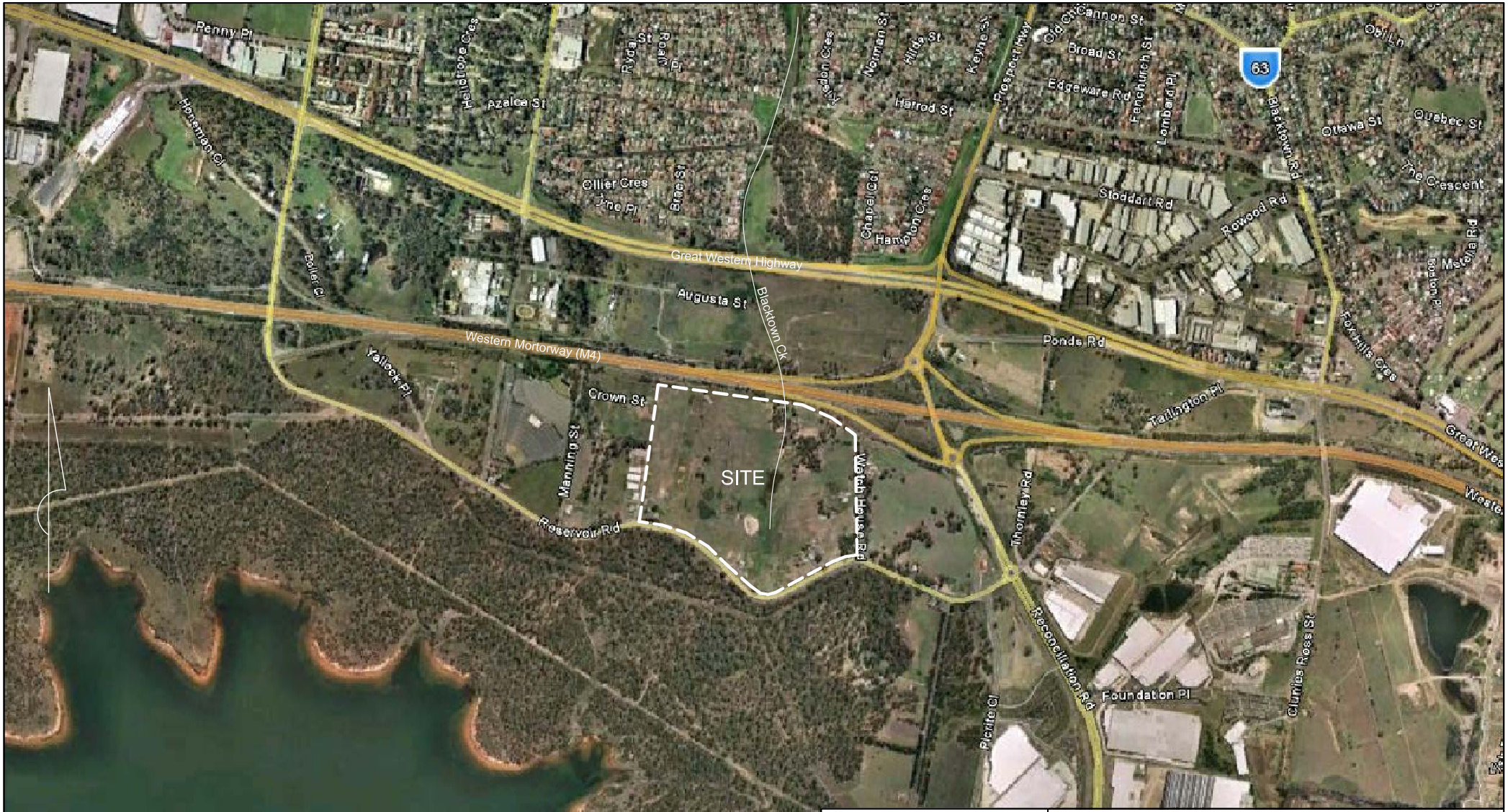
Geoff Mason
Manager Environmental Services

REFERENCES

[1] Blacktown City Council, *Planning Certificate under Section 149*, 11 December 2009.

Appendix A

Drawing



RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

LOT 1 DP 1045771
PHASE 1
SITE ASSESSMENT
RESERVOIR ROAD, PROSECT

CLIENT	Kellogg Brown and Root Pty Limited			PROJECT No	7600
DRAWN BY	MC	SCALE	1 : 15000 (A4)	DRAWING No 1	REV 0
APPROVED BY	GM	DATE	15/12/2009	OFFICE	NEWCASTLE

CDT–DWG–A4H–001/1

Appendix B

Section 149 Certificate

Blacktown City Council

PLANNING CERTIFICATE UNDER SECTION 149

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Certificate No.: 09-8592
Date: 11 DEC 2009
Page: 1 of 8
Enquiries: Ms Lucic
Applicants Ref.: 7600

Applicant MATTHEW CLARK OF
RCA AUSTRALIA PTY LTD
P O BOX 175
CARRINGTON 2294

Property LOT 1 DP 1045771

RESERVOIR ROAD,

Suburb PROSPECT Parish of Prospect

NOTE: **The land the subject of this Certificate is known to be located in the suburb of Prospect. For all correspondence and property transactions this suburb name is to be used.**

PART A
PRESCRIBED INFORMATION PROVIDED PURSUANT TO SECTION 149(2) OF THE *ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EP&A Act 1979)*

NOTE: The following information is provided pursuant to Section 149(2) of the EP&A Act 1979, as prescribed by Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*, and is applicable as of the date of this certificate.

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

1.1 Environmental Planning Instruments

As at the date of this certificate the abovementioned land is not affected by Blacktown Local Environmental Plan 1988.

1.2 Development Control Plans

As at the date of this certificate the abovementioned land is not affected by Blacktown Development Control Plan 2006.

1.3 Relevant State Environmental Planning Policies (SEPPs), including draft policies, or Regional Environmental Plans deemed to be SEPPs

General Manager Per:

State Environmental Planning Policy No. 1 - Development Standards

The policy requires that variations to development standards must meet the objectives of local plans and controls. It makes development standards more flexible. It allows councils to approve a development proposal that does not comply with a set standard where this can be shown to be unreasonable or unnecessary.

State Environmental Planning Policy No. 6 - Number of Storeys in a Building

This Policy sets out a method for determining the number of storeys in a building, to prevent possible confusion arising from the interpretation of various environmental planning instruments.

State Environmental Planning Policy No. 55 - Remediation of Land

This policy provides state-wide planning controls for the remediation of contaminated land. The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires councils to be notified of all remediation proposals.

State Environmental Planning Policy - Western Sydney Parklands

The aim of the policy is to put in place planning controls that will enable the Western Sydney Parklands Trust to develop the Western Parklands into multi-use urban parkland for the region of western Sydney.

State Environmental Planning Policy - Basix

This SEPP operates in conjunction with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004 to ensure the effective introduction of BASIX in NSW. The SEPP ensures consistency in the implementation of BASIX throughout the State by overriding competing provisions in other environmental planning instruments and development control plans, and specifying that SEPP 1 does not apply in relation to any development standard arising under BASIX. The draft SEPP was exhibited together with draft Environmental Planning and Assessment Amendment (Building Sustainability Index: BASIX) Regulation 2004.

State Environmental Planning Policy - Infrastructure 2007

This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. The SEPP supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.

State Environmental Planning Policy - Mining, Petroleum Production and Extractive Industries 2007

This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.

State Environmental Planning Policy - Temporary Structures and Places of Public Entertainment 2007

This policy provides for the erection of temporary structures and the use of places of public entertainment, while protecting public safety and local amenity. The SEPP supports the transfer of the regulation of places of public entertainment and temporary structures (such as tents, marquees and booths) from the Local Government Act 1993 to the Environmental Planning and Assessment Act 1979.

Sydney Regional Environmental Plan - Sydney Harbour Catchment

The Plan covers the area of Sydney Harbour, including Parramatta River and its tributaries and the Lane Cove River. The plan aims to establish a balance between promoting a prosperous working harbour, maintaining a healthy and sustainable waterway environment and promoting recreational access to the foreshore and waterways. It establishes planning principles and controls for the catchment as a whole . The plan consolidates and replaces the following instruments: - Sydney Regional Environmental Plan No. 22 - Parramatta River (SREP 22); - Sydney Regional Environmental Plan No. 23 - Sydney and Middle Harbours (SREP 23); and amends State Environmental Planning Policy No. 56 Sydney Harbour Foreshores and Tributaries (SEPP 56).

2. ZONING AND LAND USE UNDER RELEVANT ENVIRONMENTAL PLANNING INSTRUMENTS

(a) The land is unzoned under State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009.

(b) In accordance with SEPP (Western Sydney Parklands) 2009 the following development may be carried out without development consent, but only if it is carried out by or on behalf of a public authority: cafes; community facilities; entertainment facilities; environmental facilities; environmental protection works; function centres; information and education facilities; kiosks; landscaping; maintenance depots; public administration buildings; recreation areas; recreation facilities (outdoors); signage (for directional, informative, or interpretive purposes); ticketing facilities.

(c) Any development not specified in (b) above may be carried out in the Western Parklands only with consent.

(d) Development for the purposes of residential accommodation is prohibited in the Western Parklands.

(e) The land does not include or comprise a critical habitat. Critical habitat refers to habitat that is critical to the survival of endangered species, populations or ecological communities. Areas of critical habitat are declared under Part 3 of the Threatened Species Conservation Act 1995 and Part 7A of the Fisheries Management Act 1994.

(f) The land is not within a conservation area.

(g) This land does not contain an item of environmental heritage under the protection of Blacktown Local Environmental Plan 1988.

3. COMPLYING DEVELOPMENT

Complying development under the *General Housing Code* may not be carried out on the land. The land is affected by specific land exemptions:

(a) the land is bush fire prone.

(b) this Policy does not apply to land to which State Environmental Planning Policy (Western Sydney Parklands) 2009 applies.

Complying development under the *Housing Internal Alterations Code* may be carried out on the land.

Complying development under the *General Commercial and Industrial Code* may be carried out on the land.

Disclaimer: This information only addresses matters raised in Clause 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with the general requirements of the State Environmental Planning Policy (Exempt and Complying Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of State Environmental Planning Policy (Exempt and Complying Codes) 2008 is invalid.

4. COASTAL PROTECTION

The land is not affected by the operation of Sections 38 or 39 of the *Coastal Protection Act, 1979.*

5. MINE SUBSIDENCE

The land has not been proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961.*

6. ROAD WIDENING AND ROAD REALIGNMENT

Blacktown Local Environmental Plan 1988 and Blacktown Development Control Plan 2006 nominate preferred road patterns throughout the City.

The land is not affected by road widening/road realignment under Division 2 of Part 3 of the Roads Act 1993 and/or Blacktown Local Environmental Plan 1988.

7. COUNCIL AND OTHER PUBLIC AUTHORITY POLICIES ON HAZARD RISK RESTRICTIONS

Council has not adopted any policies to restrict the development of the land by reason of the likelihood of landslip, bushfire, tidal inundation, subsidence or the occurrence of acid sulphate soils. Although the Council has not adopted a specific policy to restrict development on bush fire prone land, it is bound by statewide bush fire legislation that may restrict development. In this regard, refer to point 11 below.

Council has adopted a policy on contaminated land which may restrict the development of this land. The land contamination policy applies when zoning or land use changes are proposed on land which has previously been used for certain purposes or has the potential to be affected by such purposes undertaken on nearby lands. Council's records may not be sufficient to determine all previous uses on the land, or determine activities that may have taken place on this land. Consideration of Council's policy and the application of provisions under the relevant State legislation and guidelines is necessary.

7A. FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION

There are currently no mainstream or backwater flood-related development controls adopted by Council that apply to the land subject to this Certificate.

8. LAND RESERVED FOR ACQUISITION

For the purposes of Section 27 of the Act, the corporation will be the relevant authority to acquire land reserved for certain public purposes if the land is required to be acquired under Division 3 of Part 2 of the Land Acquisition (Just Terms Compensation) Act 1991 (the owner-initiated acquisition provisions).

9. CONTRIBUTIONS PLANS

Council currently levies contributions under Section 94 of the EP&A Act 1979 for facilities and services. The further development of the subject land may incur such contribution.

10. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997

Item 10 to Schedule 4 of the Environmental Planning and Assessment Regulation 2000 has been repealed by the Contaminated Land Management Amendment Act 2008

11. BUSH FIRE PRONE LAND

The *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*, which came into force on 1 August 2002, introduced development provisions for bush fire prone land as shown on a Bush Fire Prone Land Map. "Bush fire prone land" is land that has been designated by the Commissioner of the NSW Rural Fire Service as being bush fire prone due to characteristics of vegetation and topography. The land the subject of this certificate has been identified on Council's Bush Fire Prone Land Map as being:

within 100m buffer around Category 1

On land that is bush fire prone, certain development may require further consideration under Section 79BA or Section 91 of the EP&A Act 1979 and under Section 100B of the *Rural Fires Act 1997*.

12. PROPERTY VEGETATION PLANS

Land to which this Certificate applies is not subject to a Property Vegetation Plan under the provisions of the *Native Vegetation Act 2003*.

13. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Land to which this Certificate applies is not the subject of an order made under the *Trees (Disputes Between Neighbours) Act 2006*.

14. DIRECTIONS UNDER PART 3A

Land to which this Certificate applies is not subject to the above.

15. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS HOUSING

Land to which this Certificate applies is not subject to the above.

16. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE

Land to which this Certificate applies is not subject to the above.

17. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING

Land to which this Certificate applies is not subject to the above.

18. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997 AND CONTAMINATED LAND MANAGEMENT AMENDMENT ACT 2008

(a) The land to which this certificate relates has not been declared to be significantly contaminated land at the date when the certificate was issued.

(b) The land to which the certificate relates is not subject to a management order at the date when the certificate was issued.

(c) The land to which this certificate relates is not the subject of an approved voluntary management proposal at the date when the certificate was issued.

(d) The land to which this certificate relates is not subject to an ongoing maintenance order as at the date when the certificate was issued.

(e) The land to which this certificate relates is not the subject of a site audit statement provided to the Council.

PART B
ADDITIONAL INFORMATION PROVIDED PURSUANT TO SECTION 149(5) OF THE *ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (EP&A Act 1979)*

NOTE: When information pursuant to section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that section. Council draws your attention to section 149(6) which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

This advice is provided in accordance with Section 149(5) and 149(6) of the EP&A Act 1979:

The land is affected by a tree preservation control under Blacktown Local Environmental Plan 1988. A person shall not ringbark, cut down, lop, top, remove, injure or wilfully destroy any tree, or cause any tree to be ringbarked, cut down, topped, lopped, injured or wilfully destroyed, except with the consent of the Council.

The provisions of any covenant, agreement or instrument applying to this land purporting to restrict or prohibit certain development may be inconsistent with the provisions of a Regional Environmental Plan, State Environmental Planning Policy or Blacktown Local Environmental Plan 1988, in which case the provisions of any such covenant, agreement or instrument may be overridden.

This land may contain an Aboriginal archaeological site under the protection of the National Parks and Wildlife Service Act, 1974. Before any development can proceed in an area known to contain Aboriginal archaeological sites, a consent to destroy must be obtained from the Director of the National Parks and Wildlife Service.

The *Threatened Species Conservation Act 1995* provides for the conservation of threatened species, populations and ecological communities of animals and plants. The *Threatened Species Conservation Act* amended the *Environmental Planning and Assessment Act 1979* to require, amongst other things, that:-

(a) a critical habitat (as defined in the *Threatened Species Conservation Act 1995)* be identified in environmental planning instruments;

(b) consent authorities and determining authorities must, when considering proposed development or an activity, assess whether it is likely to significantly affect threatened species, populations and ecological communities, or their habitats, and, if a significant effect is likely, to require the preparation of a species impact statement in accordance with the requirements of the *Threatened Species Conservation Act 1995;*

(c) consent authorities and determining authorities must, when considering proposed development or an activity, have regard to the relevant recovery plans and threat abatement plans; and

(d) a regime for concurrence and consultation between consent authorities and determining authorities and the Minister administering the *Threatened Species Conservation Act 1995* or the Director-General of the National Parks and Wildlife be instructed to aid the assessment process under the *Environmental Planning & Assessment Act 1979*.

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* provides protection for items of national significance. The Act requires a separate Commonwealth approval to be obtained where an action is likely to have significant impacts on items of national environmental significance. Items of national environmental significance include, amongst other things, nationally threatened animal and plant species and ecological communitites. The Commonwealth Department of the Environment and Water Resources should be contacted for further advice.

General Manager

Per: _____

End of Certificate

Appendix C

Historical Aerial Photographs

NOTE!
SLR has not received the remainder of this document to review

PHASE 2 ENVIRONMENTAL SITE ASSESSMENT

SYDNEY WET 'N' WILD PROSPECT NSW

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

- Geotechnical Engineering
- Engineering Geology
- Hydrogeology
- Contaminated Site Assessment
- Construction Materials Testing
- Environmental Monitoring

Prepared for

PROSPECT AQUATIC INVESTMENTS (PAI)

Prepared by

RCA AUSTRALIA

RCA ref 7600-403/2

DECEMBER 2010

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/1	1	Electronic (email)	Prospect Aquatic Investments	3.12.10
/1	1	Electronic report	RCA – job archive	3.12.10
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/2	2	Bound Report	Prospect Aquatic Investments	17.12.10
/2	1	Electronic report	RCA – job archive	17.12.10

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LABORATORY REPORT SHEETS

RCA ref 7600-403/2

17 December 2010

Prospect Aquatic Investments (PAI)
c/- Kellogg Brown and Root Pty Ltd
201 Kent Street
SYDNEY NSW 2000

Attention: Wojtek Zborowski

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

Geotechnical Engineering
Engineering Geology
Environmental Engineering
Hydrogeology
Construction Materials Testing

PHASE 2 ENVIRONMENTAL ASSESSMENT

SYDNEY WET 'N' WILD, PROSPECT, NSW

1 INTRODUCTION

RCA Australia (RCA) has been engaged by Kellogg Brown and Root to undertake a Phase 2 Environmental Site Assessment (ESA) at Lot 1 DP1045771, Prospect NSW at the request of Mr Wojtek Zborowski on behalf of Prospect Aquatic Investments (PAI).

It is understood that the site is planned to undergo redevelopment to accommodate a "*Wet 'n' Wild*" water theme park and as part of this redevelopment a Phase 2 ESA is required.

A number of potentially contaminating activities and consequently contaminants of concern were identified within the Phase 1 ESA report (Ref [1]) including asbestos, pesticides, herbicides, hydrocarbons and heavy metals and these are outlined in Section 3 of this report. The information obtained from the Phase 1 ESA report provided a basis for the development of a scope of works for the Phase 2 assessment of the site.

The purpose of this investigation is to develop a site characterisation by identifying the location and extent of any contamination that may be present on site. This will ensure appropriate materials management is undertaken prior to or during the construction phase of the project.

At the request of the client, RCA investigated the vacant land at the site only and did not undertake any investigation of the residential properties on the site.

2 SITE DESCRIPTION AND LOCATION

The site is located at Reservoir Road, Prospect and is approximately 25.5ha in size. The site of this assessment is known as Lot 1 DP1045771. The site is bordered by bushland to the south, rural residential properties to the east and west and the 'M4' Motorway to the north (**Drawing 1** in **Appendix A**).

The site can be classed as rural residential and, as such, contains some residential development and associated buildings (ie, sheds and garages) within the southern and eastern boundaries of the site. The site is generally flat to hilly and comprises a mix of different species of grass and sparse trees.

The closest environmental feature is Blacktown Creek which appears to begin as a low-lying catchment in the centre of the site and continues to run north (**Drawing 1** in **Appendix A)**. The Prospect reservoir is located approximately 700m to the south of the site and is considered the closest sensitive environmental receptor. The closest sensitive human health land use to the site is the *Blacktown Happy Days Kindergarten*, which is located approximately 2.5km to the north of the site.

3 SITE HISTORY AND BACKGROUND INFORMATION

The site is currently unzoned under State Environmental Planning Policy (SEPP) (Western Sydney Parklands) 2009. The site is presently utilised as rural residential land, however the proposed site use is for a commercial leisure development.

Review of the *Section 149 Certificate for the site, contained within the Phase 1 report (Ref [1])* shows that the land is not affected by the Blacktown Development Control Plan (DCP) 2006 or the Blacktown Local Environment Plan (LEP) 1998. A number of State Environmental Planning Policies (SEPPs) that do apply to the land can be found within the Phase 1 report (Ref [1]).

Based on a review of site history contained within the Phase 1 report (Ref [1]), including historical aerial photographs for the years 1951, 1961, 1978, 1986, 1996 and 2005, the following Contaminants of Concern (COCs) have been identified that may be associated with activities undertaken at the site:

- Asbestos – in fill material from demolition activities and around areas of present and former buildings.
- Pesticides and herbicides – across the majority of the site from past agricultural use.
- Hydrocarbons – in fill material and areas of present and former storage sheds and potentially around present and former residential developments.
- Heavy metals – across the entire site from past agricultural use and development activities on the site.

Whilst no Phase 2 works were undertaken on the residential properties on the site at the request of the client, it was noted that all appeared to contain asbestos building products in their construction.

4 FIELDWORK

An environmental scientist experienced in the handling of potentially contaminated soil and groundwater undertook the fieldwork from 18 to 22 October 2010.

The collection of all soil and groundwater samples was undertaken in compliance with RCA methodology, which forms part of our accreditation. Soil and groundwater sample collection methods comprised:

- disturbed soil samples from the bulk of soil within the backhoe bucket;
- disturbed samples direct from the hand auger; and
- hand bailer – following bore development (three (3) bore volumes) and the purging of one bore volume, continuing until pH and EC readings were within 0.1 units to ensure a representative sample is collected.

These soil and groundwater collection methods were chosen for the site due to the requirement for limited disturbance at the site and limited access at the site.

Test pitting was undertaken at a total of twenty four (24) locations using a rubber-tyred backhoe. Test pits were located in a 50m spaced general grid pattern across the site (**Drawing 1**, **Appendix A**) and undertaken to a depth of approximately 2.0m or until excavator bucket refusal on hard materials. Samples were taken directly from the backhoe bucket from two (2) separate depths varying between 0 to 0.5m in fill materials and 1.0 to 1.5m from natural materials from each test pit. Deeper samples were not able to be obtained due excavator bucket refusal on hard materials.

Surface soil samples were collected from a total of sixteen (16) locations using a hand auger. Again, these locations were located in a grid pattern across the site (**Drawing 1**, **Appendix A**) and were collected from depths varying between 0 to 0.5m.

All soil samples collected were analysed for total petroleum hydrocarbons (TPH), Benzene Toluene Ethyl-benzene and Xylenes (BTEX), and metals 8 (As, Cd, Cr, Cu, Ni, Pb, Zn and Hg).

All surface soil samples from hand auger locations, as well as samples collected from TP4a, TP8a, TP9a, TP9b, and TP11a had the additional analysis of Polycyclic Aromatic Hydrocarbons (PAHs), Organo-chlorine pesticides (OCPs) and Organo-phosphorus pesticides (OPPs) to assess potential impacts from historical agricultural practices in these areas.

A total of five (5) groundwater monitoring wells (piezometers) were installed at targeted locations across the site. These wells were developed by removing three times the well volume, at which time the rising head permeability was measured. Permeability calculations are attached in **Appendix D**. Groundwater samples were collected from all locations and analysed for TPH, BTEX, Metals (8), and PAHs (low level).

Decontamination of the sampling equipment was undertaken by washing the bailer with Decon 90 then rinsing with potable water between samples. No decontamination of the backhoe bucket was undertaken, however the collection of the sample from within the bulk of the excavated soil material (rather than against the side of the bucket) is considered to prevent potential cross-contamination.

All test pits were logged by a qualified scientist and all samples were described for future reference.

Examination of the NSW Department of Mineral Resources 1:100,000 scale Penrith geology sheet (Ref [8]), indicates the site lies within the mapped extent of the Bringelly Shale of Triassic age. Listed rock types for the Bringelly Shale are: shale, carbonaceous claystone, laminite, fine to medium grained lithic sandstone and rare coal and tuff.

The subsurface profile encountered on the site is detailed on the attached field logs and is summarised in **Table 1**.

Table 1 *General Summary of Subsurface Conditions (or Summary of Subsurface Conditions at Test Locations)*

Typical Depth (m)		Material Type	Description/Comment
Top	Base		
0.0	0.2-0.4	Filling	Uncontrolled. Mixture of clay and topsoil, with occasional bricks.
0.2-0.4	0.4-0.6	Topsoil	Silty sand, wet, black. Typically 200mm thick.
0.4-0.6	1.0-1.2	Clay	Stiff becoming hard with depth. Moist, brown.
1.0-1.2	>1.5	Claystone rock	Highly weathered, friable, white.

Test pit logs are attached in **Appendix B**.

Fill was identified at Reservoir Road extending in a northerly direction and is outlined on **Drawing 1**, **Appendix A**.

The depth to groundwater measured at each of the monitoring wells ranged between 0 to 9.26m below ground level. A summary table of depths is presented below in **Table 2**.

Table 2 *Summary of Piezometer Specifications and Depth of Groundwater*

	BH10	BH9	BH8	BH5	BH2
Stick-up (m)	0.6	0.62	0.54	0.65	0.45
Depth to aquifer (m)	9.86	1.8	5.45	0.65	1.33
Depth of bore (m)	10.33	7.74	10.51	8.94	6.93
Depth Below Ground-Level (m)	9.26	1.18	4.91	0	0.88

A rising head permeability test was conducted for each of the monitoring wells. This was done by removing one bore volume using a bailer and measuring the rate at which the bore recharged. Permeability calculations are attached in **Appendix D**.

QUALITY ASSURANCE/QUALITY CONTROL

All samples were preserved as recommended by the analytical laboratory and stored in the field in an Esky on ice (at approximately 4^{o}C). Samples were then stored in the RCA refrigerator until transport.

All samples were sent under Chain of Custody (COC) documentation detailing the sample identification, required analysis, the name of the sampler and date released from custody. The laboratory acknowledged the receipt of samples by signature and date and returned the COC with a sample receipt notice indicating the condition of the samples received upon receipt.

A total of eight (8) soil duplicate samples and four (4) soil blanks were submitted blind to the laboratory for analysis, including four (4) inter-laboratory and four (4) intra-laboratory duplicates. This represents a percentage of 11%, in accordance with the Australian Standard and RCA protocol.

One water duplicate and one blank were submitted blind to the laboratory, in accordance with RCA protocol.

Results are summarised in **Appendix C**.

Results indicate a total of three (3) soil analyses which report a Relative Percentage Difference (RPD) in excess of the acceptance criteria:

- TP15a/QA1 - Reported an elevated RPD for chromium, copper nickel and zinc. This sample is described as red/brown silty CLAY and it is therefore considered that sample heterogeneity is not the likely cause of the high RPD. Whilst there is some uncertainty associated with this sample, both the sample and duplicate reported concentrations well below the site guidelines and the data is considered to be reliable for use in this report.

- TP18b/QA3 - Reported an elevated RPD for copper. This sample is described as grey/red/brown SILTSTONE and it is therefore considered that sample heterogeneity is not the likely cause of the high RPD. Whilst there is some uncertainty associated with this sample, both the sample and duplicate reported concentrations well below the site guidelines and data is considered to be reliable for use in this report.

- TP19a/QA4 - Reported an elevated RPD for nickel. This sample is described as red silty CLAY with grey sandstone bands and it is therefore considered that sample heterogeneity is the likely cause of the high RPD due to the banding present in the sample. Both the sample and duplicate reported concentrations well below the site guidelines and data is considered to be reliable for use in this report.

Results indicate a total of five (5) soil and one (1) groundwater field blank analyses which reported analyte concentrations that were equal to or in excess of the laboratory Limit of Reporting (LOR):

- QB1 Reported detect results for As, Cr, Ni, and Zn.
- QB2 Reported detect results for As, Cr, Cu, Ni, and Zn.
- QB3 Reported detect results for As, Cr, Ni, and Zn.
- QB4 Reported detect results for Cr, and Ni.
- WB1 Reported detect results for Cr, Cu and Zn.

All blanks reported the above analytes equal to or slightly above the LOR. This is considered to have resulted from the source of the blank material and not as a result of cross-contamination. This minor non-compliance is not considered to affect the overall integrity of results.

Labmark was chosen as the primary laboratory and ALS was chosen as the secondary laboratory.

All laboratories used for analysis are NATA accredited and are experienced in the analytical requirements for potentially contaminated soil and groundwater.

Both laboratories undertook internal quality assurance testing. Results are contained within the laboratory report sheets, **Appendix E**. **Table 3** presents a summary of their review.

Table 3 *Internal Quality Assurance Review*

	Number Samples (including QA)	Laboratory Duplicates	Spikes	Laboratory Control Samples	Laboratory Blanks
Requirement		**10%**	**5%**	**One every batch**	**One every batch**
Soil					
BTEX	70	8	4	2	2
TPH C_6-C_9	70	8	4	2	2
TPH C_{10}-C_{36}	70	8	4	2	2
Metals (As, Cd, Cr, Cu, Ni, Pb, Zn and Hg)	70	8	4	2	2
PAHs	24	3	2	2	2
OCP/OPP	24	3	2	2	2
Water					
BTEX	6	1	1	1	1
TPH C_6-C_9	6	1	1	1	1
TPH C_{10}-C_{36}	6	1	1	1	1
Metals (As, Cd, Cr, Cu, Ni, Pb, Zn and Hg)	6	1	1	1	1
PAHs	6	1	1	1	1

Examination of the above table reveals that Labmark have undertaken laboratory quality assurance testing in accordance with the NEPM.

- Recoveries of Surrogates were within acceptance criteria of 70-130%.
- Holding Times were within laboratory specified timeframes.
- Recoveries of laboratory control samples were within the acceptance criteria of 70-130%.
- Recoveries of Spikes were within acceptance criteria of 70-130% with the exception of:
    - E050669 - Copper in Sample TP1b which reported recoveries of 45%;
    - E050669 - Copper in Sample TP6b which reported recoveries of 66%;
    - E050669 - Arsenic, Chromium and Copper in Sample ES10 which reported recoveries of 44%, 34%, and 10% respectively.
    - E050669 - Arsenic in Sample QA1 which reported recoveries of 67%.

The non-compliance of some spike recoveries is considered to be minor due to the good performance of external QA, remaining internal QA and low concentrations in samples compared to guideline values.

- Relative Percentage Differences for Duplicates were within acceptance criteria the exception of:
    - E050669 - Arsenic in Sample TP23b reported a RPD of 120%. This sample is described as mottled brown/grey silty CLAY and it is therefore considered that sample heterogeneity is not the likely cause of the high RPD. There is some uncertainty associated with this sample, however a triplicate undertaken indicated that the representative concentration is most likely similar to that reported for the duplicate and as such this value has been used in the characterisation of the site.
- No Laboratory Blank result was detected above the PQL.

It is therefore considered that the data obtained from this testing is accurate and reliable in as far as it can be ascertained.

5 SITE GUIDELINES

The following guidelines have been adopted for the assessment of this site.

5.1 SOIL

5.1.1 DECC – WASTE CLASSIFICATION GUIDELINES (2008)

These guidelines have been prepared by the DECC and apply to any material which requires offsite disposal. Any material which is required to leave the site must be characterised against the NSW waste classification guidelines prior to disposal off site to a licensed facility.

5.1.2 NEPM – NATIONAL ENVIRONMENT PROTECTION (ASSESSMENT OF SITE CONTAMINATION) MEASURE (1999)

The guidelines used for the assessment of the soil on site were sourced from the National Environment Protection Measure (NEPM) for the Assessment of Site Contamination, 1999 (Ref [4]). Schedule B (1) of this measure provides a table for the investigation concentrations for contaminants based on human health risk and certain exposure scenarios due to site use.

The site can currently be classed as rural residential, however based on information provided to RCA the intended site use will be of a commercial nature. While HIL 'F' (commercial) guidelines are applicable for the intended site use, RCA has adopted the more conservative HIL 'A' (residential) guidelines for comparison of analytical results.

RCA therefore considers the following guidelines to be appropriate for site assessment:

- HIL 'A' Residential, access to soil, fruit and vegetable consumption <10%, no poultry, no groundwater consumption: This category includes children's day care centres, kindergartens, preschools and primary schools.

Results were also compared to the ecological investigation levels (EILs).

The NEPM sets out an acceptance procedure by which sites can be considered as suitable for use depending on the sample results. The mean of the sample results can be compared to the guidelines as long as:

- no single value exceeds 250% of the chosen guidelines;
- the standard deviation of the results for each analyte is less than 50% of the guideline.

However, this approach does not allow for sampling and analytical variability, therefore the Sampling Design Guidelines (Ref [2]) recommends the use of the 95%UCL_{ave}, calculated for a site using samples collected from the same lithology, for comparison with the guidelines.

5.1.3 NSWEPA – SERVICE STATION GUIDELINES

The guidelines adopted for TPH C_6-C_9, TPH C_{10}-C_{36} and BTEX were the "Guidelines for Assessing Service Station Sites" produced by the NSWEPA, December 1994, (Ref [3]). These guidelines are applicable for soil and water concentrations on all sites where fuel has been stored.

5.2 WATER

5.2.1 DECC 2007, GUIDELINES FOR THE ASSESSMENT AND MANAGEMENT OF GROUNDWATER CONTAMINATION

These groundwater quality guidelines have been introduced by the NSWDECC (Ref [5]). These guidelines recommend that ANZECC 2000 (Ref [6]) investigation levels be adopted as Groundwater Investigation Levels (GILs) for aquatic ecosystems and NHMRC and NMMC 2004 (Ref [7]) for drinking water GILs.

ANZECC 2000 is a complex set of guidelines that consider not only the level of protection (eg, 99% or 95%) but also the state of the receiving water (eg, moderately disturbed). For the protection of aquatic ecosystems the DECC recommend the use of 95% protection for all analytes. The following comments are additionally made:

- Where the existing generic GIL is below the naturally occurring background concentration of a particular contaminant, the background concentration becomes the default GIL.

- Where PQLs are greater than the recommended GIL the PQL is adopted as the GIL. Where background concentrations are proven to be greater than the GIL, the background concentration is adopted as the GIL.

- Where there is insufficient data for the derivation of marine water guidelines it is allowable to use fresh water guidelines (Section 8.3.4.5, pg 8.3-36, (Ref [6]).

5.3 APPROPRIATENESS OF THE GUIDELINES

The NEPM document has been approved by the NSWEPA for use on potentially contaminated sites and supersedes most of the preceding reference documents. The Service Station Guidelines are still current for TPH and BTEX concentrations. The DECC Waste Classification guidelines are current for classification of waste material in NSW.

The exposure settings on which the NEPM guidelines are based directly affect the investigation concentration used to assess the contamination status of the site.

The DECC guidelines are applicable for groundwater and are the current endorsed guidelines.

6 RESULTS

Phase 2 ESA was undertaken on the site and consisted of collection of soil samples from test pits excavated by backhoe excavator and shallow soil samples collected by use of hand auger. The following presents a summary of the sampling and analysis undertaken:

- A total of sixty two (62) soil samples collected from test pits were analysed for TPH, BTEX and metals 8.

- Sixteen (16) surface soil samples, as well as samples TP4a, TP8a, TP9a, TP9b, and TP11a had the additional analysis of PAHs, OCPs and OPPs.

- A total of five (5) groundwater samples were collected and analysed for TPH, BTEX, Metals 8, and PAHs (low level).

6.1 SOIL RESULTS

All soil results are compared to the relevant guidelines in **Appendix C**. In summary:

- Sixty two (62) soil samples were analysed for BTEX with all samples reporting concentrations below the laboratory Limit of Reporting (LOR) and therefore below the site guidelines.

- Sixty two (62) soil samples were analysed for TPH C_6-C_{36} with sample results ranging from below the laboratory LOR to 500mg/kg, and all results were below the site guidelines.

- Twenty one (21) soil samples were analysed for PAHs with all samples reporting concentrations below the laboratory LOR and therefore below the site guidelines.

- Sixty two (62) soil samples were analysed for Metals (As, Cd, Cr, Cu, Ni, Pb, Zn and Hg) with all metal species reporting concentrations below the site guideline. Samples TP3b, ES14 and ES15 reported arsenic concentrations of 26mg/kg, 21mg/kg and 23mg/kg respectively. While these concentrations slightly exceed the EIL guidelines (20mg/kg) their ecological impact is considered to be insignificant. All samples reported chromium concentrations above EIL guidelines.

- Twenty One (21) soil samples were analysed for OCPs with all samples reporting concentrations that are below the site guidelines.

- Twenty one (21) soil samples were analysed for OPPs with all samples reporting concentrations below the laboratory LOR. It should be noted that there is no specific guidelines for this group of analytes.

6.2 GROUNDWATER RESULTS

All groundwater results are compared to the relevant guidelines in **Appendix C**. In summary:

- Five (5) groundwater samples were analysed for BTEX with all samples reporting concentrations below the laboratory LOR and therefore below the site guidelines.

- Five (5) groundwater samples were analysed for TPH with all samples reporting concentrations below the site guidelines, with the exception of **EW1** and **EW2** which reported a concentration of 6900µg/L and 320µg/L for TPH C_6-C_{36} respectively. The guideline is 600µg/L.

- Five (5) groundwater samples were analysed for PAHs (low level) with all samples reporting concentrations below the site guidelines, with the exception of **EW1** which reported a concentration of 5µg/L for the analyte phenanthrene. The guideline is 2µg/L.

- Five (5) groundwater samples were analysed for metals. Sample EW2 reported concentrations for Cd, Ni and Zn in excess of the EIL guidelines. Sample EW3 and EW4 reported concentrations for Ni and Zn in excess of the EIL guidelines. Sample EW5 reported concentrations for Zn in excess of the EIL guideline.

The permeability was determined for all monitoring wells (BH2, BH5, BH8, BH9 and BH10). A summary of permeabilities is presented in **Table 3** and permeability calculations are presented as **Appendix D**.

Table 3 *Summary of Borehole Permeabilities*

	BH2	BH5	BH8	BH9	BH10
Permeability	8.3E-07	1.0E-07	1.4E-07	2.1E-07	7.7E-09

The direction and rate of groundwater flow was determined by creating a groundwater contour map (**Drawing 2**, **Appendix A**). Groundwater is noted as flowing from a north-east to a south-west direction at a rate of approximately 0.10 m/year.

7 DISCUSSION

Fill material was identified in one area of the site and is shown on **Drawing 1, Appendix A**. The material was identified from the bend on Reservoir Road and extends north towards the dam in the middle of the site (encompassing TP7, TP8, TP9 and TP11).

A trace amount of bonded asbestos (AC) was identified within a bulk sample taken from TP7 at a depth of approximately 1.20 to 1.50m. There was no AC material noted during excavation of any test pits and therefore the extent of AC impact is considered to be limited. It should be noted during site works that there is potential for some AC to be present within the fill material. Should any further asbestos be identified during site works, advice should be sought from a suitably qualified consultant.

Some soil samples (TP3b, ES14 and ES15) reported arsenic in excess of the EIL guideline and all soil samples exceeded the EIL guideline for chromium. These concentrations exceeded the EIL only slightly and therefore are not considered to be of concern.

Groundwater sample EW1 and EW2 reported TPH C_{10}-C_{36} concentrations of 6900µg/L and 320µg/L, respectively. These elevated concentrations are in excess of the adopted ANZECC guideline (95%Fresh[A]). Sample EW1 also recorded phenanthrene concentrations of 5µg/L, slightly in excess of the guideline (4µg/L). Following discussion with the drilling sub-contractor it was noted that drilling oils were not used during the installation of any of the monitoring wells. Based on discussion with a RCA senior engineering geologist it is believed the elevated TPH concentrations are likely due to natural shale oil deposits within the Bringelly Shale and are considered to be limited in area. Additional monitoring could be undertaken to confirm the concentrations of TPH in the groundwater at locations where TPH was identified. Due to the low permeability of underlying soils, low groundwater sensitivity at the site, and isolated occurrence RCA considers no specific soils or groundwater remediation is required.

Based on the stratigraphy of the site it is likely that the monitoring wells intersect numerous confined aquifers. The rock strata and type (shale and claystone) are likely placing the aquifer(s) under pressure which is resultant in raised groundwater levels within monitoring wells. This is not considered to affect the integrity of the data obtained and as such is appropriate for use in characterisation of this site. It has been determined that groundwater is flowing to the south west direction through the site at a rate of approximately 0.10 m/year. It should be noted that this is directly towards the Prospect Reservoir and is likely a source of recharge for the reservoir. The proposed development is not considered likely to have an impact on the groundwater of the region. In the case that groundwater is to be encountered during construction works; a hydro-geological study may be required and a suitably qualified professional should be contacted for advice.

8 CONCLUSIONS

Test pitting was undertaken at a total of twenty four (24) locations across the site in a general grid-like pattern to a depth of approximately 2.0m or until bucket refusal. Samples were collected from between 0-0.5m and 1-1.5m and analysed or TPH, BTEX and metals. Samples collected from TP4a, TP8a, TP9a, TP9b and TP11a had the additional analysis of OCPs, OPPs and PAHs.

Surface soil samples were collected at a total of sixteen (16) locations across the site in a grid-like pattern from depths ranging between 0-0.5m. All samples were analysed for TPH, BTEX, metals 8, OCPs, OPPs, and PAHs.

Groundwater monitoring wells were installed at a total of five (5) locations (BH2, BH5, BH8, BH9 and BH10) with samples collected from each and analysed for TPH, BTEX, metals 8, and PAHs (low level). The permeability was calculated for each monitoring well by conducting a rising head permeability test and measuring the rate at which the bore recharged.

All soil analyses reported analyte concentrations below site guidelines and while some metals slightly exceed EIL guidelines their ecological impact is considered insignificant.

Groundwater sample EW1 and EW2 reported elevated TPH C_{10}-C_{36} concentrations. Sample EW1 also reported phenanthrene concentrations slightly in excess of the guideline. Following discussion with a senior engineering geologist it is believed that these elevated concentrations are likely due to natural shale oil deposits. Due to the low permeability and isolated occurrence RCA considers no specific remediation is required. While some metals reported concentrations slightly in excess of the EIL guidelines their ecological impact is considered insignificant.

RCA considers from the site characterisation of soil and groundwater contamination that the site is appropriate for its intended redevelopment.

9 LIMITATIONS

This report has been prepared for PAI in accordance with an agreement with RCA. The services performed by RCA have been conducted in a manner consistent with that generally exercised by members of its profession and consulting practice.

This report has been prepared for the sole use of PAI. The report may not contain sufficient information for purposes of other uses or for parties other than PAI. This report shall only be presented in full and may not be used to support objectives other than those stated in the report without written permission from RCA.

The information in this report is considered accurate at the date of issue with regard to the current conditions of the site. Conditions can vary across any site that cannot be explicitly defined by investigation.

Environmental conditions including contaminant concentrations can change in a limited period of time. This should be considered if the report is used following a significant period of time after the date of issue.

Yours faithfully

RCA AUSTRALIA

Nathan Hills
Environmental Scientist

David Johnson
Principal Environmental Engineer

REFERENCES

[1] RCA, *Phase 1 Environmental Site Assessment*, 5 January 2010.

[2] NSWEPA, *Sampling Design Guidelines*, September 1995.

[3] NSWEPA, *Guidelines for Assessing Service Station Sites*, December 1994.

[4] NEPC, *National Environment Protection (Assessment of Site Contamination) Measure*, 1999.

[5] DECC, *Contaminated Sites – Guidelines for the Assessment and Management of Contaminated Groundwater*, March 2007.

[6] ANZECC, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, October 2000.

[7] National Health and Medical Research Council, *Australian Drinking Water Guidelines*, 1996.

[8] RCA, Preliminary Geotechnical Assessment, 17 December 2009

GLOSSARY

Aerobic	An environment that has a partial pressure of oxygen similar to normal atmospheric conditions.
AHD	Australian Height Datum (m), based on a mean sea level.
ANZECC	Australian and New Zealand Environmental Conservation Council.
Brownfield	An abandoned, idled, or under-used industrial or commercial facility where expansion or redevelopment is complicated by a real or perceived environmental contamination.
DECC	Department of Environment and Climate Chance
DLWC	Department of Land and Water Conservation.
EMP	Environmental Management Plan.
HIL 'A'	Standard Residential Health Based Investigation Level, pg 9 Schedule B1, *National Environment Protection (Assessment of Site Contamination) Measure.*
HIL 'F'	Commercial/industrial Health Based Investigation Levels, pg 9 Schedule B1 *National Environment Protection (Assessment of Site Contamination) Measure*.

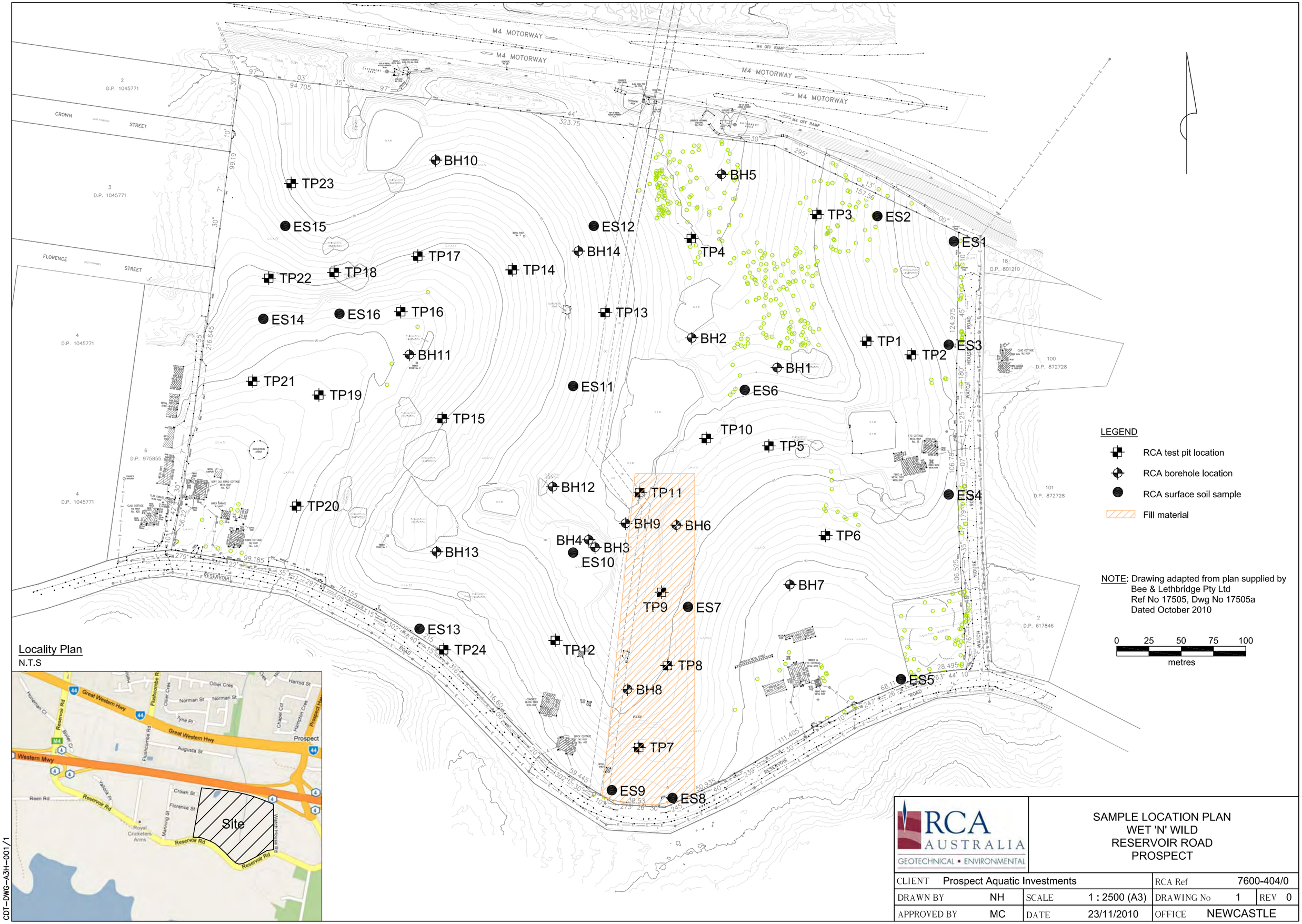
Hotspot	A sample, or location, where contaminant concentrations exceed 250% of the appropriate guideline.
Interlaboratory	Prefix inter – as meaning between. A sample sent to two different laboratories for comparative analysis.
Intralaboratory	Prefix intra – as meaning within. A sample sent twice to the sample laboratory for comparative analysis.
kg	kilogram, 1000 gram.
LEP	Local Environment Plan. A planning tool for the Local Government.
LOR	Limit of Reporting.
µg	microgram, 1/1000 milligram.
mg	milligram, 1/1000 gram.
NEPC	National Environment Protection Council.
NEPM	National Environment Protection Measure.
NHMRC	National Health and Medical Research Council.
PPE	Personal Protective Equipment.
PQL	Practical Quantitation Limit.
QA	Quality Assurance.
QC	Quality Control.
RPD	Relative Percentage Difference.
Weathering	All physical and chemical changes produced by atmospheric agents.

<u>Chemical Compounds</u>

BTEX	Benzene, Toluene, Ethylbenzene, Xylene.
OCPs	Organochlorin Pesticides.
PAH	Polycyclic Aromatic Hydrocarbons. Multi-ring compounds found in fuels, oils and creosote. These are also common combustion products.
TPH	Total Petroleum Hydrocarbons.

Appendix A

Drawings



LEGEND

- RCA test pit location
- RCA borehole location
- RCA surface soil sample
- Fill material

NOTE: Drawing adapted from plan supplied by Bee & Lethbridge Pty Ltd
Ref No 17505, Dwg No 17505a
Dated October 2010

0 25 50 75 100
metres

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

SAMPLE LOCATION PLAN
WET 'N' WILD
RESERVOIR ROAD
PROSPECT

CLIENT	Prospect Aquatic Investments			RCA Ref	7600-404/0
DRAWN BY	NH	SCALE	1 : 2500 (A3)	DRAWING No 1	REV 0
APPROVED BY	MC	DATE	23/11/2010	OFFICE	NEWCASTLE

CDT-DWG-A3H-001/1

Appendix C

ASET Soil Contamination Assessment Adjacent to the Eastern Boundary (2012)

Proposed Wet n' Wild Theme Park
Reservoir Rd, Prospect
Report Number 610.11873 R03

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref: ASET30805/ 33985 / 1 - 30
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

2 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter,

Asbestos Identification
This report presents the results of thirty samples, collected[×] from the front section of the barricaded area near the main entrance to the site on 31 August 2012, for analysis for asbestos.

1.Introduction: Thirty samples collected[×] were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results : **Sample No. 1. ASET30805 / 33985-1 / 1. Sample 1**
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, insect matter, fragments of plaster, brick and paint flakes.
No asbestos detected.

Sample No. 2. ASET30805 / 33985-1 / 2. Sample 2
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of fibro plaster, cement, brick and fibre cement material*.
Chrysotile^* asbestos and Crocidolite* asbestos detected.

Sample No. 3. ASET30805 / 33985-1 / 3. Sample 3
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of soft fibro plaster[#].
Chrysotile[#] asbestos, Amosite[#] asbestos and Crocidolite[#] asbestos detected.

Sample No. 4. ASET30805 / 33985-1 / 4. Sample 4
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of soft fibro plaster[#].
Chrysotile[#] asbestos, Amosite[#] asbestos and Crocidolite[#] asbestos detected.

Sample No. 5. ASET30805 / 33985-1 / 5. Sample 5
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, insect matter and fragments of plaster.
No asbestos detected.

Sample No. 6. ASET30805 / 33985-1 / 6. Sample 6
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and fibre cement*.
Chrysotile* asbestos and Crocidolite* asbestos detected.

Sample No. 7. ASET30805 / 33985-1 / 7. Sample 7
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, synthetic mineral fibres, plant matter and insect matter.
No asbestos detected.

Sample No. 8. ASET30805 / 33985-1 / 8. Sample 8
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 9. ASET30805 / 33985-1 / 9. Sample 9
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 10. ASET30805 / 33985-1 / 10. Sample 10
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 11. ASET30805 / 33985-1 / 11. Sample 11
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 12. ASET30805 / 33985-1 / 12. Sample 12
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 13. ASET30805 / 33985-1 / 13. Sample 13
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 14. ASET30805 / 33985-1 / 14. Sample 14
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, insect matter and fragments of plaster.
No asbestos detected.

Sample No. 15. ASET30805 / 33985-1 / 15. Sample 15
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster# and cement.
Chrysotile^# asbestos and Crocidolite^# asbestos detected.

Sample No. 16. ASET30805 / 33985-1 / 16. Sample 16
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and insect matter.
No asbestos detected.

Sample No. 17. ASET30805 / 33985-1 / 17. Sample 17
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter and fragments of soft fibro plaster#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 18. ASET30805 / 33985-1 / 18. Sample 18
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement and brick.
Chrysotile^# asbestos, Amosite^#asbestos and Crocidolite^# asbestos detected.

Sample No. 19. ASET30805 / 33985-1 / 19. Sample 19
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement, brick and paint flakes.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 20. ASET30805 / 33985-1 / 20. Sample 20
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 21. ASET30805 / 33985-1 / 21. Sample 21
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 22. ASET30805 / 33985-1 / 22. Sample 22
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement and brick.
Chrysotile^#asbestos, Amosite^# asbestos and Crocidolite^#asbestos detected.

Sample No. 23. ASETe30805 / 33985-1 / 23. Sample 23
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 24. ASET30805 / 33985-1 / 24. Sample 24
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibro plaster#, cement and brick.
Chrysotile^# asbestos, Amosite^#asbestos and Crocidolite^# asbestos detected.

Sample No. 25. ASET30805 / 33985-1 / 25. Sample 25
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 26. ASET30805 / 33985-1 / 26. Sample 26
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 27. ASET30805 / 33985-1 / 27. Sample 27
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 28. ASET30805 / 33985-1 / 28. Sample 28
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 29. ASET30805 / 33985-1 / 29. Sample 29
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 30. ASET30805 / 33985-1 / 30. Sample 30
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

× Sampling procedure not covered by the Scope of the Accreditation.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denote asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET30805/ 33985 / 31 - 60
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

2 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills
NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter

Asbestos Identification
This report presents the results of thirty samples, collected***** from the front section of the barricaded area near the main entrance to the site on 31 August 2012, for analysis for asbestos.

1.Introduction: Thirty samples collected***** were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results : **Sample No. 31. ASET30805 / 33985 / 31. Sample No 31.**
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 32. ASET30805 / 33985 / 32. Sample No 32.
Approx dimensions 8.0 cm x 8.0 cm x 4.75 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and cement.
No asbestos detected.

Sample No. 33. ASET30805/ 33985/ 33. Sample No 33.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 34. ASET30805 / 33985 / 34. Sample No 34.
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 35. ASET30805 / 33985 / 35. Sample No 35.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 36. ASET30805 / 33985 / 36. Sample No 36.
Approx dimensions 8.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibre cement*, fibro plaster #, cement.
Chrysotile^*# asbestos, Amosite^*# asbestos and Crocidolite#*^ asbestos detected.

Sample No. 37. ASET30805 / 33985 / 37. Sample No 37.
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibro plaster#, fibre cement* and cement.
Chrysotile^*# asbestos, Amosite^*# asbestos and Crocidolite^*# asbestos detected.

Sample No. 38. ASET30805 / 33985 / 38. Sample No 38.
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 39. ASET30805 / 33985 / 39. Sample No 39.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 40. ASET30805 / 33985 / 40. Sample No 40.
Approx dimensions 8.0 cm x 8.0 cm x 4.75 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibro plaster#, fibre cement* and brick.
Chrysotile^*# asbestos, Amosite^*# asbestos and Crocidolite^*# asbestos detected.

Sample No. 41. ASET30805 / 33985 / 41. Sample No 41.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibre cement*, fibro plaster# and brick.
Chrysotile #^* asbestos, Amosite#^* asbestos and Crocidolite#^* asbestos detected.

Sample No. 42. ASET30805 / 33985 / 42. Sample No 42.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster and brick.
Chrysotile #^*asbestos, Amosite #^* asbestos and Crocidolite #^* asbestos detected.

Sample No. 43. ASET30805 / 33985 / 43. Sample No 43 - On the Driveway.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibre cement*, fibro plaster# and brick.
Chrysotile asbestos ^#*, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 44. ASET30805 / 33985 / 44. Sample No 44 - Drive way.
Approx dimensions 8.0 cm x 7.5 cm x 4.75 cm
The sample consisted of a mixture of soil, stones, fibres^, plant matter and fragments of plaster, fibre cement*, fibro plaster# and brick.
Chrysotile^#* asbestos, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 45. ASET30805 / 33985 / 45. Sample No 45.
Approx dimensions 7.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibre cement*, fibro plaster# and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite#^* asbestos detected.

Sample No. 46. ASET30805 / 33985 / 46. Sample No 46.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 47. ASET30805 / 33985 / 47. Sample No 47.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, synthetic mineral fibres, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 48. ASET30805 / 33985 / 48. Sample No 48.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 49. ASET30805 / 33985 / 49. Sample No 49.
Approx dimensions 7.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 50. ASET30805 / 33985 / 50. Sample No 50.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 51. ASET30805 / 33985 / 51. Sample No 51.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 52. ASET30805 / 33985 / 52. Sample No 52.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 53. ASET30805 / 33985 / 53. Sample No 53.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 54. ASET30805 / 33985 / 54. Sample No 54.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and fibre cement*.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 55. ASET30805 / 33985 / 55. Sample No 55.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibre cement*, fibro plaster# and plaster.
Chrysotile^*# asbestos, Amosite #^* asbestos and Crocidolite#^* asbestos detected.

Sample No. 56. ASET30805 / 33985 / 56. Sample No 56.
Approx dimensions 8.0 cm x 7.5 cm x 5.0 cm
The sample consisted of a mixture of soil, stones, fibre ^, plant matter and fragments of plaster, fibre cement*, fibro plaster# and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite#^* asbestos detected.

Sample No. 57. ASET30805 / 33985 / 57. Sample No 57.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, cement, fibre cement*, fibro plaster# and brick.
Chrysotile^#* asbestos, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 58. ASET30805 / 33985 / 58. Sample No 58.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibre cement*, fibro plaster#, cement and brick.
Chrysotile*#^ asbestos, Amosite*^# asbestos and Crocidolite*^# asbestos detected.

Sample No. 59. ASET30805 / 33985 / 59. Sample No 59.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 60. ASET30805 / 33985 / 60. Sample No 60.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibro plaster#, fibre cement* and plaster.
Chrysotile #^* asbestos, Amosite #^* asbestos and Crocidolite #^* asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

***Sampling procedure not covered by the Scope of the Accreditation.**

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denote asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30805/ 33985-1 / 61 - 150
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

11 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter,

Asbestos Identification
This report presents the results of ninety samples, collected[×] from the front section of the barricaded area near the main entrance to the site on 31 August 2012, for analysis for asbestos.

1.Introduction: Ninety samples collected[×] were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 61. ASET30805 / 33985-1 / 61. Sample 61
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres[^], plant matter, insect matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile[^#] asbestos, Amosite[^#] asbestos and Crocidolite[^#] asbestos detected.

Sample No. 62. ASET30805 / 33985-1 / 62. Sample 62
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres[^], plant matter, insect matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile[^#] asbestos, Amosite[^#] asbestos and Crocidolite[^#] asbestos detected.

Sample No. 63. ASET30805 / 33985-1 / 63. Sample 63
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres[^], plant matter, insect matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile[^#] asbestos, Amosite[^#] asbestos and Crocidolite[^#] asbestos detected.

Sample No. 64. ASET30805 / 33985-1 / 64. Sample 64
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres[^], plant matter, insect matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile[^#] asbestos, Amosite[^#] asbestos and Crocidolite[^#] asbestos detected.

Sample No. 65. ASET30805 / 33985-1 / 65. Sample 65
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 66. ASET30805 / 33985-1 / 66. Sample 66
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster, cement and brick.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 67. ASET30805 / 33985-1 / 67. Sample 67
Approx dimensions 8.0 cm x 8.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement, brick, paint flakes and glass.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 68. ASET30805 / 33985-1 / 68. Sample 68
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 69. ASET30805 / 33985-1 / 69. Sample 69
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 70. ASET30805 / 33985-1 / 70. Sample 70
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster, cement, brick, corroded metal and glass.
Chrysotile^ asbestos detected.

Sample No. 71. ASET30805 / 33985-1 / 71. Sample 71
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and fibre cement*.
Chrysotile^* asbestos detected.

Sample No. 72. ASET30805 / 33985-1 / 72. Sample 72
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material# and brick.
Chrysotile^# asbestos and Crocidolite^# asbestos detected.

Sample No. 73. ASET30805 / 33985-1 / 73. Sample 73
Approx dimensions 7.0 cm x 7.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 74. ASET30805 / 33985-1 / 74. Sample 74
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 75. ASET30805 / 33985-1 / 75. Sample 75
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 76. ASET30805 / 33985-1 / 76. Sample 76
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, ceramic tiles and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 77. ASET30805 / 33985-1 / 77. Sample 77
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 78. ASET30805 / 33985-1 / 78. Sample 78
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, brick and paint flakes.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 79. ASET30805 / 33985-1 / 79. Sample 79
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 80. ASET30805 / 33985-1 / 80. Sample 80
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 81. ASET30805 / 33985-1 / 81. Sample 81
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, brick and glass.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 82. ASET30805 / 33985-1 / 82. Sample 82
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 83. ASET30805 / 33985-1 / 83. Sample 83
Approx dimensions 8.0 cm x 8.0 cm x 5.6 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, brick and paint flakes.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 84. ASET30805 / 33985-1 / 84. Sample 84
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 85. ASET30805 / 33985-1 / 85. Sample 85
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, fibre cement*, brick and paint flakes.
Chrysotile^#* asbestos, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 86. ASET30805 / 33985-1 / 86. Sample 86
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, fibre cement*, and brick.
Chrysotile^#* asbestos, Amosite^#* asbestos and Crocidolite^#* asbestos detected.

Sample No. 87. ASET30805 / 33985-1 / 87. Sample 87
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 88. ASET30805 / 33985-1 / 88. Sample 88
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 89. ASET30805 / 33985-1 / 89. Sample 89
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material# and cement.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 90. ASET30805 / 33985-1 / 90. Sample 90
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement, brick and paint flakes.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 91. ASET30805 / 33985-1 / 91. Sample 91
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 92. ASET30805 / 33985-1 / 92. Sample 92
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, insect matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 93. ASET30805 / 33985-1 / 93. Sample 93
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos, Amosite^ asbestos and Crocidolite^ asbestos detected.

Sample No. 94. ASET30805 / 33985-1 / 94. Sample 94
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 95. ASET30805 / 33985-1 / 95. Sample 95
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement, brick and glass.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 96. ASET30805 / 33985-1 / 96. Sample 96
Approx dimensions 9.0 cm x 9.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite^#* asbestos detected.

Sample No. 97. ASET30805 / 33985-1 / 97. Sample 97
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement, brick and glass.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 98. ASET30805 / 33985-1 / 98. Sample 98
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement, brick and glass.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 99. ASET30805 / 33985-1 / 99. Sample 99
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 100. ASET30805 / 33985-1 / 100. Sample 100
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 101. ASET30805 / 33985-1 / 101. Sample 101
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#] and cement.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 102. ASET30805 / 33985-1 / 102. Sample 102
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 103. ASET30805 / 33985-1 / 103. Sample 103
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster, cement and paint flakes.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 104. ASET30805 / 33985-1 / 104. Sample 104
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 105. ASET30805 / 33985-1 / 105. Sample 105
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 106. ASET30805 / 33985-1 / 106. Sample 106
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 107. ASET30805 / 33985-1 / 107. Sample 107
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 108. ASET30805 / 33985-1 / 108. Sample 108
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 109. ASET30805 / 33985-1 / 109. Sample 109
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 110. ASET30805 / 33985-1 / 110. Sample 110
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#] and cement.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 111. ASET30805 / 33985-1 / 111. Sample 111
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and fibre cement*.
Chrysotile^[#]* asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 112. ASET30805 / 33985-1 / 112. Sample 112
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 113. ASET30805 / 33985-1 / 113. Sample 113
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement, brick and glass.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 114. ASET30805 / 33985-1 / 114. Sample 114
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 115. ASET30805 / 33985-1 / 115. Sample 115
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 116. ASET30805 / 33985-1 / 116. Sample 116
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#], cement and brick.
Chrysotile^[#] asbestos, Amosite[#]^ asbestos and Crocidolite^[#] asbestos detected.

Sample No. 117. ASET30805 / 33985-1 / 117. Sample 117
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and cement.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 118. ASET30805 / 33985-1 / 118. Sample 118
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of cement and fibre cement*.
Chrysotile^* asbestos and Amosite* asbestos detected.

Sample No. 119. ASET30805 / 33985-1 / 119. Sample 119
Approx dimensions 9.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 120. ASET30805 / 33985-1 / 120. Sample 120
Approx dimensions 9.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 121. ASET30805 / 33985-1 / 121. Sample 121
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, synthetic mineral fibres, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 122. ASET30805 / 33985-1 / 122. Sample 122
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres, plant matter, fragments of plaster and glass.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 123. ASET30805 / 33985-1 / 123. Sample 123
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and paint flakes.
Chrysotile^# asbestos and Crocidolite^# asbestos detected.

Sample No. 124. ASET30805 / 33985-1 / 124. Sample 124
Approx dimensions 10.0 cm x 10.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement, brick and glass.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 125. ASET30805 / 33985-1 / 125. Sample 125
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 126. ASET30805 / 33985-1 / 126. Sample 126
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 127. ASET30805 / 33985-1 / 127. Sample 127
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 128. ASET30805 / 33985-1 / 128. Sample 128
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 129. ASET30805 / 33985-1 / 129. Sample 129
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material# and cement.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 130. ASET30805 / 33985-1 / 130. Sample 130
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 131. ASET30805 / 33985-1 / 131. Sample 131
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 132. ASET30805 / 33985-1 / 132. Sample 132
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 133. ASET30805/ 33985-1/ 133. Sample 133
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 134. ASET30805 / 33985-1 / 134. Sample 134
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 135. ASET30805 / 33985-1 / 135. Sample 135
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite^#* asbestos detected.

Sample No. 136. ASET30805 / 33985-1 / 136. Sample 136
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 137. ASET30805 / 33985-1 / 137. Sample 137
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite^#* asbestos detected.

Sample No. 138. ASET30805 / 33985-1 / 138. Sample 138
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 139. ASET30805 / 33985-1 / 139. Sample 139
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite^#* asbestos detected.

Sample No. 140. ASET30805 / 33985-1 / 140. Sample 140
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, fibre cement*, cement and brick.
Chrysotile^#* asbestos, Amosite#^* asbestos and Crocidolite^#* asbestos detected.

Sample No. 141. ASET30805 / 33985-1 / 141. Sample 141
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 142. ASET30805 / 33985-1 / 142. Sample 142
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and paint flakes.
No asbestos detected.

Sample No. 143. ASET30805 / 33985-1 / 143. Sample 143
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 144. ASET30805 / 33985-1 / 144. Sample 144
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 145. ASET30805 / 33985-1 / 145. Sample 145
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 146. ASET30805 / 33985-1 / 146. Sample 146
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 147. ASET30805 / 33985-1 / 147. Sample 147
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 148. ASET30805 / 33985-1 / 148. Sample 148
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 149. ASET30805 / 33985-1 / 149. Sample 149
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Sample No. 150. ASET30805 / 33985-1 / 150. Sample 150
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, cement and brick.
Chrysotile^# asbestos, Amosite#^ asbestos and Crocidolite^# asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

× Sampling procedure not covered by the Scope of the Accreditation.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denote asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30805/ 33985-1 / 151 - 200
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

11 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter,

Asbestos Identification
This report presents the results of fifty samples, collected[×] from the front section of the barricaded area near the main entrance to the site on between 31 August 2012 and 5 September 2012, for analysis for asbestos.

1.Introduction: Fifty samples collected[×] were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET30805 / 33985-1 / 1. Sample No 151.
Approx dimensions 6.7 cm x 6.5 cm x 6.4 cm
The sample consisted of a mixture of soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET30805 / 33985-1 / 2. Sample No 152.
Approx dimensions 6.7 cm x 6.4 cm x 6.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 3. ASET30805 / 33985-1 / 3. Sample No 153.
Approx dimensions 6.9 cm x 6.3 cm x 5.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 4. ASET30805 / 33985-1 / 4. Sample No154.
Approx dimensions 6.8 cm x 6.5 cm x 5.7 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 5. ASET30805 / 33985-1 / 5. Sample No 155.
Approx dimensions 7.2 cm x 6.5 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 6. ASET30805 / 33985-1 / 6. Sample No 156.
Approx dimensions 7.5 cm x 6.8 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 7. ASET30805 / 33985-1 / 7. Sample No 157.
Approx dimensions 7.8 cm x 6.7 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 8. ASET30805 / 33985-1 / 8. Sample No 158.
Approx dimensions 7.6 cm x 6.7 cm x 6.1 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 9. ASET30805 / 33985-1 / 9. Sample No 159.
Approx dimensions 7.6 cm x 7.2 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 10. ASET30805 / 33985-1 / 10. Sample No 160.
Approx dimensions 7.4 cm x 6.5 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 11. ASET30805 / 33985-1 / 11. Sample No 161.
Approx dimensions 6.7 cm x 6.4 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 12. ASET30805 / 33985-1 / 12. Sample No 162.
Approx dimensions 7.2 cm x 6.6 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 13. ASET30805 / 33985-1 / 13. Sample No 163.
Approx dimensions 7.5 cm x 7.1 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 14. ASET30805 / 33985-1 / 14. Sample No 164.
Approx dimensions 7.6 cm x 6.7 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 15. ASET30805 / 33985-1 / 15. Sample No 165.
Approx dimensions 7.5 cm x 6.7 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of soft fibre plaster material#.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 16. ASET30805 / 33985-1 / 16. Sample No 166.
Approx dimensions 7.4 cm x 6.8 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 17. ASET30805 / 33985-1 / 17. Sample No 167.
Approx dimensions 7.3 cm x 7.1 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibre plaster material# and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 18. ASET30805 / 33985-1 / 18. Sample No 168.
Approx dimensions 7.5 cm x 6.8 cm x 6.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of fibro plaster cement*.
Chrysotile^* asbestos and Crocidolite* asbestos detected.

Sample No. 19. ASET30805 / 33985-1 / 19. Sample No 169.
Approx dimensions 6.9 cm x 6.7 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 20. ASET30805 / 33985-1 / 20. Sample No 170.
Approx dimensions 7.4 cm x 7.1 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 21. ASET30805 / 33985-1 / 21. Sample No 171.
Approx dimensions 7.6 cm x 7.2 cm x 6.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos detected.

Sample No. 22. ASET30805 / 33985-1 / 22. Sample No 172.
Approx dimensions 7.6 cm x 7.3 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 23. ASET30805 / 33985-1 / 23. Sample No 173.
Approx dimensions 7.4 cm x 7.1 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 24. ASET30805 / 33985-1 / 24. Sample No 174.
Approx dimensions 7.4 cm x 7.3 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibre plaster material# and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 25. ASET30805 / 33985-1 / 25. Sample No 175.
Approx dimensions 7.5 cm x 7.2 cm x 6.7 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of plaster and cement.
Chrysotile detected.

Sample No. 26. ASET30805 / 33985-1 / 26. Sample No 176.
Approx dimensions 7.6 cm x 7.4 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of soft fibre plaster material# and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 27. ASET30805 / 33985-1 / 27. Sample No 177.
Approx dimensions 8.2 cm x 7.3 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 28. ASET30805 / 33985-1 / 28. Sample No 178.
Approx dimensions 7.5 cm x 7.2 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos detected.

Sample No. 29. ASET30805 / 33985-1 / 29. Sample No 179.
Approx dimensions 7.8 cm x 7.5 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of fibre cement*, soft fibro plaster# and plaster.
Chrysotile^*# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 30. ASET30805 / 33985-1 / 30. Sample No 180.
Approx dimensions 8.2 cm x 7.4 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite^# asbestos detected.

Sample No. 31. ASET30805 / 33985-1 / 31. Sample No 181.
Approx dimensions 7.6 cm x 7.2 cm x 6.9 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite^# asbestos detected.

Sample No. 32. ASET30805 / 33985-1 / 32. Sample No 182.
Approx dimensions 8.1 cm x 7.5 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 33. ASET30805/ 33985-1/ 33. Sample No 183.
Approx dimensions 7.2 cm x 6.4 cm x 6.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite^# asbestos detected.

Sample No. 34. ASET30805 / 33985-1 / 34. Sample No 184.
Approx dimensions 7.8 cm x 7.5 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 35. ASET30805 / 33985-1 / 35. Sample 185.
Approx dimensions 8.1 cm x 7.6 cm x 7.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of cement.
No asbestos detected.

Sample No. 36. ASET30805 / 33985-1 / 36. Sample No 186.
Approx dimensions 6.7 cm x 6.5 cm x 6.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 37. ASET30805 / 33985-1 / 37. Sample 187.
Approx dimensions 7.8 cm x 7.5 cm x 7.1 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 38. ASET30805 / 33985-1 / 38. Sample No 188.
Approx dimensions 7.6 cm x 7.5 cm x 7.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 39. ASET30805 / 33985-1 / 39. Sample No 189.
Approx dimensions 7.7 cm x 6.9 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 40. ASET30805 / 33985-1 / 40. Sample No 190.
Approx dimensions 8.2 cm x 7.5 cm x 6.6 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 41. ASET30805 / 33985-1 / 41. Sample No 191.
Approx dimensions 7.8 cm x 7.6 cm x 7.1 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 42. ASET30805 / 33985-1 / 42. Sample No 192.
Approx dimensions 7.6 cm x 7.4 cm x 7.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 43. ASET30805 / 33985-1 / 43. Sample No 193.
Approx dimensions 7.6 cm x 7.2 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 44. ASET30805 / 33985-1 / 44. Sample No 194.
Approx dimensions 8.1 cm x 7.4 cm x 7.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 45. ASET30805 / 33985-1 / 45. Sample No 195.
Approx dimensions 7.8 cm x 7.5 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of plaster.
Chrysotile^ asbestos detected.

Sample No. 46. ASET30805 / 33985-1 / 46. Sample No 196.
Approx dimensions 8.3 cm x 7.4 cm x 6.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^ and fragments of fibre cement*.
Chrysotile^* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 47. ASET30805 / 33985-1 / 47. Sample No 197.
Approx dimensions 8.4 cm x 7.6 cm x 6.9 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite^# asbestos detected.

Sample No. 48. ASET30805 / 33985-1 / 48. Sample No198.
Approx dimensions 7.9 cm x 7.5 cm x 7.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite^*asbestos detected.

Sample No. 49. ASET30805 / 33985-1 / 49. Sample No199.
Approx dimensions 8.3 cm x 7.6 cm x 7.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 50. ASET30805 / 33985-1 / 50. Sample No200.
Approx dimensions 8.2 cm x 7.3 cm x 6.8 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of soft fibro plaster# and plaster.
Chrysotile^# asbestos, Amosite^ asbestos and Crocidolite^# asbestos detected.

Analysed and reported by,

Laxman Dias. BSc
Analyst / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

× Sampling procedure not covered by the Scope of the Accreditation.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denote asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref: ASET30805/ 33985-1 / 301 - 401
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

11 September 2012

Brown Consulting (NSW) Pty Ltd
Level 2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager - Urban Development

Dear Peter,

Asbestos Identification
This report presents the results of hundred and one samples, collected[×] from the front section of the barricaded area near the main entrance to the site on between 31 August 2012 and 5 September 2012, for analysis for asbestos.

1.Introduction: Hundred and one samples collected[×] were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 301. ASET30805 / 33985-1 / 301. Sample 301
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 302. ASET30805 / 33985-1 / 302. Sample 302
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 303. ASET30805 / 33985-1 / 303. Sample 303
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 304. ASET30805 / 33985-1 / 304. Sample 304
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and glass.
Chrysotile^ asbestos detected.

Sample No. 305. ASET30805 / 33985-1 / 305. Sample 305
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and plaster.
Chrysotile^ asbestos detected.

Sample No. 306. ASET30805 / 33985-1 / 306. Sample 306
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material[#] and corroded metal.
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 307. ASET30805 / 33985-1 / 307. Sample 307
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 308. ASET30805 / 33985-1 / 308. Sample 308
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and corroded metal.
No asbestos detected.

Sample No. 309. ASET30805 / 33985-1 / 309. Sample 309
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and fibre cement*.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 310. ASET30805 / 33985-1 / 310. Sample 310
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 311. ASET30805 / 33985-1 / 311. Sample 311
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 312. ASET30805 / 33985-1 / 312. Sample 312
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and brick.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 313. ASET30805 / 33985-1 / 313. Sample 313
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and fibre cement*.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 314. ASET30805 / 33985-1 / 314. Sample 314
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 315. ASET30805 / 33985-1 / 315. Sample 315
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 316. ASET30805 / 33985-1 / 316. Sample 316
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 317. ASET30805 / 33985-1 / 317. Sample 317
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 318. ASET30805 / 33985-1 / 318. Sample 318
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 319. ASET30805 / 33985-1 / 319. Sample 319
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 320. ASET30805 / 33985-1 / 320. Sample 320
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 321. ASET30805 / 33985-1 / 321. Sample 321
Approx dimensions 9.0 cm x 9.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material# and brick.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 322. ASET30805 / 33985-1 / 322. Sample 322
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 323. ASET30805 / 33985-1 / 323. Sample 323
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 324. ASET30805 / 33985-1 / 324. Sample 324
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 325. ASET30805 / 33985-1 / 325. Sample 325
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 326. ASET30805 / 33985-1 / 326. Sample 326
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, brick and paint flakes.
No asbestos detected.

Sample No. 327. ASET30805 / 33985-1 / 327. Sample 327
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement*, and brick.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 328. ASET30805 / 33985-1 / 328. Sample 328
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 329. ASET30805 / 33985-1 / 329. Sample 329
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 330. ASET30805 / 33985-1 / 330. Sample 330
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and fibre cement*.
Chrysotile* asbestos detected.

Sample No. 331. ASET30805 / 33985-1 / 331. Sample 331
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, brick and glass.
No asbestos detected.

Sample No. 332. ASET30805 / 33985-1 / 332. Sample 332
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and cement.
Chrysotile^ asbestos detected.

Sample No. 333. ASET30805/ 33985-1 / 333. Sample 333
Approx dimensions 9.0 cm x 9.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and paint flakes.
Chrysotile^ asbestos detected.

Sample No. 334. ASET30805 / 33985-1 / 334. Sample 334
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 335. ASET30805 / 33985-1 / 335. Sample 335
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and paint flakes.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 336. ASET30805 / 33985-1 / 336. Sample 336
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos detected.

Sample No. 337. ASET30805 / 33985-1 / 337. Sample 337
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 338. ASET30805 / 33985-1 / 338. Sample 338
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 339. ASET30805 / 33985-1 / 339. Sample 339
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement*, brick and glass.
Chrysotile* asbestos detected.

Sample No. 340. ASET30805 / 33985-1 / 340. Sample 340
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement*, brick and paint flakes.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 341. ASET30805 / 33985-1 / 341. Sample 341
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement* and brick.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 342. ASET30805 / 33985-1 / 342. Sample 342
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster#.
Chrysotile^# asbestos and Crocidolite^# asbestos detected.

Sample No. 343. ASET30805 / 33985-1 / 343. Sample 343
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 344. ASET30805 / 33985-1 / 344. Sample 344
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 345. ASET30805 / 33985-1 / 345. Sample 345
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and fibre cement*.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 346. ASET30805 / 33985-1 / 346. Sample 346
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of plaster and glass.
Chrysotile^ asbestos detected.

Sample No. 347. ASET30805 / 33985-1 / 347. Sample 347
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and brick.
No asbestos detected.

Sample No. 348. ASET30805 / 33985-1 / 348. Sample 348
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 349. ASET30805 / 33985-1 / 349. Sample 349
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 350. ASET30805 / 33985-1 / 350. Sample 350
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 351. ASET30805 / 33985-1 / 351. Sample 351
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 352. ASET30805 / 33985-1 / 352. Sample 352
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, brick and paint flakes.
No asbestos detected.

Sample No. 353. ASET30805 / 33985-1 / 353. Sample 353
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 354. ASET30805 / 33985-1 / 354. Sample 354
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 355. ASET30805 / 33985-1 / 355. Sample 355
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 356. ASET30805 / 33985-1 / 356. Sample 356
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 357. ASET30805 / 33985-1 / 357. Sample 357
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement* and brick.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 358. ASET30805 / 33985-1 / 358. Sample 358
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and brick.
No asbestos detected.

Sample No. 359. ASET30805 / 33985-1 / 359. Sample 359
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, fibre cement* and brick.
Chrysotile* asbestos detected.

Sample No. 360. ASET30805 / 33985-1 / 360. Sample 360
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 361. ASET30805 / 33985-1 / 361. Sample 361
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, brick and glass.
No asbestos detected.

Sample No. 362. ASET30805 / 33985-1 / 362. Sample 362
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and brick.
No asbestos detected.

Sample No. 363. ASET30805 / 33985-1 / 363. Sample 363
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and brick.
No asbestos detected.

Sample No. 364. ASET30805 / 33985-1 / 364. Sample 364
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement, brick and glass.
No asbestos detected.

Sample No. 365. ASET30805 / 33985-1 / 365. Sample 365
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 366. ASET30805 / 33985-1 / 366. Sample 366
Approx dimensions 8.0 cm x 8.0 cm x 4.8 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material#.
Chrysotile^# asbestos, Amosite^# asbestos and Crocidolite^# asbestos detected.

Sample No. 367. ASET30805 / 33985-1 / 367. Sample 367
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 368. ASET30805 / 33985-1 / 368. Sample 368
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 369. ASET30805 / 33985-1 / 369. Sample 369
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 370. ASET30805 / 33985-1 / 370. Sample 370
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 371. ASET30805 / 33985-1 / 371. Sample 371
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 372. ASET30805 / 33985-1 / 372. Sample 372
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 373. ASET30805 / 33985-1 / 373. Sample 373
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 374. ASET30805 / 33985-1 / 374. Sample 374
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter, fragments of soft fibre plaster material#, brick and cement.
Chrysotile^# asbestos and Crocidolite^# asbestos detected.

Sample No. 375. ASET30805 / 33985-1 / 375. Sample 375
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 376. ASET30805 / 33985-1 / 376. Sample 376
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 377. ASET30805 / 33985-1 / 377. Sample 377
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 378. ASET30805 / 33985-1 / 378. Sample 378
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 379. ASET30805 / 33985-1 / 379. Sample 379
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 380. ASET30805 / 33985-1 / 380. Sample 380
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 381. ASET30805 / 33985-1 / 381. Sample 381
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibre plaster material[#].
Chrysotile^[#] asbestos, Amosite^[#] asbestos and Crocidolite^[#] asbestos detected.

Sample No. 382. ASET30805 / 33985-1 / 382. Sample 382
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 383. ASET30805 / 33985-1 / 383. Sample 383
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 384. ASET30805 / 33985-1 / 384. Sample 384
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 385. ASET30805 / 33985-1 / 385. Sample 385
Approx dimensions 7.0 cm x 7.0 cm x 4.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 386. ASET30805 / 33985-1 / 386. Sample 386
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

Sample No. 387. ASET30805 / 33985-1 / 387. Sample 387
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 388. ASET30805 / 33985-1 / 388. Sample 388
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 389. ASET30805 / 33985-1 / 389. Sample 389
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 390. ASET30805 / 33985-1 / 390. Sample 390
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 391. ASET30805 / 33985-1 / 391. Sample 391
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and cement.
No asbestos detected.

Sample No. 392. ASET30805 / 33985-1 / 392. Sample 392
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 393. ASET30805 / 33985-1 / 393. Sample 393
Approx dimensions 8.0 cm x 8.0 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 394. ASET30805 / 33985-1 / 394. Sample 394
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 395. ASET30805 / 33985-1 / 395. Sample 395
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 396. ASET30805 / 33985-1 / 396. Sample 396
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and glass.
No asbestos detected.

Sample No. 397. ASET30805 / 33985-1 / 397. Sample 397
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, brick and cement.
No asbestos detected.

Sample No. 398. ASET30805 / 33985-1 / 398. Sample 398
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and fibre cement*.
Chrysotile* asbestos and Crocidolite* asbestos detected.

Sample No. 399. ASET30805 / 33985-1 / 399. Sample 399
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 400. ASET30805 / 33985-1 / 400. Sample 400
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 401. ASET30805 / 33985-1 / 401. Sample 401
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/Approved Identifier

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

× **Sampling procedure not covered by the Scope of the Accreditation.**

^ denotes loose fibres of relevant asbestos types detected in soil/dust.

*** denotes asbestos detected in ACM in bonded form.**

 # denote asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30805/ 33985-1 / 201 - 300
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

11 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter,

Asbestos Identification
This report presents the results of hundred samples, collected[×] from the front section of the barricaded area near the main entrance to the site on between 31 August 2012 and 5 September 2012, for analysis for asbestos.

1.Introduction: Hundred samples collected[×] were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET30805 / 33985-1 / 1. Sample No 201.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 2. ASET30805 / 33985-1 / 2. Sample No 202.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, fibres^, stones, plant matter and fragments of soft fibro plaster#, and cement.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 3. ASET30805 / 33985-1 / 3. Sample No 203.
Approx dimensions 8.0 cm x 6.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 4. ASET30805 / 33985-1 / 4. Sample No 204.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 5. ASET30805 / 33985-1 / 5. Sample No 205.
Approx dimensions 8.0 cm x 6.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, fibres^, stones, plant matter and fragments of soft fibro plaster#, and cement.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 6. ASET30805 / 33985-1 / 6. Sample No 206.
Approx dimensions 6.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and cement.
No asbestos detected.

Sample No. 7. ASET30805 / 33985-1 / 7. Sample No 207.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibro plaster # and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 8. ASET30805 / 33985-1 / 8. Sample No 208.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of soft fibro plaster#, fibre cement* and plaster.
Chrysotile#* asbestos, Amosite#* asbestos and Crocidolite#* asbestos detected.

Sample No. 9. ASET30805 / 33985-1 / 9. Sample No 209.
Approx dimensions 8.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, Fibres^, plant matter and fragments of fibre cement*, soft fibro plaster# and plaster.
Chrysotile#^* asbestos, Amosite#* asbestos and Crocidolite#^* asbestos detected.

Sample No. 10. ASET30805 / 33985-1 / 10. Sample No 210.
Approx dimensions 8.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibro plaster# and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 11. ASET30805 / 33985-1 / 11. Sample No 211.
Approx dimensions 8.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of cement, soft fibro plaster# and plaster.
Chrysotile# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 12. ASET30805 / 33985-1 / 12. Sample No 212.
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibre cement*, soft fibro plaster# and plaster.
Chrysotile#^* asbestos, Amosite#* asbestos and Crocidolite#^* asbestos detected.

Sample No. 13. ASET30805 / 33985-1 / 13. Sample No 213.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibre cement*, soft fibro plaster# and plaster.
Chrysotile#* asbestos, Amosite#* asbestos and Crocidolite#* asbestos detected.

Sample No. 14. ASET30805 / 33985-1 / 14. Sample No 214.
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibrous material containing synthetic mineral fibres, cement* and plaster.
Chrysotile* asbestos and Crocidolite* asbestos detected.

Sample No. 15. ASET30805 / 33985-1 / 15. Sample No 215.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 16. ASET30805 / 33985-1 / 16. Sample No 216.
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and cement.
No asbestos detected.

Sample No. 17. ASET30805 / 33985-1 / 17. Sample No 217.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 18. ASET30805 / 33985-1 / 18. Sample No 218.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 19. ASET30805 / 33985-1 / 19. Sample No 219.
Approx dimensions 8.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 20. ASET30805 / 33985-1 / 20. Sample No 220.
Approx dimensions 8.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 21. ASET30805 / 33985-1 / 21. Sample No 221.
Approx dimensions 7.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile* asbestos detected.

Sample No. 22. ASET30805 / 33985-1 / 22. Sample No 222.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of soft fibro plaster# and plaster.
Chrysotile#^ asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 23. ASET30805 / 33985-1 / 23. Sample No 223.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 24. ASET30805 / 33985-1 / 24. Sample No 224.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 25. ASET30805 / 33985-1 / 25. Sample No 225.
Approx dimensions 8.0 cm x 7.25 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 26. ASET30805 / 33985-1 / 26. Sample No 226.
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and cement.
No asbestos detected.

Sample No. 27. ASET30805 / 33985-1 / 27. Sample No 227.
Approx dimensions 7.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 28. ASET30805 / 33985-1 / 28. Sample No 228.
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibrous material of synthetic mineral fibres and brick.
No asbestos detected.

Sample No. 29. ASET30805 / 33985-1 / 29. Sample No 229.
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 30. ASET30805 / 33985-1 / 30. Sample No 230.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 31. ASET30805 / 33985-1 / 31. Sample No 231.
Approx dimensions 7.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 32. ASET30805 / 33985-1 / 32. Sample No 232.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.

No asbestos detected.

Sample No. 33. ASET30805/ 33985-1/ 33. Sample No 233.
Approx dimensions 7.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 34. ASET30805 / 33985-1 / 34. Sample No 234.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 35. ASET30805 / 33985-1 / 35. Sample No 235.
Approx dimensions 8.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 36. ASET30805 / 33985-1 / 36. Sample No 236.
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and wood chips.
No asbestos detected.

Sample No. 37. ASET30805 / 33985-1 / 37. Sample No 237.
Approx dimensions 7.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of cement and woodchips.
No asbestos detected.

Sample No. 38. ASET30805 / 33985-1 / 38. Sample No 238.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 39. ASET30805 / 33985-1 / 39. Sample No 239.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of wood chips and cement.
No asbestos detected.

Sample No. 40. ASET30805 / 33985-1 / 40. Sample No 240.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 41. ASET30805 / 33985-1 / 41. Sample No 241.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 42. ASET30805 / 33985-1 / 42. Sample No 242.
Approx dimensions 8.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 43. ASET30805 / 33985-1 / 43. .Sample No 243.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 44. ASET30805 / 33985-1 / 44. Sample No 244.
Approx dimensions 7.5 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 45. ASET30805 / 33985-1 / 45. Sample No 245.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 46. ASET30805 / 33985-1 / 46. Sample No 246.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 47. ASET30805 / 33985-1 / 47. Sample No 247.
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 48. ASET30805 / 33985-1 / 48. Sample No 248.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, bitumen like material and brick.
No asbestos detected.

Sample No. 49. ASET30805 / 33985-1 / 49. Sample No 249.
Approx dimensions 7.0 cm x 7.5 cm x 4.0 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster, bitumen like material and brick.
No asbestos detected.

Sample No. 50. ASET30805 / 33985-1 / 50. Sample No 250.
Approx dimensions 8.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 51. ASET30805 / 33985-1 / 51. Sample No 251.
Approx dimensions 7.5 cm x 7.5 cm x 4.5 cm

The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 52. ASET30805 / 33985-1 / 52. Sample No 252.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 53. ASET30805 / 33985-1 / 53. Sample No 253.
Approx dimensions 75 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 54. ASET30805 / 33985-1 / 54. Sample No 254.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 55. ASET30805 / 33985-1 / 55. Sample No 255.
Approx dimensions 7.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 56. ASET30805 / 33985-1 / 56. Sample No 256.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 57. ASET30805 / 33985-1 / 57. Sample No 257.
Approx dimensions 7.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 58. ASET30805 / 33985-1 / 58. Sample No 258.
Approx dimensions 8.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 59. ASET30805 / 33985-1 / 59. Sample No 259.
Approx dimensions 7.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 60. ASET30805 / 33985-1 / 60. Sample No 260.
Approx dimensions 8.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 61. ASET30805 / 33985-1 / 61. Sample No 261.
Approx dimensions 8.0 cm x 7.5 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 62. ASET30805 / 33985-1 / 62. Sample No 262.
Approx dimensions 8.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 63. ASET30805 / 33985-1 / 63. Sample No 263.
Approx dimensions 10.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 64. ASET30805 / 33985-1 / 64. Sample No 264.
Approx dimensions 8.0 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 65. ASET30805 / 33985-1 / 65. Sample No 265.
Approx dimensions 8.0 cm x 10.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 66. ASET30805 / 33985-1 / 66. Sample No 266.
Approx dimensions 8.5 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 67. ASET30805 / 33985-1 / 67. Sample No 267.
Approx dimensions 10.0 cm x 8.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of ceramic tiles and plaster.
No asbestos detected.

Sample No. 68. ASET30805 / 33985-1 / 68. Sample No268.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of fibre cement* and plaster.
Chrysotile^* asbestos and Amosite* asbestos detected.

Sample No. 69. ASET30805 / 33985-1 / 69. Sample No 269.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, fibres^, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile^* asbestos and Amosite* asbestos detected.

Sample No. 70. ASET30805 / 33985-1 / 70. Sample No270.
Approx dimensions 58.5 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 71. ASET30805 / 33985-1 / 71. Sample No 271.
Approx dimensions 8.0 cm x 10.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 72. ASET30805 / 33985-1 / 72. Sample No 272.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and cement.
No asbestos detected.

Sample No. 73. ASET30805 / 33985-1 / 73. Sample No 273.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 74. ASET30805 / 33985-1 / 74. Sample No 274.
Approx dimensions 10.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 75. ASET30805 / 33985-1 / 75. Sample No 275.
Approx dimensions 8.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 76. ASET30805 / 33985-1 / 76. Sample No 276.
Approx dimensions 8.5 cm x 8.5 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 77. ASET30805 / 33985-1 / 77. Sample No 277.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 78. ASET30805 / 33985-1 / 78. Sample No 278.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 79. ASET30805 / 33985-1 / 79. Sample No 279.
Approx dimensions 8.5 cm x 8.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 80. ASET30805 / 33985-1 / 80. Sample No 280.
Approx dimensions 8.5 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 81. ASET30805 / 33985-1 / 81. Sample No 281.
Approx dimensions 8.5 cm x 8.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 82. ASET30805 / 33985-1 / 82. Sample No 282.
Approx dimensions 8.5 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, soft fibro plaster# and brick.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 83. ASET30805 / 33985-1 / 83. Sample No 283.
Approx dimensions 8.0 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of soft fibro plaster# and plaster.
Chrysotile# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 84. ASET30805 / 33985-1 / 84. Sample No 284.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and plaster and brick.
No asbestos detected.

Sample No. 85. ASET30805 / 33985-1 / 85. Sample No 285.
Approx dimensions 8.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 86. ASET30805 / 33985-1 / 86. Sample No 286.
Approx dimensions 8.5 cm x 8.5 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 87. ASET30805 / 33985-1 / 87. Sample No 287.
Approx dimensions 8.0 cm x 4.5 cm x 7.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 88. ASET30805 / 33985-1 / 88. Sample No 288.
Approx dimensions 8.5 cm x 8.0 cm x 4.75 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 89. ASET30805 / 33985-1 / 89. Sample No 289.
Approx dimensions 8.0 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 90. ASET30805 / 33985-1 / 90. Sample No 290.
Approx dimensions 8.5 cm x 8.0 cm x 4.75 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 91. ASET30805 / 33985-1 / 91. Sample No 291.
Approx dimensions 8.5 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster, soft fibro plaster# and brick.
Chrysotile# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 92. ASET30805 / 33985-1 / 92. Sample No 292.
Approx dimensions 8.0 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 93. ASET30805 / 33985-1 / 93. Sample No 293.
Approx dimensions 8.0 cm x 8.5 cm x 4.5 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of plaster, bitumen, cement and brick.
No asbestos detected.

Sample No. 94. ASET30805 / 33985-1 / 94. Sample No 294.
Approx dimensions 8.0 cm x 7.5 cm x 4.25 cm
The sample consisted of a mixture of clayish soil and stones and plant matter.
No asbestos detected.

Sample No. 95. ASET30805 / 33985-1 / 95. Sample No 295.
Approx dimensions 8.0 cm x 7.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and plaster and brick.
No asbestos detected.

Sample No. 96. ASET30805 / 33985-1 / 96. Sample No 296.
Approx dimensions 8.0 cm x 7.5 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, soft fibro plaster# and brick.
Chrysotile# asbestos, Amosite# asbestos and Crocidolite# asbestos detected.

Sample No. 97. ASET30805 / 33985-1 / 97. Sample No 297.
Approx dimensions 8.0 cm x 7.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 98. ASET30805 / 33985-1 / 98. Sample No 298.
Approx dimensions 8.5 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, fibre cement* and brick.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No. 99. ASET30805 / 33985-1 / 99. Sample No 299.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, soft fibro plaster# and brick.
Chrysotile^# asbestos, Amosite# asbestos and Crocidolite#^ asbestos detected.

Sample No 100. ASET30805 / 33985-1 / 100. Sample No 300.
Approx dimensions 8.0 cm x 8.5 cm x 4.75 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

× Sampling procedure not covered by the Scope of the Accreditation.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denote asbestos detected in easily crumbling plaster material

Appendix D
ASET Visual Assessment Across the Site (2012)

Proposed Wet n' Wild Theme Park
Reservoir Rd, Prospect
Report Number 610.11873 R03

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30805/ 33985
Your ref: Proposed Wet & Wild Site, Watch House Road, Prospect, NSW
NATA Accreditation No: 14484

6 September 2012

Brown Consulting (NSW) Pty Ltd
Level2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

Dear Peter,

Asbestos Contamination - Visual Assessment Carried out on 6 September 2012 - Report

As requested Australian Safer Environment & Technology Pty Ltd carried out a visual inspection throughout the above site, in order find the amounts of asbestos present in exposed / cut areas of the site and also assessed the situation regarding the presence or absence of friable asbestos throughout the site. For this purpose the site was divided into four large blocks named;

1. North East block
2. North west block
3. South west block
4. South East block

Distinct Land marks were used to demarcate the above blocks such as hump area of curvature of a part of Reservoir Road on south side, Only house situated on the Watch House Road. From these two points straight lines parallel to the north south axis and East West axis were drawn on a map and each block was assessed separately. Presence or absence of asbestos based fragments, friable asbestos materials etc were noted at each of the test pits done so far and also anywhere the site had disturbed top soil due to recent activities.

51 such locations were examined and few samples were also taken where ever friable asbestos based materials were observed. Approximate locations assessed were marked on a map provided and they were numbered on the map.

The results obtained are as follows;

Block No	Location No	Asbestos not observed	Asbestos Observed Type	Type of pit Or Disturbed soil	Picture No*	
Block 1 South East cnr	1	NAD	-	Pit	102 - 0298	
	2	NAD	Fragment on ground	Pit	102 – 312, 313,	
	3	NAD	-	Pit	310, 311	
	4	NAD	-	Pit	308, 309	
	5	NAD	-	Pit	99, 100	
	6	NAD	-	Pit	302, 303	
	7	NAD	-	Pit	304, 305	
	8	NAD	-	Pit	306, 307	
	9	NAD	-	Pit	315, 314	
	10	NAD	-	Pit	316, 317	
	11	NAD	-	Pit	319, 320	
	12		Fibro Plaster Cement- more than 30 fragments	Surface rubble	321, 322, 325	
	13		Approx 150m driveway- Possible friable asbestos	Driveway - Surface	324, 0329 330 - 334	
	14		driveway- Possible friable asbestos	Driveway - Surface	335 - 339	
	15		3 – 4 fragments	Pit	340 - 344	
	16		5 – 6 fragments	Pit	344 - 351	
2nd Block – North East cnr	17	NAD		Pit	352 - 353	
	18	NAD		Pit	354 - 335	
	19	NAD		Pit	356	
	20	NAD		Pit	357 - 358	
	21	NAD		Pit	359- 360	
	22	NAD		Pit	361 - 362	
	23	NAD		Pit	363	
	24	NAD		Pit	364 – 365	

Block No	Location No	Asbestos not observed	Asbestos Observed Type	Type of pit Or Disturbed soil	Picture No*	
	25	NAD		Pit	366 - 367	
	26	NAD		Pit	368- 369	
	27	NAD		Pit	370 - 371	
	28	NAD		Pit	372	
	29	NAD		Pit	373	
	30	NAD		Pit	374	
	31	NAD		Pit	375	
	32	NAD		Pit	376	
	33	NAD		Pit	377	
	34	NAD		Pit	378	
	35	NAD		Pit	379	
	36	NAD		Pit	384	
	37	NAD		Pit	385	
	38	NAD		Pit	386	
	39	NAD		Pit	387	
	40	NAD		Pit	388	
	41	NAD		Canal cut to drain pond	389-391	
	42	NAD		Canal cut to drain pond	392 - 393	
	43	-	1-3fibre cement fragments	Disturbed Surface soil	394 - 396	
	44	-	1 large fibre cement material and confirmed friable asbestos	Pit	397 - 401	
	45	-	5 – 6 fragments	Pit with water	402 - 412	
4th Block – South West cnr	46	-	Confirmed Friable Asbestos	Pit – Large cut drain	330 - 383	
	47	NAD		Disturbed Surface soil	413 - 414	
	48	-	More than 30asbestos fragments and confirmedfriable asbestos driveway	A long driveway	415 – 431 432(relevant old gate)	

Block No	Location No	Asbestos not observed	Asbestos Observed Type	Type of pit Or Disturbed soil	Picture No*	
	49	-	Confirmed Friable asbestos	Disturbed surface soil- Possible driveway	433 – 439 440 (relevant gate)	
	50	-	Confirmed Friable asbestos Possible Driveway	Surface disturbed soil	441 - 442	
	51	-	Confirmed Friable asbestos	Driveway	443 - 449	
Zone one already udentified with cinfirmed friable asbestos and have been barricaded off from the Block 3 of above	52	-	Confirmed Friable asbestos spread acroos the barricaded areas	Driveway and adjacent areasw	-	

NAD – No visible asbestos detected.

Conclusions:

Out of all the pits and disturbed surface soils inspected, most pits were free of any asbestos in exposed areas. However, it cannot be guaranteed that they do not have asbestos underneath the exposed surfaces or below, underground. It is unlikely that most of the asbestos free pits will show any asbestos in further investigations in future. Almost all driveways (about 4 of them starting from Reservoir Road in southern boundary had friable asbestos. There were at least 4 pits / exposed surfaces with large amounts of bonded fibre cement asbestos based materials. Similar friable asbestos based materials were found underneath or in driveways, were also detected scattered in some other parts (Block 3), far away from the driveways situated at the southern boundary. This friable asbestos material was also found near a water hole. This suggests that the material has been taken out from the driveways and have been disposed of in adjacent hinterlands long time ago. It is also possible that friable asbestos based materials had been dumped in this site many years ago, from some other source as well. It is likely that this type of friable material to be uncovered, when further excavations will take place.

Further investigations, by exposing more soil, sampling, visual observations at the same time are necessary to find the exact spread of the materials concerned. Friable asbestos based driveways, and other areas should be further investigated first as a priority and be removed before tackling bonded form less dangerous asbestos based products.

Zone one area near the main entrance, which is contaminated with friable asbestos based material is being investigated and prepared for removal.

Thanking you
Yours faithfully

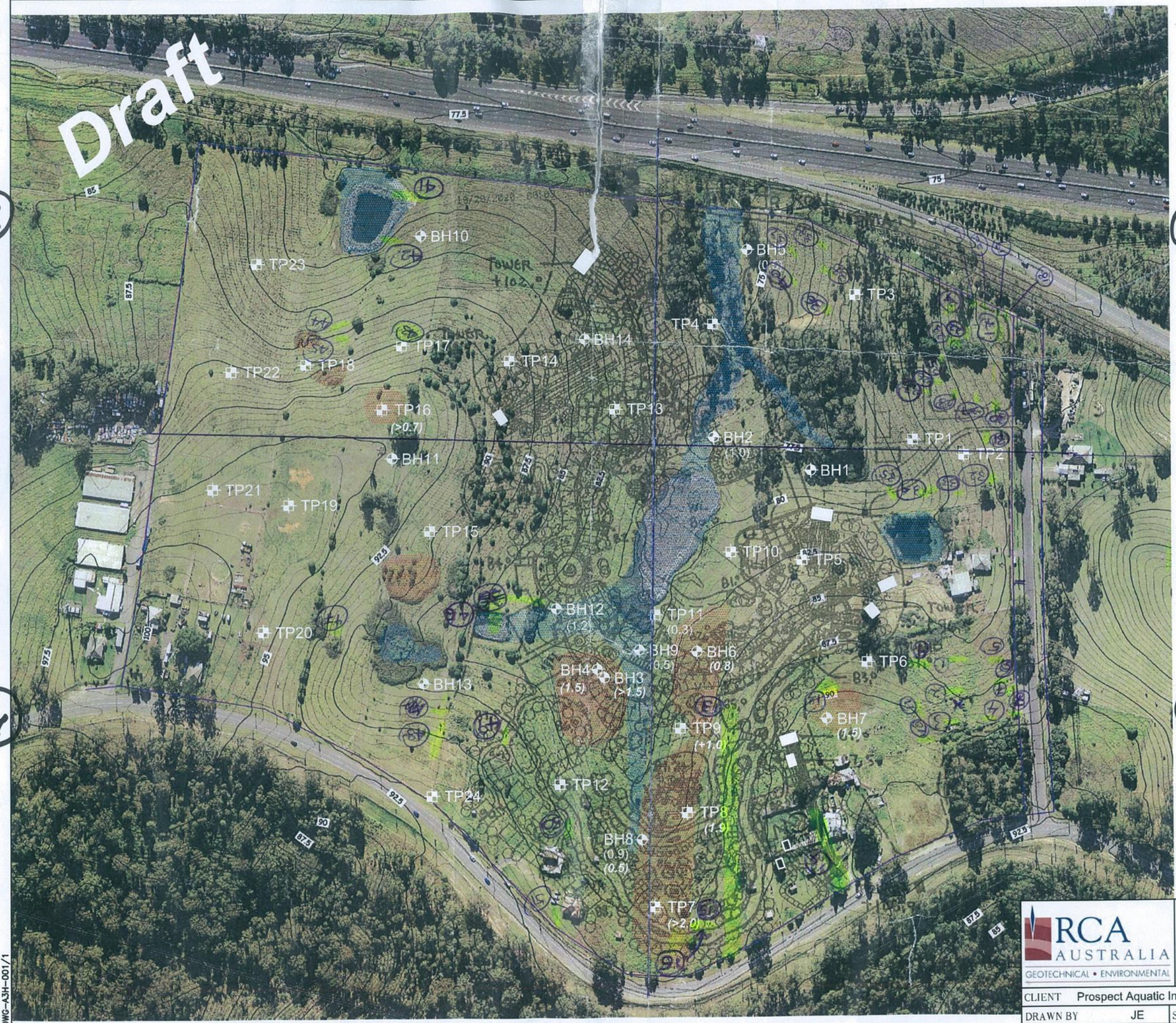
AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD.

Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist

Please note that the map attached is not very clear as it is the map we marked on, in the field today, A better map will be prepared later and submitted.

*Pictures described in the above table are not attached herewith. But can be forwarded later saved on a CD.

Draft



LEGEND

- RCA test pit location
  Asbestos fragments in bulk sample in TP7
- RCA borehole location
- (0.2) 'Blue' field area ponding water and saturated soils with (depth of affected soil in metres) dense vegetation to be treated
- (0.2) 'Red' field areas imported fill materials and/ or disturbed areas (depth of affected material in metres)
- Proposed water slide towers

NOTE: Drawing based on an aerial photo showing 25 Oct 2010 Wet 'n' Wild concept, supplied by PAI Pty Limited

0 25 50 75 100
metres

RCA AUSTRALIA
GEOTECHNICAL • ENVIRONMENTAL

INFERRED GEOTECHNICAL CONSTRAINTS PROPOSED WET 'N' WILD SYDNEY RESERVOIR ROAD PROSPECT

CLIENT	Prospect Aquatic Investments			RCA Ref	7600-404/0
DRAWN BY	JE	SCALE	1 : 2500 (A3)	DRAWING No 2	REV 0
APPROVED BY		DATE		OFFICE	NEWCASTLE

CDT-DWG-A3H-001/1

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30848 /34028-3 / 1 - 6
Your ref: Proposed Wet & Wild Project - Prospect
NATA Accreditation No: 14484.

07 September 2012

Brown Consulting (NSW) Pty Ltd
Level 2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

1. Introduction:

This report presents the results of six control air monitoring samples collected in the barricaded contaminated area towards the eastern entrance of proposed wet & wild project site on 06 September 2012, between 1144 and 1658 hours.

2. Methods:

In accordance with the Worksafe Australia Guidance Notes on Membrane Filter Method on estimating air borne asbestos fibers- Second Edition – NOHSC – 3003 (2005) and **(Safer Environment Method 2).**

3. Results:

Location	Fibers / mL
06/09/2012	
1- ASET30848 / 34028-3 / 1 - A20 **Eastern boundary of barricaded area - North to the entrance**	**< 0.01**
2- ASET30848 / 34028-3 / 2 - A23 **Eastern boundary of barricaded area - South to the entrance**	**< 0.01**
3- ASET30848 / 34028-3 / 3 - A50 **Northern boundary of barricaded area**	**< 0.01**
4- ASET30848 / 34028-3 / 4 - A19 **Southern boundary of barricaded area**	**< 0.01**
5- ASET30848 / 34028-3 / 5 - A12 **Western boundary of barricaded area towards Great Western Highway**	**< 0.01**
6- ASET30848 / 34028-3 / 6 - A86 **Western boundary of barricaded area towards Reservoir Road**	**< 0.01**

7- ASET30848 / 34028-3 / 7 - A48 - Field Blank -

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad. Dip (Occ: Hyg).
Occupational Hygienist / Approved Signatory
Approved Counter

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SUITE 710 / 90, GEORGE STREET, HORNSBY NSW 2077 – P.O. BOX 1644 HORNSBY WESTFIELD NSW 1635
PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: aset@bigpond.net.au WEBSITE: www.aset.com.au

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30848 /34028-4 / 1 - 6
Your ref: Proposed Wet & Wild Project - Prospect
NATA Accreditation No: 14484.

10 September 2012

Brown Consulting (NSW) Pty Ltd
Level 2, Burbank Place, Norwest Business Park
Baulkam Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

1. Introduction:

This report presents the results of six control air monitoring samples collected in the barricaded contaminated area towards the eastern entrance of proposed wet & wild project site on 07 September 2012, between 0952 and 1848 hours.

2. Methods:

In accordance with the Worksafe Australia Guidance Notes on Membrane Filter Method on estimating air borne asbestos fibers- Second Edition – NOHSC – 3003 (2005) and **(Safer Environment Method 2).**

3. Results:

Location	Fibers / mL
07/09/2012	
1- ASET30848 / 34028-4 / 1 - A42 **Eastern boundary of barricaded area - North to the entrance**	**< 0.01**
2- ASET30848 / 34028-4 / 2 - A32 **Eastern boundary of barricaded area - South to the entrance**	**< 0.01**
3- ASET30848 / 34028-4 / 3 - A39 **Northern boundary of barricaded area**	**< 0.01**
4- ASET30848 / 34028-4 / 4 - A38 **Southern boundary of barricaded area**	**< 0.01**
5- ASET30848 / 34028-4 / 5 - A25 **Western boundary of barricaded area towards Great Western Highway**	**< 0.01**
6- ASET30848 / 34028-4 / 6 - A22 **Western boundary of barricaded area towards Reservoir Road**	**< 0.01**

7- ASET30848 / 34028-4 / 7 - A16 - Field Blank -

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad. Dip (Occ: Hyg).
Occupational Hygienist / Approved Signatory
Approved Counter

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AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET30848 /34028-5 / 1 - 6
Your ref: Proposed Wet & Wild Project - Prospect
NATA Accreditation No: 14484.

10 September 2012

Brown Consulting (NSW) Pty Ltd
Level 2, Burbank Place, Norwest Business Park
Baulkham Hills NSW2153

Attn : Mr Peter Fagan
Senior Project Manager
Urban Development

1. Introduction:

This report presents the results of six control air monitoring samples collected in the barricaded contaminated area towards the eastern entrance of proposed wet & wild project site on 08 September 2012, between 1100 and 1832 hours.

2. Methods:

In accordance with the Worksafe Australia Guidance Notes on Membrane Filter Method on estimating air borne asbestos fibers- Second Edition – NOHSC – 3003 (2005) and **(Safer Environment Method 2).**

3. Results:

Location	Fibers / mL
08/09/2012	
1- ASET30848 / 34028-5 / 1 - A17 **Eastern boundary of barricaded area - North to the entrance**	**< 0.01**
2- ASET30848 / 34028-5 / 2 - A56 **Eastern boundary of barricaded area - South to the entrance**	**< 0.01**
3- ASET30848 / 34028-5 / 3 - A10 **Northern boundary of barricaded area**	**< 0.01**
4- ASET30848 / 34028-5 / 4 - A24 **Southern boundary of barricaded area**	**< 0.01**
5- ASET30848 / 34028-5 / 5 - A27 **Western boundary of barricaded area towards Great Western Highway**	**< 0.01**
6- ASET30848 / 34028-5 / 6 - A34 **Western boundary of barricaded area towards Reservoir Road**	**< 0.01**

7- ASET30848 / 34028-5 / 7 - A7 - Field Blank -

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad. Dip (Occ: Hyg).
Occupational Hygienist / Approved Signatory
Approved Counter

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AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET30983/ 34163 / 1 - 17
Your ref :610.11873.00000
NATA Accreditation No: 14484

18 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove
NSW 2066

Attn: Mr Nalin De Silva
Mr Neil Kumar

Dear Nalin / Neil

Asbestos Identification
This report presents the results of seventeen samples, forwarded by SLR Consulting Australia Pty Ltd on 17 September 2012, for analysis for asbestos.

1.Introduction: Seventeen samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET30983 / 34163 / 1. 610.11873.00000 - TP01 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 2.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET30983 / 34163 / 2. 610.11873.00000 - TP02 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 10.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET30983 / 34163 / 3. 610.11873.00000 - TP03 – 0.0 – 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 4. ASET30983 / 34163 / 4. 610.11873.00000 - TP04 - 0.0 - 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 1.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 5. ASET30983 / 34163 / 5. 610.11873.00000 - TP05 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 2.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 6. ASET30983 / 34163 / 6. 610.11873.00000 - TP10 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 7. ASET30983 / 34163 / 7. 610.11873.00000 - TP11 - 0.0 - 100.0.
Approx dimensions 6.0 cm x 6.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 8. ASET30983 / 34163 / 8. 610.11873.00000 - TP12 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 9. ASET30983 / 34163 / 9. 610.11873.00000 - TP13 - 0.0 - 100.0.
Approx dimensions 6.0 cm x 6.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 10. ASET30983 / 34163 / 10. 610.11873.00000 - TP14 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 11. ASET30983 / 34163 / 11. 610.11873.00000 - TP15 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 12. ASET30983 / 34163 / 12. 610.11873.00000 - TP19 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 13. ASET30983 / 34163 / 13. 610.11873.00000 - TP20 - 0.0 - 100- 0..
Approx dimensions 8.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 14. ASET30983 / 34163 / 14. 610.11873.00000 - TP21 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 15. ASET30983 / 34163 / 15. 610.11873.00000 - TP22 - 0.0 - 100.0.
Approx dimensions 10.0 cm x 8.0 cm x 5.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 16. ASET30983 / 34163 / 16. 610.11873.00000 - TP23 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, shale and glass.
No asbestos detected.

Sample No. 17. ASET30983 / 34163 / 17. 610.11873.00000 - TP24 - 0.0 - 100.0.
Approx dimensions 10.0 cm x 10.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

NATA
WORLD RECOGNISED ACCREDITATION

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET31007/ 34187 / 1 - 21
Your ref :610.11873.00000 - Wet n' Wild
NATA Accreditation No: 14484

19 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove
NSW 2066

Attn: Mr Nalin De Silva
Mr Neil Kumar

Dear Nalin / Neil

Asbestos Identification
This report presents the results of twenty one samples, forwarded by SLR Consulting Australia Pty Ltd on 18 September 2012, for analysis for asbestos.

1.Introduction: Twenty one samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results : **Sample No. 1. ASET31007 / 34187 / 1. 610.11873.00000 - Wet n' Wild - TP025 - 0.0 -100.0.**
Approx dimensions 10.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 2. ASET31007 / 34187 / 2. 610.11873.00000 - Wet n' Wild - TP 026 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET31007 / 34187 / 3. 610.11873.00000 - Wet n' Wild - TP027 - 0.0 - 100.0.
Approx dimensions 6.0 cm x 6.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 4. ASET31007 / 34187 / 4. 610.11873.00000 - Wet n' Wild - TP028 - 0.0 - 100.0.
Approx dimensions 7.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 5. ASET31007 / 34187 / 5. 610.11873.00000 - Wet n' Wild TP-029 . 0.0- 100.0
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 6. ASET31007 / 34187 / 6. 610.11873.00000 - Wet n' Wild - TP030 - 0.0 - 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 7. ASET31007 / 34187 / 7. 610.11873.00000 - Wet n' Wild - TP031 - 0.0 - 100.0.
Approx dimensions 6.0 cm x 6.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 8. ASET31007 / 34187 / 8. 610.11873.00000 - Wet n' Wild - TP033 - 0.0 - 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 9. ASET31007 / 34187 / 9. 610.11873.00000 - Wet n' Wild - TP038 - 0.0- 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 10. ASET31007 / 34187 / 10. 610.11873.00000 - Wet n' Wild - TP039 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 11. ASET31007 / 34187 / 11. 610.11873.00000 - Wet n' Wild - TP040 0.0- 100.0.
Approx dimensions 10.0 cm x 10.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 12. ASET31007 / 34187 / 12. 610.11873.00000 - Wet n' Wild - TP041 0.0-100.0.
Approx dimensions 10.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 13. ASET31007 / 34187 / 13. 610.11873.00000 - Wet n' Wild - TP042 0.0- 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 14. ASET31007 / 34187 / 14. 610.11873.00000 - Wet n' Wild - TP043 0.0 - 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, cement and brick.
No asbestos detected.

Sample No. 15. ASET31007 / 34187 / 15. 610.11873.00000 - Wet n' Wild - TP043 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 16. ASET31007 / 34187 / 16. 610.11873.00000 - Wet n' Wild - TP45 - 0.0 -100.0.
Approx dimensions 8.0 cm x 8.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale and plaster.
No asbestos detected.

Sample No. 17. ASET31007 / 34187 / 17. 610.11873.00000 - Wet n' Wild - TP046- 0.0- 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 18. ASET31007 / 34187 / 18. 610.11873.00000 - Wet n' Wild - TP047- 0.0-100.0.
Approx dimensions 7.0 cm x 7.0 cm x 2.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 19. ASET31007 / 34187 / 19. 610.11873.00000 - Wet n' Wild - TP048-0.0-100.0.
Approx dimensions 7.0 cm x 7.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, cement, brick and glass.
No asbestos detected.

Sample No. 20. ASET31007 / 34187 / 20. 610.11873.00000 - Wet n' Wild - TP049-0.0 -100.0.
Approx dimensions 7.0 cm x 7.0 cm x 1.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 21. ASET31007 / 34187 / 21. 610.11873.00000 - Wet n' Wild - TP050 0.0-100.0.
Approx dimensions 7.0 cm x 8.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster, char and brick.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET31074/ 34254 / 1 - 35
Your ref :610.11873.00000
NATA Accreditation No: 14484

25 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove
NSW 2066

Attn: Mr Nalin De Silva

Dear Nalin

Asbestos Identification
This report presents the results of thirty five samples, forwarded by SLR Consulting Australia Pty Ltd on 24 September 2012, for analysis for asbestos.

1.Introduction: Thirtyfive samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET31074 / 34254 / 1. 610.11873.00000 -TP 56 - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 2. ASET31074 / 34254 / 2. 610.11873.00000 -TP 56 - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 3. ASET31074 / 34254 / 3. 610.11873.00000 -TP 66 - 0.0- 100.0.
Approx dimensions 10.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 4. ASET31074 / 34254 / 4. 610.11873.00000 -TP 66 - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster,fibre cement* and brick like material.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 5. ASET31074 / 34254 / 5. 610.11873.00000 -TP 66 A - 0.0- 100.0.
Approx dimensions 7.0 cm x 8.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 6. ASET31074 / 34254 / 6. 610.11873.00000 -TP 66 A - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 7. ASET31074 / 34254 / 7. 610.11873.00000 -TP 66 B - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 8. ASET31074 / 34254 / 8. 610.11873.00000 -TP 66 B- 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 9. ASET31074 / 34254 / 9. 610.11873.00000 -TP 67 - 0.0- 100.0.
Approx dimensions 8.0 cm x 7.5 cm x 4.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 10. ASET31074 / 34254 / 10. 610.11873.00000 -TP 67 - 200.0 - 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 11. ASET31074 / 34254 / 11. 610.11873.00000 -TP76 A - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 12. ASET31074 / 34254 / 12. 610.11873.00000 -TP 76 A - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, fragment of fibre cement* and plant matter.
Chrysotile* asbestos detected.

Sample No. 13. ASET31074 / 34254 / 13. 610.11873.00000 -TP77A - 0.0- 100.0.
Approx dimensions 8.0 cm x 7.0 cm x 3.25 cm
The sample consisted of a mixture of clayish soil, stones, fragment of fibre cement* and plant matter.
Chrysotile* asbestos detected.

Sample No. 14. ASET31074 / 34254 / 14. 610.11873.00000 -TP 77 A - 200.0 - 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 15. ASET31074 / 34254 / 15. 610.11873.00000 -TP 78 - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 16. ASET31074 / 34254 / 16. 610.11873.00000 -TP 78 - 200.0- 300.0.
Approx dimensions 7.0 cm x 8.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 17. ASET31074 / 34254 / 17. 610.11873.00000 -TP 89 - 0.0- 100.0.
Approx dimensions 7.0 cm x 7.5 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, fragment of fibre cement*, shale and plant matter.
Chrysotile* asbestos detected.

Sample No. 18. ASET31074 / 34254 / 18. 610.11873.00000 -TP 89 - 200.0- 300.0.
Approx dimensions 10.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 19. ASET31074 / 34254 / 19. 610.11873.00000 -TP 89 A - 0.0- 100.0.
Approx dimensions 10.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, fibre cement*, paint flakes and brick like material and glass.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 20. ASET31074 / 34254 / 20. 610.11873.00000 -TP 89A - 200.0- 300.0.
Approx dimensions 5.0 cm x 6.0 cm x 0.55 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 21. ASET31074 / 34254 / 21. 610.11873.00000 -TP 89 B - 0.0- 100.0.
Approx dimensions 10.0 cm x 8.0 cm x 4.25 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, fibre cement*, brick and glass.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 22. ASET31074 / 34254 / 22. 610.11873.00000 -TP89B - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, fibre cement* and glass.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 23. ASET31074 / 34254 / 23. 610.11873.00000 -TP 99 - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 24. ASET31074 / 34254 / 24. 610.11873.00000 -TP 99 - 200.0- 300.0.
Approx dimensions 8.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 25. ASET31074 / 34254 / 25. 610.11873.00000 -TP 101 - 0.0- 100.0.
Approx dimensions 7.5 cm x 7.5 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 26. ASET31074 / 34254 / 26. 610.11873.00000 -TP 101 - 200.0- 300.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 27. ASET31074 / 34254 / 27. 610.11873.00000 -TP 102 - 0.0- 100.0.
Approx dimensions 8.0 cm x 10.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 28. ASET31074 / 34254 / 28. 610.11873.00000 -TP 103 - 0.0- 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 29. ASET31074 / 34254 / 29. 610.11873.00000 -TP 103 - 200.0- 300.0.
Approx dimensions 8.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 30. ASET31074 / 34254 / 30. 610.11873.00000 -TP107 - 0.0- 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster,fibre cement* and brick.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 31. ASET31074 / 34254 / 31. 610.11873.00000 -TP 107 - 200.0- 300.0.
Approx dimensions 6.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 32. ASET31074 / 34254 / 32. 610.11873.00000 -TP 56 - 0.0- 100.0.
Approx dimensions 7.0 cm x 7.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 33. ASET31074/ 34254/ 33. 610.11873.00000 -TP 108 - 200.0- 300.0.
Approx dimensions 7.0 cm x 7.0 cm x 3.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 34. ASET31074 / 34254 / 34. 610.11873.00000 -TP 114 - 0.0- 100.0.
Approx dimensions 6.0 cm x 6.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 35. ASET31074 / 34254 / 35. 610.11873.00000 -TP 114 - 200.0- 300.0.
Approx dimensions 8.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

*** denotes asbestos detected in ACM in bonded form.**
^ denotes asbestos in loose fibre form.
 # denotes soft asbestos insulation material in easily crumbling plaster form.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref : ASET31030/ 34210-1 / 1 - 7
Your ref :610.11873.00000
NATA Accreditation No: 14484

24 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove
NSW 2066

Attn: Mr Nalin De Silva

Dear Nalin

Asbestos Identification
This report presents the results of seven samples, forwarded by SLR Consulting Australia Pty Ltd on 21 September 2012, for analysis for asbestos.

1.Introduction: Seven samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET31030 / 34210-1 / 1. 610.11873.00000 -TP54- -200 --300.
Approx dimensions 8.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale and plaster.
No asbestos detected.

Sample No. 2. ASET31030 / 34210-1 / 2. 610.11873.00000 - TP056 - 200 - 300.
Approx dimensions 7.0 cm x 7.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster, shale and brick.
Chrysotile^ asbestos detected.

Sample No. 3. ASET31030 / 34210-1 / 3. 610.11873.00000 -TP061- 200 - 300.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick.
No asbestos detected.

Sample No. 4. ASET31030 / 34210-1 / 4. 610.11873.00000 - TP062 -200 -300.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 5. ASET31030 / 34210-1 / 5. 610.11873.00000 - TP66-200 - 300.
Approx dimensions 8.0 cm x 8.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement* and plaster.
Chrysotile* asbestos and Amosite* asbestos detected.

Sample No. 6. ASET31030 / 34210-1 / 6. 610.11873.00000 - TP67 - 200 -300.
Approx dimensions 8.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Sample No. 7. ASET31030 / 34210-1 / 7. 610.11873.00000 - TP68 -200 - 300.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier.
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD

ABN 36 088 095 112

Our ref: ASET31075/ 34255 / 26 - 38
Your ref: 610.11873.00000 - Wet n' Wild
NATA Accreditation No: 14484

26 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove NSW 2066

Attn: Mr Nalin De Silva

Dear Nalin,

Asbestos Identification
This report presents the results of thirteen samples, forwarded by SLR Consulting Australia Pty Ltd on 24 September 2012, for analysis for asbestos.

1.Introduction: Thirteen samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 26. ASET31075 / 34255 / 26. TP95 - 200-300
Approx dimensions 6.0 cm x 6.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster and corroded metal.
No asbestos detected.

Sample No. 27. ASET31075 / 34255 / 27. TP96 - 0-100
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 28. ASET31075 / 34255 / 28. TP97 - 0-100
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 29. ASET31075 / 34255 / 29. TP97 - 200-300
Approx dimensions 6.0 cm x 6.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 30. ASET31075 / 34255 / 30. TP98 - 0-100
Approx dimensions 6.0 cm x 6.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 31. ASET31075 / 34255 / 31. TP98 - 200-300
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 32. ASET31075 / 34255 / 32. TP102 - 0-100
Approx dimensions 7.0 cm x 7.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 33. ASET31075/ 34255/ 33. TP104 - 0-100
Approx dimensions 8.0 cm x 8.0 cm x 6.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 34. ASET31075 / 34255 / 34. TP104 - 200-300
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 35. ASET31075 / 34255 / 35. TP105 - 0-100
Approx dimensions 6.0 cm x 6.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

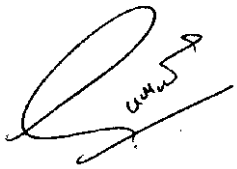
Sample No. 36. ASET31075 / 34255 / 36. TP106 - 0-100
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of fibre cement*.
Chrysotile* asbestos, Amosite* asbestos and Crocidolite* asbestos detected.

Sample No. 37. ASET31075 / 34255 / 37. TP106 - 200-300
Approx dimensions 6.0 cm x 6.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fibre cement*.
Chrysotile* asbestos detected.

Sample No. 38. ASET31075 / 34255 / 38. 200-300
Approx dimensions 6.0 cm x 6.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Nisansala Maddage. BSc(Hons)
Environmental Scientist/ Approved Identifier



Mahen De Silva . BSc. MSc. Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

*** denotes asbestos detected in ACM in bonded form.**

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET31075/ 34255 / 1 - 25
Your ref : 610.11873.00000 – Wet n' Wild
NATA Accreditation No: 14484

26 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove NSW 2066

Attn: Mr Nalin De Silva
Principal Consultant

Dear Nalin,

Asbestos Identification
This report presents the results of twenty five samples, forwarded by SLR Consulting Australia Pty Ltd on 24 September 2012, for analysis for asbestos.

1.Introduction: Twenty five samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method. **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET31075 / 34255 / 1. TP71 - 0 - 100.
Approx dimensions 6.8 cm x 5.4 cm x 5.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET31075 / 34255 / 2. TP72 - 0 - 100.
Approx dimensions 7.1 cm x 6.2 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 3. ASET31075 / 34255 / 3. TP72 - 200 - 300.
Approx dimensions5.8 cm x5.5 cm x 5.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and wood chips.
No asbestos detected.

Sample No. 4. ASET31075 / 34255 / 4. TP73 - 0 - 100.
Approx dimensions 6.2 cm x 5.7 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 5. ASET31075 / 34255 / 5. TP74 - 0 - 100.
Approx dimensions 6.2 cm x 5.4 cm x 5.2 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fibres^, fragments of glass and shale.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 6. ASET31075 / 34255 / 6. TP75 - 0 - 100.
Approx dimensions 5.7 cm x 5.6 cm x 5.4 cm
The sample consisted of a mixture of soil, stones, plant matter, fibres^, fragments of soft fibre plaster #, coal like material and brick.
Chrysotile#^ asbestos, Amosite#^ asbestos and Crocidolite#^ asbestos detected.

Sample No. 7. ASET31075 / 34255 / 7. TP75 - 200 - 300.
Approx dimensions 5.7 cm x 4.8 cm x 4.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of brick.
No asbestos detected.

Sample No. 8. ASET31075 / 34255 / 8. TP76 - 0 - 100.
Approx dimensions 5.8 cm x 5.6 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 9. ASET31075 / 34255 / 9. TP77 - 0 - 100.
Approx dimensions 8.2 cm x 7.1 cm x 6.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 10. ASET31075 / 34255 / 10. TP77 - 200 - 300.
Approx dimensions 6.2 cm x 5.7 cm x 5.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of plaster, bitumin and glass.
No asbestos detected.

Sample No. 11. ASET31075 / 34255 / 11. TP82 - 0 - 100.
Approx dimensions 6.7 cm x 5.8 cm x 5.3 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 12. ASET31075 / 34255 / 12. TP83 - 0 - 100.
Approx dimensions 6.1 cm x 5.7 cm x 5.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 13. ASET31075 / 34255 / 13. TP84 - 0 - 100.
Approx dimensions 5.3 cm x 4.8 cm x 4.6 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of glass.
No asbestos detected.

Sample No. 14. ASET31075 / 34255 / 14. TP84 - 200 - 300.
Approx dimensions 6.2 cm x 5.8 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of shale, glass and paint flakes.
No asbestos detected.

Sample No. 15. ASET31075 / 34255 / 15. TP85 - 0 - 100.
Approx dimensions 6.4 cm x 5.3 cm x 5.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 16. ASET31075 / 34255 / 16. TP86 - 0 - 100.
Approx dimensions 5.4 cm x 5.2 cm x 4.8 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 17. ASET31075 / 34255 / 17. TP87 - 0 - 100.
Approx dimensions 5.6 cm x 5.2 cm x 4.7 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 18. ASET31075 / 34255 / 18. TP87 - 200 - 300.
Approx dimensions 8.7 cm x 8.6 cm x 7.6 cm
The sample consisted of a mixture of soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 19. ASET31075 / 34255 / 19. TP88 - 0 - 100.
Approx dimensions 5.8 cm x 5.6 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 20. ASET31075 / 34255 / 20. TP88 - 200 - 300.
Approx dimensions 5.4 cm x 5.2 cm x 4.8 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 21. ASET31075 / 34255 / 21. TP93 - 0 - 100.
Approx dimensions 6.4 cm x 5.3 cm x 5.1 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 22. ASET31075 / 34255 / 22. TP93 - 200 - 300.
Approx dimensions 6.2 cm x 5.4 cm x 5.1 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 23. ASET31075 / 34255 / 23. TP94 - 0 - 100.
Approx dimensions 6.1 cm x 5.3 cm x 5.2 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 24. ASET31075 / 34255 / 24. TP94 - 200 - 300.
Approx dimensions 6.3 cm x 5.6 cm x 5.4 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale.
No asbestos detected.

Sample No. 25. ASET31075 / 34255 / 25. TP95 - 0 - 100.
Approx dimensions 7.4 cm x 6.2 cm x 5.3 cm
The sample consisted of a mixture of clayish soil, stones, plant matter, fragments of shale and glass.
No asbestos detected.

Analysed and reported by,

Laxman Dias. BSc
Analyst / Approved Identifier
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denotes asbestos detected in easily crumbling plaster material

AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD
ABN 36 088 095 112

Our ref : ASET31030/ 34210 / 1 - 19
Your ref : 610.11873.00000 – Wet n' Wild
NATA Accreditation No: 14484

26 September 2012

SLR Consulting Australia Pty Ltd
2 Lincoln Street
Lane Cove NSW 2066

Attn: Mr Nalin De Silva
Mr Neil Kumar

Dear Nalin / Neil

Asbestos Identification
This report presents the results of nineteen samples, forwarded by SLR Consulting Australia Pty Ltd on 20 September 2012, for analysis for asbestos. This report supersedes the report issued on 24 September 2012.

1.Introduction: Nineteen samples forwarded were examined and analysed for the presence of asbestos.

2. Methods : The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method **(Safer Environment Method 1.)**

3. Results :

Sample No. 1. ASET31030 / 34210 / 1. 610.11873.00000 - TP51- 0.0 - 100.
Approx dimensions 7.0 cm x 7.0 cm x 2.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 2. ASET31030 / 34210 / 2. 610.11873.00000 - TP052 -0.0- 100.
Approx dimensions 8.0 cm x 8.0 cm x 3.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 3. ASET31030 / 34210 / 3. 610.11873.00000 - TP053 - 0.0 - 100.
Approx dimensions 8.0 cm x 10.0 cm x 3.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 4. ASET31030 / 34210 / 4. 610.11873.00000 - TP054 -0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 5.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster.
Chrysotile^ asbestos and Crocidolite^ asbestos detected.

Sample No. 5. ASET31030 / 34210 / 5. 610.11873.00000 - TP55 - 0.0 - 100.
Approx dimensions 7.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments of plaster and brick.
Chrysotile^ asbestos detected.

Sample No. 6. ASET31030 / 34210 / 6. 610.11873.00000 - TP056 - 0.0 - 100.
Approx dimensions 6.5 cm x 7.0 cm x 3.25 cm
The sample consisted of a mixture of clayish soil, stones, fibres^, plant matter and fragments soft fibro plaster# and plaster.
Chrysotile ^# , Amosite #^ asbestos and Crocidolite #^ asbestos detected.

Sample No. 7. ASET31030 / 34210 / 7. 610.11873.00000 - TP57 - 0.0- 100.
Approx dimensions 6.0 cm x 7.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 8. ASET31030 / 34210 / 8. 610.11873.00000 - TP058 - 0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 4.0 cm
The sample consisted of a mixture of clayish soil, fibres^, stones and plant matter.
Chrysotile^ asbestos detected.

Sample No. 9. ASET31030 / 34210 / 9. 610.11873.00000 - TP059 - 0.0 - 100.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of shale and plaster.
No asbestos detected.

Sample No. 10. ASET31030 / 34210 / 10. 610.11873.00000 - TP060 - 0.0 - 100.
Approx dimensions 10.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 11. ASET31030 / 34210 / 11. 610.11873.00000 - TP061- 0.0 - 100.
Approx dimensions 7.0 cm x 7.0 cm x 2.25 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 12. ASET31030 / 34210 / 12. 610.11873.00000 - TP062 - 0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 4.5 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 13. ASET31030 / 34210 / 13. 610.11873.00000 - TP063 - 0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 2.65 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 14. ASET31030 / 34210 / 14. 610.11873.00000 - TP064 - 0.0 - 100.0.
Approx dimensions 8.0 cm x 8.0 cm x 3.75 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 15. ASET31030 / 34210 / 15. 610.11873.00000 - TP065 - 0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 3.25 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of brick like material.
No asbestos detected.

Sample No. 16. ASET31030 / 34210 / 16. 610.11873.00000 - TP066 - 0.0 - 100.
Approx dimensions 7.0 cm x 7.0 cm x 2.5 cm
The sample consisted of a mixture of clayish soil, stones, plant matter and fragments of plaster and brick like material.
No asbestos detected.

Sample No. 17. ASET31030 / 34210 / 17. 610.11873.00000 - TP067 - 0.0 - 100.
Approx dimensions 8.0 cm x 8.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Sample No. 18. ASET31030 / 34210 / 18. 610.11873.00000 - TP068 - 0.0 - 100.
Approx dimensions 8.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones, fragments of plaster, brick and glass.
No asbestos detected.

Sample No. 19. ASET31030 / 34210 / 19. 610.11873.00000 - TP079 - 0.0 - 100.
Approx dimensions 8.0 cm x 7.0 cm x 3.0 cm
The sample consisted of a mixture of clayish soil, stones and plant matter.
No asbestos detected.

Analysed and reported by,

Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)
Occupational Hygienist / Approved Identifier
Approved Signatory

This document is issued in accordance with NATA's Accreditation requirements. Accredited for compliance with ISO/IEC 17025.

^ denotes loose fibres of relevant asbestos types detected in soil/dust.
*** denotes asbestos detected in ACM in bonded form.**
 # denotes asbestos detected in easily crumbling plaster material

Appendix G
Unexpected Finds Protocol (SLR Consulting, 2012)

Proposed Wet n' Wild Theme Park
Reservoir Rd, Prospect
Report Number 610.11873 R03

global environmental solutions

Unexpected Finds Protocol

Bulk Earthworks

Proposed Wet n' Wild Theme Park

Reservoir Rd, Prospect

Report Number 610.11873 R02

21 September 2012

Prospect Aquatic Investments Pty Limited
Jam Factory,
Level 1, 500 Chapel Street,
South Yarra VIC 3141

Version: Final Draft

Unexpected Finds Protocol

Bulk Earthworks

Proposed Wet n' Wild Theme Park

Reservoir Rd, Prospect

PREPARED BY:

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
2 Lincoln Street Lane Cove NSW 2066 Australia

(PO Box 176 Lane Cove NSW 1595 Australia)
T: 61 2 9428 8100 F: 61 2 9427 8200
E: sydney@slrconsulting.com www.slrconsulting.com

DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.11873 R02	Final Draft	21 September 2012	Nalin De Silva	Adam Marshal	Nalin De Silva

TABLE OF CONTENTS

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR Consulting) has been engaged to prepare an Unexpected Finds Protocol to assist with the bulk earthworks that are currently being conducted at the property located at Lot 1 DP1045771 off Reservoir Rd, Prospect (the Site). The earthworks are part of the development of the proposed Wet n' Wild theme park.

2 BACKGROUND

As part of documentation submitted to Department of Planning to obtain planning approval for the development, the following two contamination assessments had been prepared by RCA:

- **RCA, 2010**. *Phase 1 Environmental Site Assessment – Sydney Wet n' Wild, Prospect NSW*
- **RCA, 2010.** *Phase 2 Contamination Assessment – Sydney Wet n' Wild, Prospect NSW.*

The contamination assessments have indicated that significant widespread contamination is unlikely and stated that the site is suitable for the proposed land use. However, SLR Consulting understands that asbestos contamination has been identified in a number of areas within the site during the clearing works that have been conducted to date, in preparation for the bulk earthworks. A number of locations where such asbestos contamination has been identified have been cordoned off prevent earth works in those areas.

Based on visual observations of pits excavated at various locations within the site, the asbestos contamination is predominantly present within:

- Fill material present within the site;
- Beneath former driveways that serviced the now demolished residences; and
- Areas in the vicinity of the now demolished residences.

SLR Consulting is currently conducting a contamination assessment to assess the extent of contamination at the site, including asbestos contamination.

Earth works are currently not proposed to be conducted in any areas where asbestos contamination is known to exist. However, earth works are proposed to be conducted in areas where no asbestos has been identified or reported.

This Unexpected Finds Protocol has been prepared to assist the earthworks contractor in the event that asbestos contamination, or any other contamination, is encountered during the earthworks.

3 OBJECTIVES

The objective of this Unexpected Finds Protocol is to outline a strategy for the earthworks contractor to manage unexpected occurrences of contamination that may be encountered during earthworks, such that potential risks to workers health and the environment is minimised.

4 THE SITE

4.1 Site Identification

The site is identified as Lot 1 of DP1045771 and is located off Reservoir Rd, Prospect NSW. A site plan is shown below on **Figure 1**.

Figure 1 Site Location Plan

4.2 Site condition and environment

The site is currently vacant, except for the site sheds and amenities that have been established as part of the development works. The residences and sheds that are visible on **Figure 1** have been removed. The dams present on the site have been drained.

A number of areas have been cordoned off due to identified asbestos contamination. The main cordoned off area is shown on Figure 2 below.

Figure 2 Areas of known and likely asbestos contamination

5 UNEXPECTED FINDS PROTOCOL

Based on the current contamination assessment and visual observations by SLR Consulting, areas of the site are progressively being “cleared” to conduct bulk earthworks. In the event that any material suspected of containing potentially hazardous substances is found during such earth works, the following procedure should be implemented.

Potentially hazardous substances could include, but are not limited to:

- Friable or bonded asbestos;
- Underground storage tanks;
- Buried containers;
- Phase separated hydrocarbons;
- Powders and other suspicious buried material; and
- Evidence of contamination including significant staining, odours and discolouration.

Unexpected Finds Protocol

1 Stop/prevent any activity in the area and surrounds and secure the area. Do not touch or disturb the item/material;

2 Report the Unexpected Finding to the site foreman AND the Nominated SLR Consulting Representative. If the find constitutes an imminent hazard to human health or the environment move immediately to Step 4;

3 If safe to do so, record location, visual appearance, odour, depth, surrounding material and mode of discovering the material to the site foreman AND the Nominated SLR Consulting Representative;

4 Obtain assistance from SLR Consulting in identifying the potential hazard to human health or the environment in accordance with the relevant NSW regulatory requirements and Guidelines. This may include additional sampling and laboratory analysis, but could be limited to inspections;

5 Establish management actions in compliance with NSW regulatory requirements and Guidelines;

6 Obtain approval from the Nominated SLR Consulting Representative and regulator (if applicable) for the proposed management actions;

7 Do not recommence work until the appropriate approvals have been received;

8 Implement the approved management action plan and seek on-going advice as necessary;

9 Document the findings, and compliance with the approved action plan and provide documentation to the site foreman AND the Nominated SLR Consulting Representative; and

10 Update the site hazards register as required.

11 Brief site team through Tool Box Talk.

6 NOMINATED PERSONNEL

The following personnel have been nominated to action this Unexpected Finds Protocol.

Role	Contact Details	Responsibility with respect to the Unexpected Finds Protocol
Site Foreman Jason Todd Site Manager – Lipman	0418 864 840 jasont@lipman.com.au	Inform SLR Consulting Representative of the unexpected find Record the location of the unexpected find Isolate the unexpected find Implement, or direct the implementation of the unexpected finds protocol. Ensure that works are not conducted within the unexpected finds area until appropriate action has been conducted and approval received from the SLR Consulting Representative.
SLR Consulting Rep Nalin De Silva Principal Consultant – SLR Consulting	0407 117 562 ndesilva@slrconsulting.com	Inspect the unexpected find upon notification by site foreman Investigate the unexpected find as appropriate Advise on any action that may be required to mitigate risks to site workers or the environment Validate any remediation works conducted Approve recommencement of earth works in affected area following completion of remediation and validation works. Document any investigation and remediation works that may be conducted

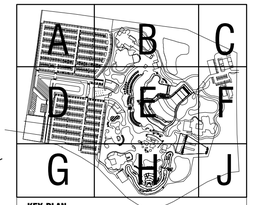
7 CLOSURE

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Prospect Aquatic Investments Pty Limited. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR Consulting.

SLR Consulting disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

PRELIMINARY



KEY PLAN

THE BUCHAN GROUP

Malone Buchan Laird & Bawden Pty Ltd
ACN 066 985 046 ABN 56 069 344 614
Nominated Architect: Nathan Hones NSW ARN 6957
Architecture + Master Planning + Interiors + Graphics
A member of **The Buchan Group**

issue	date	revision	ints	auth
A	12/11/12	PRELIMINARY ISSUE		AP

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SITE IMAGE
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Quantity Surveyors
DAVIS LANGDON
Level 21, 420 George Street, Sydney NSW 2000
Tel: 02 8934 0343

WET'N'WILD SYDNEY
RESERVOIR ROAD
PROSPECT

CONTAINMENT CELL LOCATIONS

purpose	PRELIMINARY 12/11/12
proj no	212038
scale	1:1250 @ A1/1:2500 @ A3
created	NOV 2012
plotted	12.11.2012 at 16:10
file	Y:\712\212038 Wet 'N Wild Sydney\PLO A-DD-0103.dwg

NORTH

dwn	dwg no	issue
CAD	A-DD-0103	A

NSW GOVERNMENT | Planning & Infrastructure

MAJOR PROJECT ASSESSMENT: Wet 'n' Wild Sydney Reservoir Road, Prospect (MP10_0190)

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

December 2011

ABBREVIATIONS

CIV	Capital Investment Value
Department	Department of Planning & Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning & Infrastructure
EA	Environmental Assessment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning
PAC	Planning Assessment Commission
Parklands SEPP	State Environmental Planning Policy (Western Sydney Parklands) 2009
Part 3A	Part 3A of the *Environmental Planning and Assessment Act 1979*
PEA	Preliminary Environmental Assessment
PFM	Planning Focus Meeting
PPR	Preferred Project Report
Proponent	Prospect Aquatic Investments Pty Ltd
RtS	Response to Submissions

Cover Photograph: Masterplan

Published December 2011
NSW Department of Planning & Infrastructure
www.planning.nsw.gov.au

NSW Government
Department of Planning & Infrastructure

EXECUTIVE SUMMARY

This report is an assessment of an application by Prospect Aquatic Investment Pty Ltd (the proponent), seeking concept plan approval for the construction and operation of a water theme park (known as Wet 'n' Wild Sydney) at Reservoir Road, Prospect, pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The site is within the Western Sydney Parklands and is located between the M4 Motorway, Reservoir Road and Watch House Road at Prospect, within the Blacktown Local Government Area.

The concept plan seeks approval for the design, construction and operation of Stage 1 which includes site preparation and earthworks, demolition and tree removal, construction of 10 water theme park rides and attractions, construction of ancillary park support facilities, at-grade car parking, signage, landscaping, and construction of associated stormwater and water cycle management facilities, infrastructure and utilities. Additionally, the concept plan seeks approval of a Complying Development Scheme for the future development of the site.

The Capital Investment Value (CIV) of the concept plan is **$98,118,364**. The concept plan will create approximately 222 full time equivalent construction jobs, and approximately 187 full time equivalent operational jobs.

The site is unzoned under clause 9 of the State Environmental Planning Policy (Western Sydney Parklands) 2009. The development of the water theme park is permissible with consent under clause 11(2) of the State Environmental Planning Policy (Western Sydney Parklands) 2009.

The EA was exhibited from 23 February 2011 until 25 March 2011 (30 days). The Department received nine submissions from public authorities and thirty eight submissions were received from the general public, of which ten were submissions objecting to the development. Issues raised in submissions related to heritage, traffic, public transport, noise, flora and fauna, visual impacts, air quality, ecologically sustainable development, impacts to water supply and community benefits.

On 3 August 2011, the proponent submitted a Preferred Project Report (PPR) which detailed changes to the configuration and staging of the development. Additionally, the proponent submitted a response to public and agency submissions and additional information in response to issues raised therein.

The department has assessed the merits of the proposal and considers that the key issues relate to traffic and accessibility, noise, heritage and archaeology, ESD, ecology, bushfire, and the complying development code. These issues have been assessed in detail and the department is satisfied that they can be adequately mitigated and managed to ensure a satisfactory level of environmental performance, pursuant to section 75J of the EP&A Act. The proponent also negotiated with the council contributions payable for the upgrade of Reservoir Road.

The department is satisfied the site is suitable for the proposed use and that the project will provide significant social and economic benefits for Western Sydney, and

is consistent with the Metropolitan Plan for Sydney 2036 and the North West Subregion Draft Subregional Strategy.

The department therefore considers the proposal to be in the public interest and the concept plan including Stage 1 should be approved, subject to modifications and conditions.

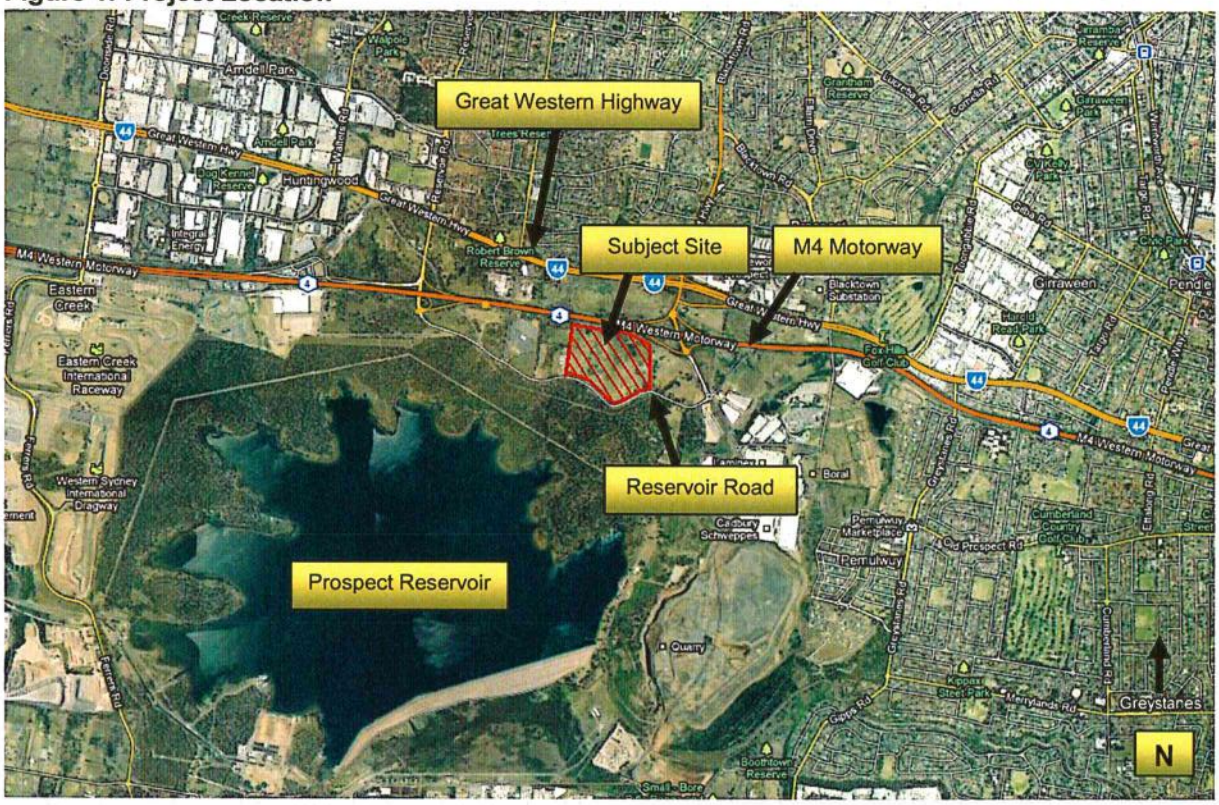
TABLE OF CONTENTS

1. BACKGROUND

1.1. The Site

The site is located within Blacktown Local Government Area (LGA) and also forms part of the Western Sydney Parklands. The site is located between the M4 Motorway, Reservoir Road and Watch House Road in Prospect and is legally described as Lot 1 in DP 1045771. The project location is shown in Figure 1 below.

Figure 1: Project Location



1.2. Existing Site Features

The site comprises a single irregular shaped allotment with an area of approximately 25.5 hectares. The site has frontages to the M4 Motorway, Watch House Road and Reservoir Road. The topography of the site comprises undulating gentle slopes with a drainage line running through the centre of the site from the south to the north. The site is predominantly covered in pasture with some isolated areas of natural vegetation, including two areas of Cumberland Plain Woodland with a combined area of approximately 2.2 ha. The site also contains 5 dilapidated houses and associated sheds and garages which are located along the southern and eastern boundaries of the site. The existing site is shown below in Figure 2.

Figure 2: View across the site to the north east

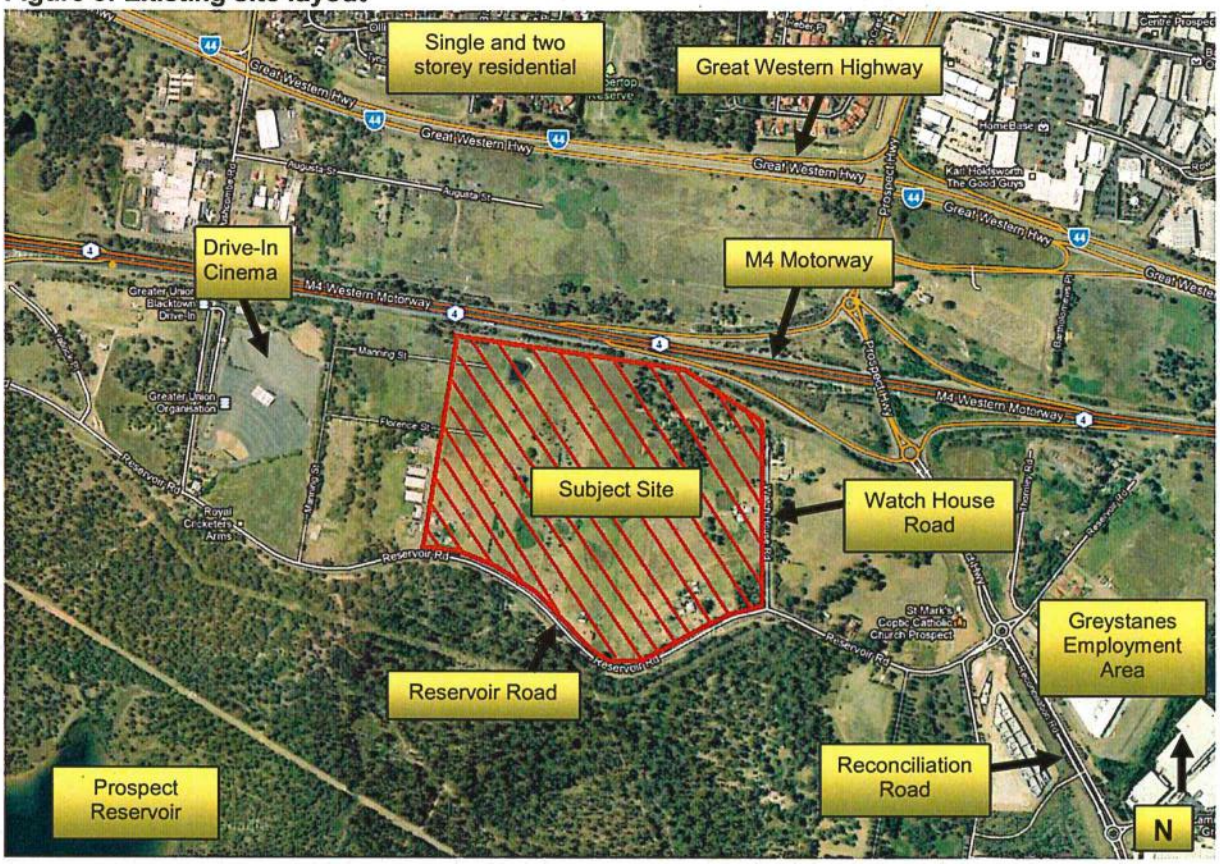
1.3. Surrounding Development

Development surrounding the subject site is detailed below:

- To the north of the site, beyond the M4 Motorway, is a vacant land corridor zoned for general industrial use. The Great Western Highway and the residential suburb of Prospect are also located further north of the site.
- To the east of the site, beyond Watch House Road, are a number of rural residential land uses and a telecommunications tower facility. The Prospect Highway and the Greystanes employment area are also located further east of the site.
- To the south of the site, beyond Reservoir Road, is native bushland surrounding Prospect Reservoir.
- To the west of the site are a number of rural properties. The Blacktown Drive Inn Cinema, Royal Cricketers Arms Inn, Eastern Creek Raceway and the Western Sydney Dragway are also located further west of the site.

The existing site layout and surrounding development is shown in Figure 3 below.

Figure 3: Existing site layout



1.4. Strategic Context

1.4.1 NSW State Plan 2021

The NSW State Plan is the NSW Government's strategic business plan, setting priorities for action and guiding resource allocation. The plan seeks to rebuild the economy, return quality services, renovate infrastructure, strengthen our local environment and communities and restore accountability. The proposed development would contribute to a number of the plans important priorities and targets, including the following:

- increase business investment and employment
- encourage job growth in centres close to where people live and provide access to public transport
- increase participation in recreational activities in Sydney
- protecting local environments from pollution
- increase walking and cycling.

1.4.2 Metropolitan Plan for Sydney 2036

The Metropolitan Plan for Sydney 2036 vision seeks to create a sustainable, affordable, liveable, equitable and networked city that supports the continued economic growth of Sydney and enhances its standing as a global city. The plan identifies that Sydney's future growth will require the establishment of approximately 760,000 more jobs, half of which will be required to be located within Western Sydney.

The proposed development will satisfy the Metropolitan Plan objectives to:

- provide for a broad range of local employment types in dispersed locations
- ensure appropriate services are located near transport, jobs and housing
- increase and diversify the jobs and skills base of Western Sydney
- achieve sustainable water use
- minimise and recycle waste.

1.4.3 North West Subregion Draft Subregional Strategy

The North West Subregion Draft Subregional Strategy identifies the Western Sydney Employment Hub as a collection of 10 sites, including the Greystanes Employment Lands and the Huntingwood Precinct which are located in close proximity to the proposed development. The proposal will complement the employment precinct as it will provide approximately 222 full time equivalent construction jobs, and approximately 187 full time equivalent operational jobs. Additionally, the proposal will contribute towards meeting the employment capacity target of 130,000 new jobs within the north west subregion by 2031.

2. PROPOSED PROJECT

2.1. Project Description and Approval Regime

The proposal as described in the Environmental Assessment, and revised by the Preferred Project Report, sought approval of a water theme park.

2.1.1 Concept Plan

The concept plan approval is sought for:

- Stage 1
  - Stage 1 includes: site preparation and earthworks, demolition and tree removal, construction of 10 water theme park rides and attractions, construction of ancillary park support facilities, at-grade car parking, signage, landscaping, and construction of associated stormwater and water cycle management facilities, infrastructure and utilities.
  - Approval is sought for Stage 1 of the concept plan to proceed to construction with no further environmental assessment required.
  - Key Components of Stage 1 are identified in table 1 below.

- Future expansion area.
  - Approval is sought for a Complying Development Code (CD Code) for the whole of the site, allowing future expansion area of rides and ancillary uses outside the Stage 1 area, and also the replacement of rides and facilities inside the Stage 1 area, as required.
  - Any development that falls outside of the prescribed standards and conditions of the CD Code will be the subject of a future development application.

2.1.2. Key Components of the Concept Plan

Table 1: Stage 1 Design Construction and Operation Components

Aspect	*Description*
site preparation earthworks, demolition and tree removal	• cut and fill earthworks across the site • demolition of 4 of the 5 existing structures on the site (retention of the former policeman's cottage) • removal of 0.78 hectares of Cumberland Plain Woodland • grading, draining and turfing of future expansion areas of the site
water theme park rides and attractions	• construction of 10 water theme park rides, including: 'Boomerang Bay' 'Surf Wave Pool', 'Lazy / Adventure River', 'Giant Rainfortress Waterplay on Wet Deck', 'Double Aqualoop, Freeloop and Freefall Complex', 'Duelling Master Blaster Tube Ride', 'Zip Line', 'Double Flowrider', 'Innertube Slides with Superbowl / Rattler / High Speed Drop / Constrictor', 'Family Boomerango and Abyss Raft Ride', and 'Sky Coaster'.
ancillary park support facilities	• entry plaza • turnstiles • guest support • ticketing / group sales (under canopy) • park entry overview • fencing • guest services / first aid • retail shop / park exit • change rooms / showers / lockers • life guards and security • sails fabric shade structures • beer garden • fast food • terraced sand beach lounging • rental cabanas • smoking area • restrooms • plaza with iconic giant geyser • rentals • main food service • dining area under shade canopy • "all you can eat" dining • sloping lawn • mechanical space • administration and staff building • maintenance / storage / service area • central overlook plaza • tube storage
access and parking	• visitor access via a new signalised intersection with turning lanes off Reservoir Road to visitor car parking area on the western side of the site • loading dock access off Watch House Road at the north eastern side of the site • emergency vehicle access around the site and emergency egress from each boundary of the site

Aspect	Description
	• construction of main visitor car park at the west of the site with 1,857 sealed car spaces including 42 spaces for the disabled, 12 coach spaces, 6 mini-bus spaces, 20 motorcycle spaces, 200 bicycle parking spaces and a pick-up / drop-off area. • staff and service vehicle car parking for 47 unsealed spaces at the north eastern side of the site • loading area at the north eastern of the site • sealed pedestrian and disabled access paths throughout the Stage 1 site
utility services	• augmentation of 350 m of water supply services along Reservoir Road to the site and relocation of a Sydney Water easement within the site • connection to sewerages services approximately 800 m north of the site • connection to gas main services approximately 600 m north of the site • connection to electricity services approximately 1,200 m south east of the site • connection to telecommunication services along Reservoir Road
signage	• the location of three free standing signs along the M4 motorway and Reservoir Road frontages • signs on rides, attractions and building structures • information / directional signage throughout the park
landscaping	• landscaping comprising iconic beach trees and beach landscape treatments and subtropical rainforest throughout different areas of the park, supplement existing woodland areas with plantings of Cumberland Plain Woodland Species, and planting of native wetland species around water detention pond.
water cycle management	• stormwater management including vegetated water treatment swales throughout the car park, roof water collection tanks, pits and underground pipes through the main water park areas, gross pollutant traps prior to discharge into wetland, water treatment wetland, stormwater detention and reuse pond, overflow discharge in to Blacktown Creek • rainwater use including harvesting and use of rainwater for irrigation from the detention and reuse pond, toilet flushing washdown water from roof water collection tanks following UV disinfection and filtration of sediment • use of potable water for pools, rides, kitchens, showers and hand basins, and discharge of waste water from them in to Sydney water sewer.
Environmental Management Plan	• to be implemented in Stage 1 and includes objectives, actions, indicators and targets for environmental performance
operating hours	• December and January 9 am to 11 pm (and to 12 midnight for special events) • February to April 9 am to 6 pm weekdays, 9 am to 10 pm weekends • May to August 9am to 5 pm weather and circumstances permit, and temporary closures for upgrades • September to November 9 am to 6 pm weekdays, 9 am to 10 pm weekends

The layout of the concept plan is shown below in Figure 4.

Figure 4: Concept Plan

2.1.3. Complying Development Code

As part of the concept plan, approval is also sought for a Complying Development Code (CD Code) for the future expansion stages of the site. The boundary between Stage 1 and the future expansion areas is identified in Figure 5 below. The CD Code will allow ride structures up to a height of 35 m above finished ground level and buildings for recreation, entertainment and ancillary facilities up to a height of 12 m above finished ground level with a maximum footprint of 1,000 m^2 to be complying development, subject to satisfying the prescribed standards and conditions.

Complying development would be approved through the issue of a Complying Development Certificate by either Blacktown City Council or an accredited private certifier. Future development of the site that doesn't meet the complying development standards in the code would need to be the subject of a development application to Blacktown City Council. The Stage 1 and future expansion areas of the site are shown in Figure 5. The CD Code is discussed in more detail in Section 5.7.

Figure 5: Stage 1 (shown in white) and Future Expansion Area (shown in green)

2.2. Project Need and Justification

The proposal will provide Western Sydney with a major recreational and entertainment facility that will make a significant contribution to the local economy in terms of investment, tourism and employment. The development of the water theme park is also consistent with the Western Sydney Parklands Plan of Management 2020 which identifies the desired future character of the subject site and surrounding area as a major destination for tourism and passive and active recreation.

The proposal is also consistent with the Metropolitan Plan for Sydney 2036 and the North West Subregion Draft Subregional Strategy as the proposal will contribute towards meeting the employment capacity target of 130,000 new jobs within the north west subregion by 2031 through the provision of approximately 222 full time equivalent construction jobs, and approximately 187 full time equivalent operational jobs.

3. STATUTORY CONTEXT

3.1. Major Project

The proposal is a major project under Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) because it is development located within the Western Sydney Parklands and has a capital investment value of more than $30 million, in accordance with clause 10(1) of the State Environmental Planning Policy (Western Sydney Parklands) 2009 (Parklands SEPP).

Clause 10 of the Parklands SEPP was repealed on 1 October 2011 pursuant to clause 6.14(1), Schedule 6 of State Environmental Planning Policy (State and Regional Development) 2011, however, under clause 6.14(2), clause 10 of the Parklands SEPP continues to apply to applications made, but not finally determined before that repeal.

Part 3A of the EP&A Act, as in force immediately before its repeal on 1 October 2011 and pursuant to Schedule 6A to the EP&A Act, continues to apply to *transitional Part 3A projects*. Director-General's environmental assessment requirements (DGRs) were issued in respect of this project prior to 1 October 2011, and the project is therefore a *transitional Part 3A project*. Consequently, this report has been prepared in accordance with the requirements of Part 3A and associated regulations, and the Minister for Planning and Infrastructure (or his delegate) may approve or disapprove of the carrying out of the concept plan under section 75O of the EP&A Act, and may make a determination under 75P(1)(c) of the EP&A Act that no further environmental assessment is required for Stage 1.

3.2. Delegation

The Minister has delegated his functions to determine Part 3A applications to the Department where:

- the council has not made an objection, and
- there are less than 25 public submissions objecting to the proposal, and
- a political disclosure statement has not been made in relation to the application.

There have been 10 submissions received from the public objecting to the proposal. Council initially provided a submission which objected to the proposal, however, this objection was withdrawn during the assessment. There has also been no political disclosure statement made for this application or for any previous related applications, and no disclosures made by any persons who have lodged an objection to this application.

Accordingly the application is able to be determined by the Deputy Director General under delegation.

Additionally, the Minister delegated his functions under section 75P of the EP&A Act to the Deputy Director-General where approval is given for a concept plan under section 75O of the EP&A Act. Accordingly, subject to approval of the concept plan, the Deputy Director-General may make a determination under 75P(1)(c) as documented above, and issue an order under section 75P(2)(d) for the commencement of the "Wet 'n' Wild Sydney Complying Development Code'.

3.3. Permissibility

Clause 11 of the Parklands SEPP identifies the permissible and prohibited land uses in the Western Sydney Parklands. Under Clause 11(3) of the Parklands SEPP, residential accommodation is the only prohibited land use in the Western Sydney Parklands, and under Clause 11(2) of the Parklands SEPP, all other land uses are permissible with consent if they are carried out by a private entity. Therefore, the proposed uses in the proposal are permissible in the Western Sydney Parklands with consent.

3.4. Environmental Planning Instruments

Under Sections 75I(2)(d) and 75I(2)(e) of the EP&A Act, the Director General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project. The instruments that would otherwise be applicable include:

- State Environmental Planning Policy (Western Sydney Parklands) 2009
- State Environmental Planning Policy (Major Development) 2005
- State Environmental Planning Policy (Infrastructure) 2007
- State Environmental Planning Policy No.55 – Remediation of Land
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

In accordance with clause 3(2) of the Blacktown Local Environmental Plan 1988 (Blacktown LEP), Blacktown LEP does not apply to land to which State Environmental Planning Policy (Western Sydney Parklands) 2009 applies. Additionally, Blacktown DCP 2006 (Blacktown DCP) does not apply to land to which State Environmental Planning Policy (Western Sydney Parklands) 2009 applies. Accordingly, Blacktown LEP and Blacktown DCP do not apply to the site.

The department's consideration of the abovementioned SEPPs is provided in Appendix D.

3.5. Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act. The relevant objects are:

(a) to encourage:

- *(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- *(ii) the promotion and co-ordination of the orderly and economic use and development of land,*
- *(iii) the protection, provision and co-ordination of communication and utility services,*
- *(iv) the provision of land for public purposes,*
- *(v) the provision and co-ordination of community services and facilities, and*

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and
(vii) ecologically sustainable development, and
(viii) the provision and maintenance of affordable housing, and

(b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and

(c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.

The department has considered the objects of the EP&A Act, and determined that the application is consistent with the relevant objects. The assessment of the application in relation to these relevant objects is provided in section 5 of this report.

3.6. Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

(a) the precautionary principle,
(b) inter-generational equity,
(c) conservation of biological diversity and ecological integrity,
(d) improved valuation, pricing and incentive mechanisms.

Detailed assessment of the economic and environmental issues associated with the concept plan is provided in section 5 of this report. On the basis of this assessment, the department is satisfied that the proposal encourages ESD, in accordance with the objects of the EP&A Act.

3.7. Statement of Compliance

In accordance with section 75I of the EP&A Act, the Department is satisfied that the Director-General's environmental assessment requirements have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1. Exhibition

Under section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the department publicly exhibited it from Wednesday 23 February 2011 until Friday 25 March 2011 (30 days) on the department's website, and at the Department of Planning and Infrastructure Information Centre and Blacktown City Council.

The department also advertised the public exhibition in the Sydney Morning Herald, Daily Telegraph and Blacktown Advocate on 23 February 2011 and notified landholders, local community groups and relevant State and local government authorities in writing.

The Department received forty seven (47) submissions during the exhibition of the EA – nine (9) submissions from public authorities and thirty eight (38) submissions from the general public, of which ten were submissions of objection.

A summary of the issues raised in submissions is provided below.

4.2. Public Authority Submissions

Nine submissions were received from public authorities during the exhibition. None of the submissions objected to the proposal, however, some provided general comments and recommendations as summarised below. Blacktown Council indicated it would object unless a condition was imposed requiring the upgrade of Reservoir Road. In addition to providing submissions during the EA exhibition, some agencies also provided submissions on the PPR. The department's consideration of key issues raised in submissions is contained in Section 5 of this report. Appropriate modifications / conditions of approval have been recommended where requested by agencies. An outline of submissions provided by agencies is provided below, and further details of agency submissions is provided in Appendix B and C of this report.

Blacktown City Council (Council)

- Council raised concern with the assumptions used in the traffic modelling and impacts on surrounding intersections during the exhibition. Council later identified that the supplementary information provided by the proponent in the PPR had addressed council's concerns regarding traffic modelling and impacts on the surrounding road network.
- Council considered the provision of 1810 car parks to be an underestimation of the car parking requirements, however, council later identified that they would accept a condition requiring the preparation of an Operational Traffic and Transport Management Plan to manage parking in the future.
- Council objected to any approval being given that did not provide a condition requiring the upgrade of Reservoir Road. Council later provided a submission which indicated that the council accepts the proponent's monetary contribution of $650,000 to council for the repair and reseal of Reservoir Road from Reconciliation Road to Peter Brock Drive.
- Council initially raised concern with the lack of visual impact assessment on heritage items in the vicinity of the subject site, however, later identified that the PPR is supported by further heritage assessment and a report that now satisfies the concerns raised by council.

Office of the Environment and Heritage (OEH) formerly Department of Environment Climate Change and Water

- OEH considered that the EA did not adequately assess the potential impacts of the noise and light on the fauna of Prospect Nature Reserve.
- OEH considered that the EA has not adequately assessed the impacts of the proposed cut and fill required to create the wetland and water reuse area in the north of the site, and its potential impacts on the water table and the hydrological

regime of the Cumberland Plane Woodland (CPW) remnant immediately adjacent to it.
- OEH does not consider that this replanting will adequately offset the proposed impacts on the critically endangered CPW.
- OEH identified that any areas of regenerated CPW within APZ's should not be considered as offsets for the proposal.

NSW Office of Water
- NOW noted that the site has a small roof area and a high water use, and the proposal needs to demonstrate that it can achieve this proposed water supply before any approval is given.
- NOW identified that the water sharing plan for the Greater Metropolitan Region Unregulated River Water Sources commenced on 1 July 2011, and consequently, the licensing provisions of the Water Management Act 2000 also came in to effect within the plan area.
- NOW identified that the proponent will need to trade water from another existing entitlement in accordance with the rules set out in the water management plan.

Sydney Water
- Sydney Water identified that a new 250 mm water main will need to be laid along Reservoir Road to the site from the existing 200 mm water main crossing Reservoir Road (approximately 300 m to the east of the site).
- The site is not currently connected to Sydney Water's wastewater network with the nearest connection approximately 700 m away in Norman Street. Sydney Water has limited the peak sewerage discharge from the site to this connection, to 15 mitres per second.
- Sydney Water has discussed the relocation of the water main and easement with the proponent and have conditionally agreed to relocate the water main along the northern boundary of the site.

NSW Roads and Maritime Services (formerly) NSW Roads and Traffic Authority
- Reconciliation Road is expected to open to through traffic in early 2012 which will substantially alter background traffic conditions. The SIDRA modelling provided in the EA will need to updated to reflect this and needs to be carried out in the peak period and not the shoulder period.
- The RMS identified that the monetary contribution which formed part of the lease agreement for the site (see discussion under Section 5 of this report) is a contribution towards State road works and identified that there may be a need to condition local road works directly attributed to the development.
- The RMS acknowledges that bus bays have been provided on site, however the RMS still requires the proponent to discuss the potential for bus bays at the proposed traffic control signals on Reservoir Road.

Transport NSW
- TNSW appreciated the consideration given to reducing travel demand and improving the travel characteristics of the site and supports the efforts to increase sustainable means of travel, including measures such as a shuttle bus service between the development and Blacktown Train Station, Bicycle parking facilities within the site
- TNSW strongly encouraged the facilitation of a sustainable transport culture on site and given the relative isolation of the site from public transport, the provision

of shuttle bus services to Blacktown Train Station for workers and visitor would be integral for reducing private vehicle trips to the site. The conditions should include a commitment to the continued operation and promotion of this service prior to the commencement.

Heritage Branch of the Office of the Environment and Heritage (Heritage Branch) (formerly Heritage Branch of the Department of Planning)

- The Heritage Branch considered that the EA has not sufficiently considered the heritage and archaeological impacts of the project and requested further information be provided. The Heritage Branch later acknowledged that sufficient information had been provided in the PPR.
- The Heritage Branch considered that the EA does not include a sufficient visual analysis to determine the impacts on the nearby state heritage listed Royal Cricketers Arms Hotel.
- The Heritage Branch considers that increased visual screening along the site frontage along Reservoir Road is necessary to protect this aspect of the site's significance and also considered that increased visual screening around the Policeman's Cottage is required to maintain its visual character as a heritage building.
- Signage along Reservoir Road requires careful location and design to fit in with the rural character and nature of the road, in particular, to the west of the site where the Royal Cricketers Arms Inn and Policeman's Cottage are located.

Land and Property Management Authority (LPMA)

- LPMA note that the Wet 'n' Wild proposal seeks to rely on an easement through land owned by LPMA to provide sewer and gas utilities to their site. These easements would use proposed Sydney Water easements.
- LPMA and Western Sydney Parklands Trust agreed to make available such utilities through the Huntingwood East site on the understanding they would be located in a large riparian corridor and not the proposed Sydney Water easement.

NSW Rural Fire Service

- RFS recommend that the property around buildings adjacent to the 'Remnant' Cumberland Plain Woodland is to be maintained as an inner protection area up to a minimum distance of 10 metres.
- RFS recommend that the property around buildings adjacent to the 'Forest Structure' Cumberland Plain Woodland is to be maintained as an inner protection area up to a minimum distance of 35 metres.
- RFS recommend that arrangements for an emergency evacuation plan are to comply with "Planning for Bushfire Protection 2006".

4.3. Public Submissions

Thirty eight submissions were received from the general public. Of the 38 public submissions, ten (26%) objected to the project, 21 (55%) supported the project and seven (18%) did not object but provided comments. The key issues raised in public submissions are listed in Table 3, over.

Table 3: Summary of Issues Raised in Public Submissions

Issue	Proportion of submissions (%)
Positive benefit to the community	55
Traffic impacts	34
Heritage impacts	24
Noise	11
Flora and fauna	8
Visual impact	6
Public transport	3
Air quality	3
ESD	3
Impact to water supply	3

The department has considered the issues raised in submissions in its assessment of the project.

4.4. Proponent's Preferred Project Report

The proponent provided a Preferred Project Report (PPR) on 3 August 2011 in response to issues raised in submissions (see Appendix C).

The PPR was accompanied by a Response to Public Submissions, Response to Agency Submissions, supplementary Transport and Accessibility Impacts Report, Heritage View Analysis Report, Baseline Historical Archaeological Impact Assessment, Revised Heritage Impact Statement, Sydney Water letter of agreement to relocation of easement, Complying Development Code, and revised architectural drawings.

The PPR provided changes to the site masterplan and landscape masterplan in response to recommendations made in the Heritage View Analysis Report to conserve view corridors and include additional planting and regeneration of woodland. Additionally, the PPR included revised flood detention provisions and a wetland and reuse pond area detailed plan.

5. ASSESSMENT

The Department considers the key environmental issues for the project to be:

- Traffic and Accessibility
- Noise and Vibration
- Heritage and Archaeology
- ESD
- Ecology
- Bushfire
- Complying Development Code
- Public Interest

5.1. Traffic and Accessibility

A Transport and Accessibility Impact Report (TAIR) was submitted as part of the EA and a supplementary TAIR accompanied the PPR in response to traffic and accessibility issues raised in submissions.

5.1.1 Attendance Forecast

The TAIR identifies that the proposal will attract up to 925,000 visitors per year, however daily attendance will vary considerably from day to day throughout the year. It will vary from weekdays and weekends, holidays and non holiday periods, daylight saving and non daylight saving periods, and warmer summer months and cooler winter months. The daily attendance forecast for the development was generated from surveys of existing developments, including Wet 'n' Wild Gold Coast.

The daily attendance forecast for the development is divided in to three periods throughout the year, namely, off peak (1 March – 31 October), shoulder (1 November – 19 December and 27 January – 28 February), and peak (20 December – 26 January). The daily attendance forecast is provided in Table 4 below.

Table 4: Daily attendance forecast

Period		Day of Week	Days of Year	Total Days		Forecast Daily Attendance (people)	
				Number	%	Average	Range
Off Peak	Non holiday	Weekday	1 March – 31 October	174	47.7	2,000	500-3,000
	Non holiday	Weekend		71	19.5	3,100	1,000-4,000
Shoulder	Non holiday	Weekday	1 Nov – 19 Dec and 27 Jan – 28 Feb	59	16.0	3,600	2,000-7,000
	Non holiday	Weekend		23	6.4	6,900	3,000-8,000
Peak	Holidays	Weekday	20 Dec – 26 Jan	27	7.4	7,700	4,000-9,000
	Holidays	Weekend		11	3.0	7,700	5,000-9,000
				365	100		

The daily attendance forecast identifies that the lowest attendance rates occur during the off peak period which represents the cooler months of the year and has a duration of approximately 245 days or 67% of the days in a year. During the off peak period, daily attendance rates range from 500 – 3000 people during weekdays and 1000 – 4000 people during weekends.

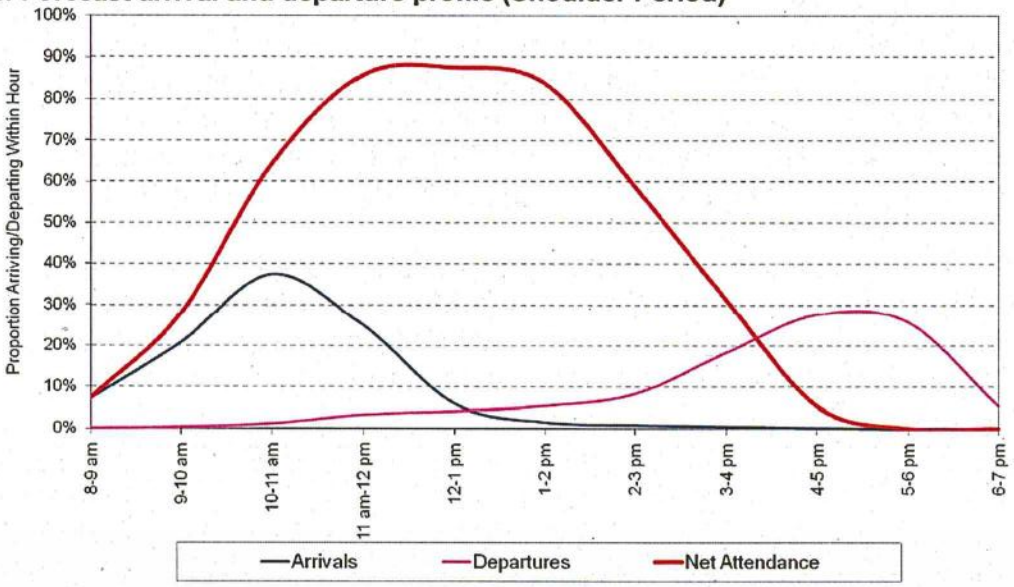
The highest daily attendance rates occur during the peak period which occupies the summer holiday period and has a duration of approximately 37 days or 10% of the days in a year. During the peak period, daily attendance rates range from 4000 – 9000 people during weekdays and 5000 – 9000 people during weekend periods.

The TAIR report identifies that the peak period for the development itself would occur on weekends and school holidays, however, the peak period for the road network surrounding the site occurs on weekdays in non-school holiday periods. Consequently, the TAIR identifies that the transport assessment was based on the shoulder period as it coincided with peak traffic conditions on the adjacent road network in non-school holiday periods.

During the shoulder period (1 November – 19 December and 27 January – 28 February), closing times of the water theme park vary between 6 pm and 10 pm.

The TAIR indicates that a 6 pm closing time has been assumed for the traffic assessment as departures are more concentrated around this time than the later 10 pm closing time, and it represents the worst case situation. The forecast arrival and departure profile for the weekday and weekend shoulder periods are illustrated below in Figure 4.

Figure 4: Forecast arrival and departure profile (Shoulder Period)



During the shoulder period, daily attendance rates range from 2000 – 7000 people on weekdays. The arrival and departure profile for the shoulder period indicates that during the weekday AM peak hour period of the surrounding road network (8 am – 9 am), approximately 7%, or between 140 - 490 people will be arriving at the water theme park. During the PM peak hour period of the surrounding road network (4 pm – 5 pm), approximately 28%, or between 560 – 1960 people will be departing the water theme park.

The TAIR also assumes that the arrival and departure profiles of the weekend and weekday periods would be similar, and during the weekend shoulder period, daily attendance rates will range from 3000 – 8000 people. Accordingly, the arrival and departure profile indicates that during the weekend peak hour period of the surrounding road network (11 am - 12pm), approximately 25%, or between 750 – 2000 people will be arriving at the water theme park.

Blacktown City Council raised concern with the use of the shoulder period as the basis of the traffic assessment given the potential traffic impacts associated with the peak holiday period. In response, the proponent identified that the use of the shoulder period is consistent with the Road and Maritime Services (RMS) (formerly RTA) Guide to Traffic Generating Development given the day to day, week to week variation of attendees to the development. Additionally, whilst there is no specific section on theme parks, the Guide identifies that recreational and tourist facilities are site and type specific in their operation and traffic generation, often with seasonal variations in usage, and analysis of proposed developments should be based on surveys of similar developments. The RMS raised no objection to the use of the shoulder period in the traffic assessment.

The department considers that the use of the shoulder period in the traffic assessment is appropriate given the high variability of the attendance forecast of the development and is consistent with the RMS Guide to Traffic Generating Development.

5.1.1 Traffic

The TAIR identifies that a traffic and parking survey from July 2008 of Wet 'n' Wild Water World on the Gold Coast found that 72% of people arrived by car and the average vehicle occupancy rate was found to be 3.25. The remaining 28% of people arrived by bus, including private tourist coaches and public bus services.

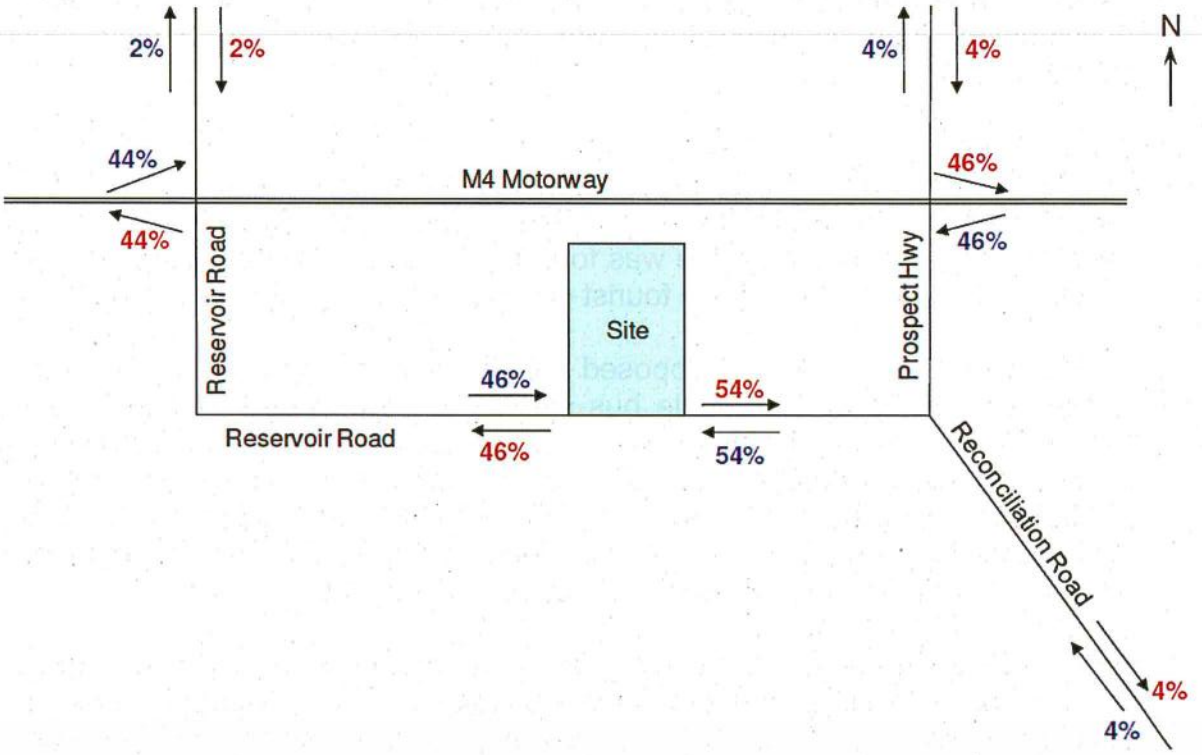
The TAIR indicates that the proposed development will be serviced by at least one public bus service and a shuttle bus service to be provided between the site and Blacktown Train Station by the proponent. Notwithstanding the provision of bus services to the development, the TAIR conservatively assumes a higher percentage of visitors arriving by car (85%), and a lower vehicle occupancy rate (3.0) than the survey results from Wet 'n' Wild Water World on the Gold Coast. The remaining 15% of attendees would arrive by public transport / shuttle bus.

Visitors to the park are expected from all over the greater Sydney metropolitan region, and will utilise different approach routes. TAIR divided Sydney in to five subregions and identified the most likely approach routes for each subregion. The supplementary TAIR incorporated the proposed Reconciliation Road extension (due to be completed in 2012) as an approach route in response to issues raised during the exhibition. The traffic distributions and approach routes identified in the supplementary TAIR are provided in Table 5 below and Figure 5 over

Table 5: Forecast Traffic Distribution

Region	Proportion of all Traffic	Proportion of all traffic by Approach Route				
		M4 East	M4 West / M7	Prospect Highway (north)	Reconciliation Road (south)	Reservoir Road (north of M4)
Sydney North	17.5%	13.5%	3.0%	1.0%	0.0%	0.0%
Sydney CBD / East	15.0%	15.0%	0.0%	0.0%	0.0%	0.0%
Sydney South	18.1%	0.0%	16.1%	0.0%	2.0%	0.0%
Sydney West	11.6%	0.0%	10.6%	0.0%	0.0%	1.0%
Sydney Central	37.8%	17.5%	14.3%	3.0%	2.0%	1.0%
Total	100%	46%	44%	4%	4%	2%

Figure 5: Forecast Traffic Distribution



The above forecast traffic distribution identifies that approximately 90% of visitors would use the M4 to access the site, approximately 4% of visitors would use Prospect Highway to the north of the M4, approximately 4% of visitors would use Reconciliation Road and approximately 2% of traffic would use Reservoir Road to the north of the M4.

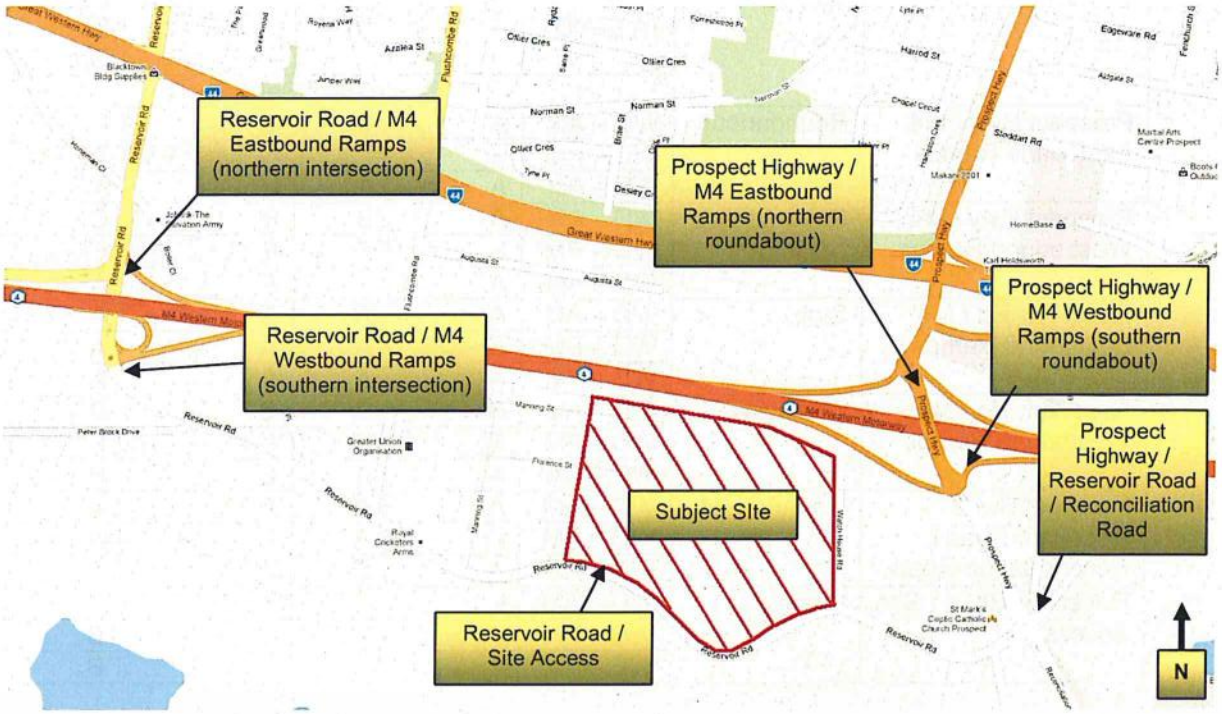
The supplementary TAIR also provided a SIDRA analysis of six key approach route intersections / interchanges in the vicinity of the site, including:

- Prospect Highway / M4 Eastbound Ramps (northern roundabout)
- Prospect Highway / M4 Westbound Ramps (southern roundabout)
- Reservoir Road / M4 Eastbound Ramps (northern intersection)
- Reservoir Road / M4 Westbound Ramps (southern intersection)
- Prospect Highway / Reservoir Road / Reconciliation Road
- Reservoir Road / Site Access

The supplementary TAIR identified that other intersections within the vicinity of the site, such as the Great Western Highway / Reservoir Road, the Great Western Highway / Prospect Highway and Prospect Highway / Ponds Road were excluded from the SIDRA analysis as the expected traffic generated around these intersections would be relatively low (less than 25 vehicles per hour), and would therefore have a negligible impact to intersection performance.

The abovementioned six key approach route intersections are identified in Figure 6.

Figure 6: Key intersections and approach routes



The SIDRA analysis was based on the peak periods of the surrounding road network, namely, weekday AM peak (8 am – 9 am), weekday PM peak (4 pm – 5 pm), and weekend AM peak (11 am – 12 pm.) Additionally, the SIDRA analysis included four traffic scenarios, namely:

- the existing traffic level of the surrounding road network (existing)
- the base traffic level for 2011 (including traffic from the opening of Reconciliation Drive) (2011 Base)
- the base traffic level for 2011 plus traffic generated by the development (2011 Base + Dev), and
- the base traffic level for 2021 plus traffic generated by the development plus background traffic growth (2011 Base + Dev + Growth).

The SIDRA analysis is based on visitors of the park and does not include staff. The TAIR indicates that there will be between 100 and 300 daily staff depending on the time of the year, and most staff would arrive approximately 30 – 60 minutes prior to the park opening and would leave approximately 30 minutes after the park closing. Accordingly, staff are not expected to impact on the total traffic generated by the development within the abovementioned peak periods. In addition, no analysis has been conducted of the existing or base level of the site access intersection along Reservoir Road as it has not been constructed. The findings for the SIDRA analysis are presented in Table 6.

Table 6: SIDRA Analysis Level of Service

Intersection	Control	Time (WE/WD)	Existing	Base 2011	Base 2011 + Dev	Base 2011 + Dev + Growth
		Level of Service				
Prospect Hwy / M4 Eastbound Ramps	Roundabout	WD – AM	A	B	B	F
		WD – PM	B	F	F	F
		WE – AM	A	A	A	A
Prospect Hwy / M4 West bound Ramps	Roundabout	WD – AM	A	B	B	C
		WD – PM	B	F	F	F
		WE – AM	A	A	A	A
Reservoir Rd / M4 Eastbound Ramps	Stop	WD – AM	A	A	A	A
		WD – PM	A	A	A	A
		WE – AM	A	A	A	A
Reservoir Rd / M4 Westbound Ramps	Giveaway	WD – AM	B	C	C	F
		WD – PM	F	F	F	F
		WE – AM	A	A	B	B
Prospect Hwy / Reservoir Road / Reconciliation Road	Roundabout	WD – AM	A	A	A	A
		WD – PM	A	A	A	A
		WE – AM	A	A	A	A
Reservoir Road / Site Access	Signals	WD – AM	-	-	A	A
		WD – PM	-	-	B	B
		WE – AM	-	-	B	B

The SIDRA analysis identified that the Prospect Highway / M4 eastbound ramps (northern roundabout) and westbound ramps (southern roundabout) are currently operating at a level of service (LOS) 'B' (good performance), however, there will be a significant deterioration in intersection performance to a LOS 'F' (at capacity and may require other control mode) during the weekday PM peak period as a result of traffic generated from the opening of Reconciliation Road (identified as Base 2011). The SIDRA analysis also identified that traffic generated by the development would result in an increase in delays of 37 seconds (to 114 s) for the northern roundabout and 79 seconds (to 182 s) for the southern roundabout in the Base 2011 + Dev level.

Reconciliation Road is expected to be open to through traffic by early 2012, prior to operation of the theme park. Whilst the significant deterioration in intersection performance of the northern and southern roundabouts is a result of the opening of Reconciliation Road, the traffic generated by the development will also contribute to deterioration of intersection performance.

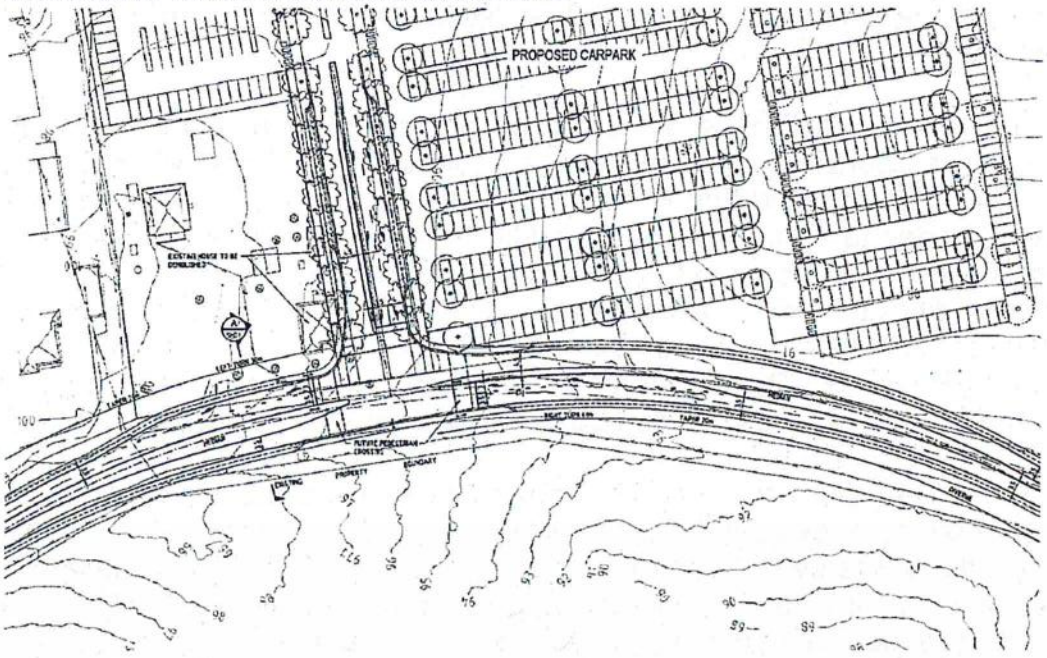
The PPR and Supplementary TAIR identify that various short term measures have been investigated by the RMS to increase capacity at this interchange, such as part time traffic signals on key movements. Full signalisation of the two roundabouts, in addition to widening of the bridge over the M4 is also a possible solution to address the capacity constraint. Further details of proposed road upgrades are provided in section 2.1.2 of this report.

The SIDRA analysis also identifies that the Reservoir Road / M4 Westbound ramp intersection currently operates at a LOS 'F' and the additional traffic generated by the opening of Reconciliation Road and traffic generated by the development will result in further delays at the intersection under the current arrangement. The department considers that interchange upgrades at the Reservoir Road / M4 Westbound ramp intersection are already warranted from current and expected traffic volumes, irrespective of the additional traffic generated by the development.

5.1.2 Road Infrastructure Works / Contributions

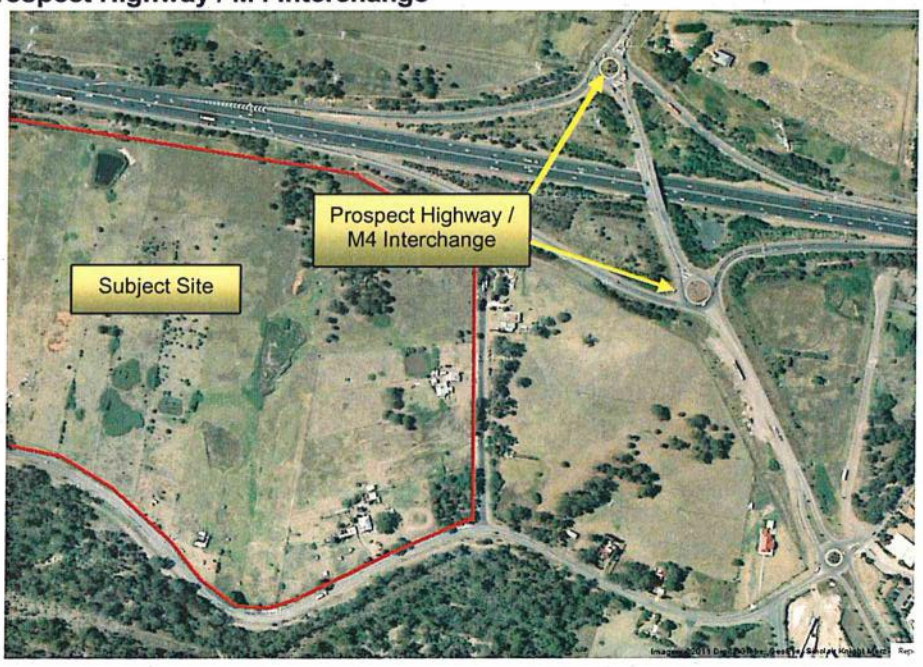
The application includes the proposed construction of a new signalised intersection at the site entry and approximately 400 m of road improvement works along Reservoir Road including traffic islands, kerb and gutter, bus stops and drainage. The proposed site access works are illustrated in Figure 7.

Figure 7: Reservoir Road / Site Access Intersection



The proponent has also identified that a monetary contribution of $5.2 million to the NSW Government for road improvement works forms part of the lease agreement (with the Western Sydney Parklands), for the subject site. The proponent identifies that the RMS is investigating the detailed scope of road improvements to the Prospect Highway / M4 Interchange to accommodate increased growth in traffic volumes in the region, including traffic generated by the development. The Prospect Highway / M4 Interchange is identified in Figure 8.

Figure 8: Prospect Highway / M4 Interchange



The proponent identified that the RMS has committed to completing upgrades to the Prospect Highway / M4 Interchange prior to the opening of the water theme park. However, the theme park itself does not warrant upgrades to the interchange as a result of traffic generated by the development.

In this regard, the RMS is not requiring additional contributions for road upgrades beyond the $5.2 million payment as stipulated in the lease agreement with the government.

Council raised traffic as an issue in their submissions on the EA and PPR. In particular, council requested that a total of 10 intersections within the vicinity of the site be upgraded and that Reservoir Road, Watch House Road and Manning Street be upgraded to accommodate the additional traffic generated by the development. In response, the proponent identified that the existing road and intersections surrounding the site have capacity to accommodate traffic generated by the development, with the exception of the Prospect Highway / M4 Interchange and the M4 / Reservoir Road Interchange which are already experiencing capacity constraints, irrespective of the traffic generated by the development.

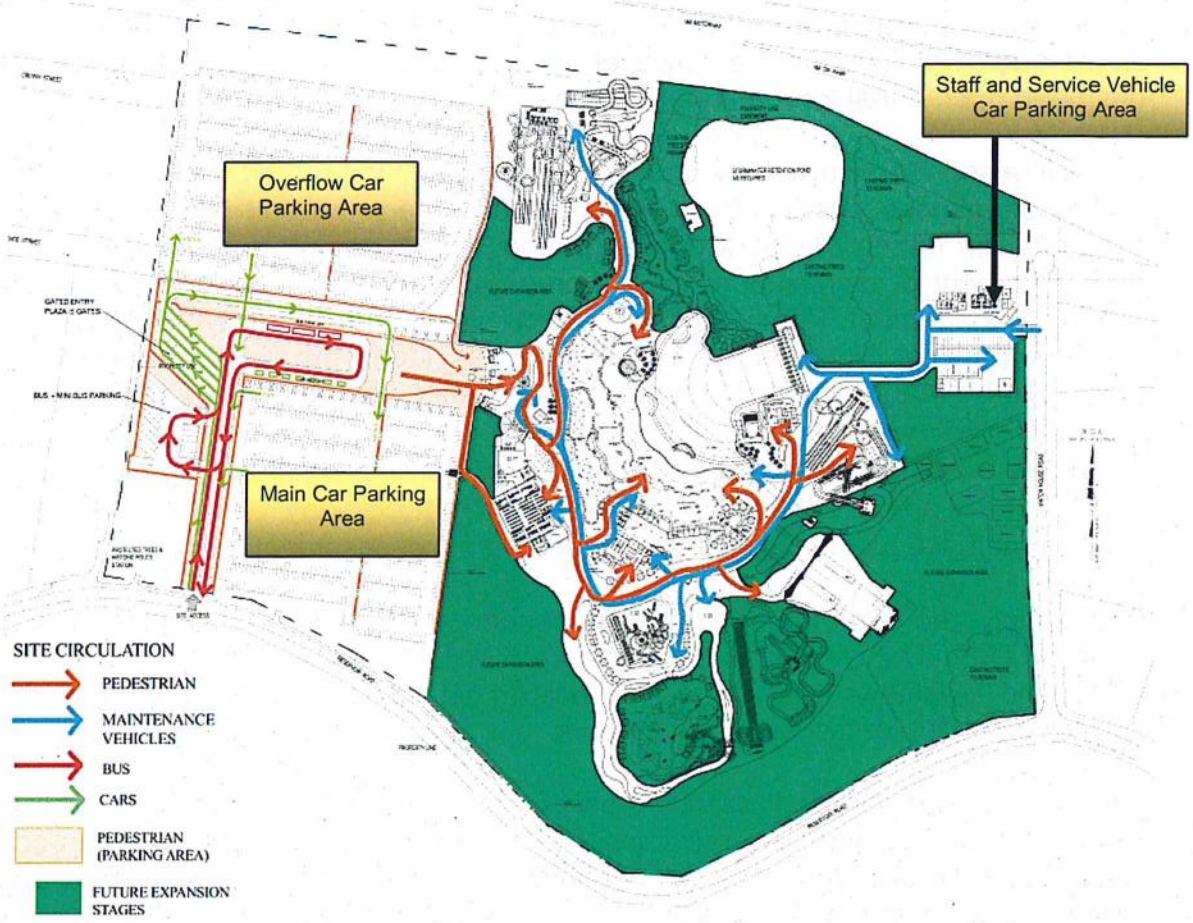
In their submission on the PPR, council expressed the view that Reservoir Road would fail as a result of the construction of the development, and maintained that an upgrade to Reservoir Road was required. In response, the proponent, in consultation with council, proposed a monetary contribution to council of $650,000 (to be imposed by a condition of approval) for the repair and reseal of Reservoir Road between Reconciliation Road and Peter Brock Drive, excluding approximately 400 m at the site entry which is already proposed to be upgraded by the proponent.

The department considers that the contribution provided by the proponent for road improvement works to be undertaken by council, in combination with the proposed 400 m of improvement works along Reservoir Road, will adequately upgrade the road to accommodate the traffic generated by the development. Council have been consulted and accept that the proposed condition will facilitate the required upgrade works.

5.1.3 Parking

The proposed development includes two car parking areas (main and overflow parking area) on the western side of the subject site, which are accessed via the site entry off Reservoir Road. An additional staff and service vehicle car parking area is proposed on the eastern site of the subject site. The car parking areas are identified in Figure 9.

Figure 9: Car parking



A total of 1,810 car parking spaces are proposed for the development, including 42 disabled bays. The car parking area will also accommodate 12 coach parking bays, 6 minibus parks and 20 motorcycle parks. The car parking area also includes a pick-up and drop-off area with capacity for 15 cars / taxis and 3 buses near the entry plaza.

Approximately 40% of car parking will be provided in the main car park and the remainder will be in the overflow car park area. Access to the main car park will be via a new 2 way site access intersection off Reservoir Road, and access to the overflow parking area will be via an internal entry point within the site.

The TAIR identifies that there is no suitable parking codes applicable to the development, and as such, the required spacing has been developed on the basis of traffic generation forecasts for the development. Traffic forecasting is based on the shoulder period, and accordingly, during the weekday shoulder period, 2,600 attendees are forecast to be at the development at 1 pm, which equates to a car parking demand of 740. Additionally, during the weekend shoulder period, approximately 86% of the total peak daily attendees for the shoulder period, or 6000 attendees, are forecast to be at the development at 1 pm, which equates to a car parking demand of 1,700 cars. Accordingly, the provision of 1,810 car parks will sufficiently accommodate the peak car parking demand of the shoulder period.

Notwithstanding, it is possible that demand for parking may exceed on-site supply on a small number of peak days each year.

The proponent has identified that, on such days, a special traffic management plan would be in operation and could involve the use of additional parking facilities such as the nearby drive in theatre, however, this is unlikely to occur until the development has been operational for a number of years.

Council raised concern with the provision of car parking proposed in the development and recommended that 2,200 car parking spaces be provided to accommodate peak accumulation during the peak holiday period. In response the proponent included a new statement of commitment for the preparation of an Operational Transport and Traffic Management Plan (OTTMP) which would include measures to address overflow parking. However, the proponent has identified that overflow parking is unlikely to be required until the park is fully expanded in the future. Council confirmed that an OTTMP would be acceptable provided:

- there was a suitable target timeframe for the delivery of the plan
- council approve the parking assessment methodology
- no off site parking is included in the parking assessment.

Accordingly, the department has recommended a condition requiring the preparation of an OTTMP. The OTTMP is to be prepared in consultation with the RMS, Transport NSW and Blacktown City Council, and is to be approved by the Director-General prior to operation of the water theme park.

A staff car parking and service vehicle area will be provided adjacent to the administration building. The parking area and service vehicle area will be accessed from Watch House Road and will contain 47 parking spaces to be shared between service vehicles and staff vehicles. On the basis of surveys conducted at Wet 'n' Wild Water World on the Gold Coast, it is estimated that the number of service vehicle movements will be no more than 10 vehicles per hour. Additionally, the majority of service vehicle movements are expected to occur outside peak periods of the surrounding road network, and outside peak arrival and departure times for visitors of the park.

The department considers that the provision of car parking on the site will adequately service the demands of the water theme park. Whilst the demand for parking may exceed on site supply on a small number of peak days in the year, this is not expected to occur until the water theme park is fully expanded. Additionally, the recommended condition for the preparation of an OTTMP will ensure that adequate car parking provision is provided.

5.1.4 Public Transport

The site is currently serviced by one bus route between Blacktown Station and Fairfield Station (west bus route 812) via Reconciliation Road and Prospect Highway. The proponent has indicated that the feasibility of a shuttle bus service between the development and Blacktown Train Station will be investigated as part of the OTTMP. The department has recommended a condition that the OTTMP is to be prepared in consultation with the RMS, Transport NSW and Blacktown City Council, and is to be approved by the Director-General prior to operation of the water theme park.

Additional measures to promote non-car travel modes include the provision of a secure bike parking area for visitors near the entry plaza which would accommodate up to 200 bikes.

Additionally, a bike parking area for staff is to be provided near the administration building, which would accommodate up to 20 bikes. The proposed site access intersection also includes pedestrian crossings on all approaches to enable pedestrians and cyclists to safely cross Reservoir Road to enter and exit the park.
The EA also identified a number of measures that could be coordinated between the proponent and government to improve the opportunity for non-car travel modes, including:

- operation of bus 812 services on weekends as well as weekdays
- development of pedestrian and cyclists facilities surrounding the site, including construction of the Blacktown bike plan route 6
- additionally, upon completion of the Reconciliation Road extension, introduce a new strategic bus corridor no. 43 Blacktown to Wetherill Park.

The EA also identifies that additional measures will be considered by the proponent to manage the demand for travel to the development, including the inclusion of public transport fares as part of the entry price, provision of priority parking for vehicles with 3 or more occupants, and preparation of a Travel Access Guide for visitors and staff.

Council and RMS have recommended that a shared pedestrian and cycle path should be provided on the northern side of Reservoir Road from the theme park to Reconciliation Road, and accordingly, council has identified that the cycle path as a high priority regional cycle path in the RMS's Cycle Ways Program. Council will apply for funding from the RMS to construct it.

The department considers that the proposed measures detailed in the EA and the proponent's Statement of Commitments will encourage sustainable transport use.

5.1.5 Construction Traffic

Construction traffic generated during the construction phase of the development is expected to access the site via the M4, Prospect Highway and Reservoir Road.

There is currently already a significant volume of trucks using Reservoir Road and Prospect Highway associated with the development of the nearby Greystanes Precinct and Reconciliation Road.

The department has therefore recommended a condition requiring the preparation and implementation of a Construction Traffic Management Plan (CTMP) for all demolition / construction activities. The CTMP would detail vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures.

5.2. Noise and Vibration

A Noise and Vibration Report (noise report) was submitted as part of the EA. The noise report identified that the proposed development will generate noise from the following sources:

- operational noise from patrons in various areas of the park and on slide platforms, noise from patron shouts and yells when on rides, noise from events (particularly those involving amplified music) and noise from mechanical plant.
- traffic noise from increased traffic on public roads and traffic movements in car park areas.
- construction noise and vibration associated with the demolition, earthworks and construction works.

The noise report identified the nearest sensitive residential receivers, including

- R1 – 24 Watch House Road, residential premises to the east
- R2 – 425 Reservoir Road, residential premises to the west
- R3 – 517 Reservoir Road, residential premises to the south west
- R4 – 525 Reservoir Road, residential premises to the south west
- R5 – 533 Reservoir Road, Coptic Catholic Church of St Mark

The location of the nearest sensitive residential receiver (R2) is approximately 50 m from the site boundary, as shown in Figure 10 below.

Figure 10: Location of Sensitive Residential Receivers

5.2.1 Operational Noise

The noise report identified existing noise levels based on noise monitoring from the front property boundary of 24 Watch House Road (R1) and the front façade of the dwelling at 431 Reservoir Road, Prospect (R2). The noise report established the intrusive criterion based on existing background levels and the amenity criterion based on the OEH Industrial Noise Policy Guideline (see Table 7 and Table 8).

Table 7: Intrusiveness Criterion

Location	Intrusive Criterion $L_{Aeq,15min}$		
	Day	Evening	Night
R1 – 24 Watch House Road	50 dB(A)	50 dB(A)	47 dB(A)
R2 – 425 Reservoir Road	45 dB(A)	45 dB(A)	39 dB(A)

Table 8: Amenity Criterion

Type of Receiver	Indicative Noise Amenity Area	Time of Day	Recommended Noise Level L_{Aeq}	
			Acceptable	Recommended Maximum
Residence	Urban	Day	60 dB(A)	65 dB(A)
		Evening	50 dB(A)	55 dB(A)
		Night	45 dB(A)	50 dB(A)
	Suburban	Day	55 dB(A)	60 dB(A)
		Evening	45 dB(A)	50 dB(A)
		Night	40 dB(A)	45 dB(A)
Place of Worship	All	When in use	50 dB(A)	55 dB(A)

The urban and suburban classifications have been included in the amenity criterion rather than a rural classification as the area has significant existing traffic noise from the M4 and Reservoir Road. Accordingly, the majority of surrounding sensitive residential receivers are classified as suburban, whilst 24 Watch House Road is classified as urban due to its close proximity to the M4.

The noise report establishes noise goals for the day, evening and night periods by applying the lowest criteria from the abovementioned intrusiveness and amenity criterion. The noise goals are provided in Table 9.

Table 9: Noise Goal

Location	Noise Goal L_{Aeq}		
	Day	Evening	Night
R1 – 24 Watch House Road	50 dB(A)	50 dB(A)	47 dB(A)
R2 – 425 Reservoir Road	45 dB(A)	45 dB(A)	39 dB(A)

The noise report provided an evaluation of noise sources generated from the operational phases of the development against the noise goal criteria. Operational noise sources include noise from patrons and visitors to the park, noise from vehicular movements in the car park, and noise from mechanical plant equipment.

The noise report identified that operational noise levels of the proposal are generally expected to comply with the noise goal criteria, with the exception of some minor exceedances of less than 5 dBA during the extended trading hours after 10 pm. Accordingly, an acoustic fence is recommended to be constructed along the common boundary between the residence at 425 Reservoir Road and the car park / drive way to minimise noise. The proponent has included this recommendation in the Statement of Commitments.

The operation of the development will also include amplified outdoor music events, referred to in this report and in the recommended conditions as 'amplified special events'.

The EA identifies that amplified special events are proposed to be infrequent events, and verbal advice from the proponent is that the events will be held in the peak summer period on a possible 16 occasions. For these events, opening hours until 12 midnight is sought (one hour later than the proposed usual operating hours of 11 pm).

Based on a predicted sound power level of 125 dBA, the noise report identifies that considerable exceedance of the noise goal could occur from these special events. The noise report proposed a number of mitigation measures to reduce potential impacts from amplified music events which have been incorporated in to the proponents Statement of Commitments, including:

- notifying residents of scheduled events and providing a contact phone number for complaints
- assigning a dedicated and trained staff member to respond to noise complaints during events
- orientating speakers so that they do not face directly towards residences
- using a greater number of low powered speakers rather than a few high powered speakers when possible
- directing speakers downward and toward the audience

- locating events in the overflow car parking area with the stage and speakers towards the M4 motorway to minimise noise impacts.

It is noted that the acoustics report submitted by the proponent does not indicate the extent to which the above measures will mitigate the noise.

As the impacts are therefore uncertain, and it may be untenable for nearby residents to be subjected to noise from an unlimited number of special events, held up to 12 midnight, it is proposed to allow five test events to be held in the first year of operation as a trial.

A condition is proposed in the concept plan and in the Stage 1 project approval to require a noise report to be submitted following the season of test events, and a submission is to be made to the Director General to allow for further events. The holding of further special events after the trial events, is to be subject to the further approval of the Director-General, and additional requirements or restrictions may be applied if necessary. If the trial events are satisfactory, the special events may be carried out on a permanent basis to the extent approved by the Director General.

Additionally, the department has recommended as a condition for the Proponent to demonstrate that the operational noise generated by the proposal (excluding amplified music events) will meet the noise goals outlined above, as well as satisfying the Building Code of Australia and Australian Standard AS 1668 with respect to operational plant.

5.2.2 Traffic Noise

The noise report identified that traffic noise along Reservoir Road is predicted to increase by more than the allowable 2 dBA as a result of traffic generated by the development, when compared to current levels of traffic in the area. The proponent has identified that, notwithstanding the additional traffic generated by the development, the completion of the Reconciliation Road extension is expected to significantly increase traffic volumes within the local road network.

The department considers that the additional traffic generated by the opening of Reconciliation Road, as detailed in the TAIR and supplementary TAIR, will be a significant contributor of additional traffic in the surrounding road network, and consequently, will result in an increase in traffic noise levels along Reservoir Road. In this context, the proposal is not considered to be a significant contributor to overall traffic noise levels in the future.

5.2.3 Construction Noise and Vibration

Noise associated with construction will result from plant and earthmoving equipment, truck movements and the operation of tools and hand held machinery. The noise report identifies that construction noise levels during the bulk earthwork phase are predicted to exceed the set management levels of the OEH Interim Construction Noise Guideline, however no receivers are predicted to be "highly affected". Accordingly, the noise report has recommended noise management measures to be implemented during the construction phase, including:

- limiting work to day light hours
- implementing respite periods with low noise / vibration-producing construction activities

- performing noisy work during less sensitive time periods
- selecting low-noise plant and equipment
- ensure equipment has qualified mufflers installed
- establish stringent noise emission limits for specified plant and equipment
- implement noise monitoring and audit program to ensure equipment remains within specified limits
- use quieter and less vibration emitting construction methods where possible
- noisy plant and equipment should be located as far as possible from noise sensitive areas, optimising attenuation effects from topography.

To ensure that the amenity of the surrounding area is protected thought the construction works, The department has recommended a condition for the proponent to prepare a Construction Management Plan which will detail noise and vibration management. The plan will need to address the OEH Interim Construction Noise Guideline, including:

- identification of specific activities that will be carried out and associated noise sources
- identification of all potentially affected sensitive receivers
- noise and vibration monitoring reporting and response procedures
- description of specific mitigation treatments, procedures and management measures.

Additionally, the recommended condition requires that the noise and vibration management section of the Construction Management Plan address the relevant provisions of Australian Standard 2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites.

The department has also recommended a the project approval condition that the hours of construction work be restricted to the hours of 8am – 1pm on Saturdays and no work on Sundays or public holidays to minimise weekend noise impacts from construction works.

The department is satisfied that the amenity of the surrounding area will be protected during the construction works through the recommended conditions of approval.

5.3. Heritage and Archaeology

A Heritage Impact Statement (HIS) accompanied the EA. A revised HIS, a Baseline Historical Archaeological Impact Assessment and a Heritage View Analysis accompanied the PPR in response to heritage issues raised by the Heritage Branch of OEH and council. Additionally, a further revised copy of the HIS was submitted to the department in response to a submission made by the Heritage Branch regarding the PPR.

Landscape and Built Heritage

The latest revised version of the HIS (dated September 2011) identifies that there are no heritage items on the site that are listed on the State heritage register or in the Blacktown Local Environmental Plan. However, the HIS identifies that a number of heritage items are located within the broader vicinity of the subject site, including:

- The Royal Cricketers Arms Inn (State heritage listed)
- Policeman's Cottage

- St Bartholomew's Church and Cemetery (State heritage listed)
- Former Prospect Post Office (State heritage listed)
- Prospect Reservoir (State heritage listed)

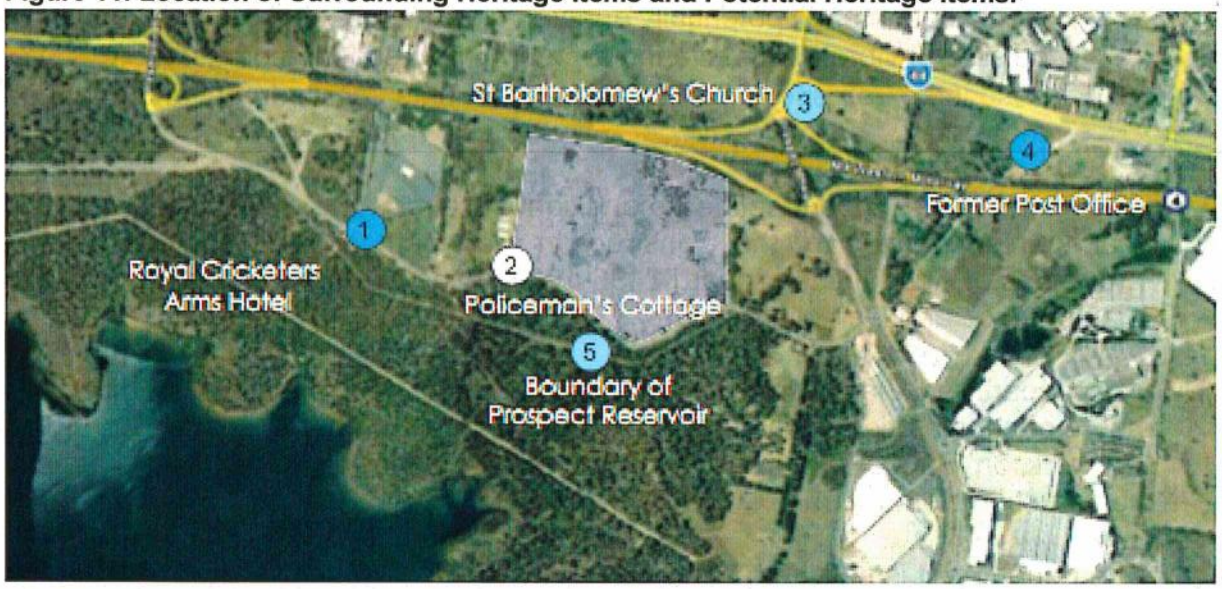
Additionally, the HIS identifies that there are a number of items of historical significance in the landscape that should be retained:

- the existing road alignments
- the former Policeman's Cottage and associated row of pine trees, and view corridors between the former Policeman's Cottage
- St Bartholomew's Church.

A Heritage View Analysis accompanied the PPR and provided an assessment of the potential impacts of the proposed water theme park on heritage items that are located in the vicinity and/or in the visual catchment of the subject site.

The location of each item in relation to the subject site is identified in Figure 11.

Figure 11: Location of Surrounding Heritage Items and Potential Heritage Items.



The Heritage View Analysis identified that the proposed development is not anticipated to visually impact on The Royal Cricketers Arms Inn, the Policeman's Cottage or the former Post Office. However, the view analysis identified that the theme park would be visible from St Bartholomew's Church, Reservoir Road and Prospect Reservoir, and additionally, the proposal would impact on mutual heritage views shared between each of these items. Further, the mutual heritage view between St Bartholomew's Anglican Church and the former Policeman's Cottage has the potential to be negatively affected by the proposed development.

The Heritage View Analysis notes that the proposed location of rides in the theme park as shown in the concept plan are such that the heights of rides do not appear to interfere with the view line, however, the main impact on the view line is likely to occur as a result of the growth of vegetation proposed to be planted in the car park areas of the site. Accordingly, the Heritage View Analysis recommended that vegetation height in the view line be controlled, so that views are maintained in both directions.

The HIS identified that the portion of Reservoir Road that defines the southern boundary of the site should be retained as it demonstrates the historic alignment of the Great Western Road to Penrith and the Blue Mountains. Additionally, the HIS identified that the existing semi rural character of the road should also be retained and visual screening through the strategic planting of appropriate tree species should be implemented along this frontage to protect the significance of this part of the site.

As described in section 5.1.2 of this report, the application seeks approval for road improvement works along Reservoir Road and the addition of a new signalised intersection at the site entry. In accordance with the recommendations of the HIS, the alignment of Reservoir Road will be maintained as part of the proposed upgrade works, as well as the alignment of Watch House Road. Additionally, the proponent has incorporated additional landscaping along the southern boundary of the site in accordance with the recommendations of the HIS.

Council provided late advice (7 December 2011) that the Reservoir Road reservation is subject to investigation by OEH for listing as a State heritage item, and requested that OEH comment on works to Reservoir Road, prior to issue of a construction certificate. However, as the alignment is not proposed to be altered, and the Council will be carrying out the road resurfacing works in part and will be working with the proponent for the remainder of the resurfacing, this is not considered necessary.

Additionally, four requirements for the site have been incorporated in the proposal and are identified in Section 5 of the proponent's Statement of Commitments, being:

- the conservation of the Policeman's Cottage and its immediate setting for a use that is compatible with both its cultural significance and the emerging context of the water theme park
- the retention and conservation of the group of tall pines in the immediate vicinity of the Policeman's Cottage as a significant visual and cultural maker or signpost in the surrounding landscape
- the retention of the alignment of Reservoir Road for its demonstration of the historic alignment of the Great Western Road to Penrith and the Blue Mountains.
- the retention of the alignment of Watch House Road, which defines the eastern boundary of the subject site, for its demonstration of the historic alignment of the former Church Street, where it gave direct access from the Great Western Road to St Bartholomew's Church.

The Heritage Branch of OEH noted the recommendations from both the Heritage Impact Statement and Heritage View Analysis had been incorporated in to the proponent's Statement of Commitments, and raised no objection in regards to any heritage impacts.

Historical Archaeology

The Baseline Historical Archaeological Impact Assessment provided with the PPR identified three areas of historical archaeological resources within the subject site, namely:

- structural remains of a mid twentieth century cottage fronting Reservoir Road, south of the former Policeman's Cottage
- structural remains and exotic plantings of a mid twentieth century farm house complex

- remnants of timber posts, possibly associated with mid twentieth century advertising hoarding or post war out buildings such as a shed or barn.

The Baseline Historical Archaeological Impact Assessment identified that historical archaeological resources found on site are unlikely to have state or local heritage significance. Accordingly, the remains are not considered to be 'relics' as defined by the *Heritage Act 1977.* Notwithstanding, potential archaeological resources, such as occupational deposits, may also exist below the interior floor of the former policeman's cottage and may be of state or local heritage significance, and therefore may be considered 'relics' as defined by the *Heritage Act 1977.*

The Baseline Historical Archaeological Impact Assessment identified that, aside from the inner floor area of the Policeman's Cottage (which is proposed to be retained) it is considered unlikely that potential archaeological resources survive within the remainder of site given that the site has been heavily modified by excavation, cutting, grading and filling works.

All recommendations of the Heritage Impact Statement, the Baseline Historical Archaeological Impact Assessment have been included in the proponent's Statement of Commitments.

The Heritage Branch of OEH noted the recommendations from both the Baseline Historical Archaeological Impact Assessment had been incorporated in to the proponent's Statement of Commitments, and raised no objection in regards to Archaeology.
In summary, the department is satisfied that, subject to the proponents Statement of Commitments, the proposal will have no adverse impacts on the heritage significance of items contained within, and in the vicinity of the site, and that the proposed development will have no adverse impacts on the archaeological resources of the site.

The OEH raised no concerns with the work undertaken in the application with regards to Aboriginal Archaeology, and indicated broad support for the management recommendations in the proponent's Statement of Commitments.

5.4. Ecologically Sustainable Development

The EA includes an Environmental Management Guideline (EMG), Ecologically Sustainable Development Statement (ESD Statement), and an Environmental Management Plan (EMP). The EMG was prepared by the Western Sydney Parklands and includes ESD recommendations to enhance the proposals environmental performance with regard to water, energy and waste.

Additionally, the Guideline includes ESD indicators that can be used to measure and monitor the environmental performance and progress of the proposal over time. The ESD statement provides an outline of the ESD measures to be included in the proposal which relate to the following categories:

- water conservation
- energy conservation
- materials and resources
- land and biodiversity
- environmental quality and emissions

- traffic and transport
- social amenity.

The EMP provided objectives, actions and indicators for each of the abovementioned categories.

The ESD statement identifies that the main water uses of the proposal are for pools and irrigation, however, other uses include toilet flushing, showering before and after swimming, kitchen operations and outdoor deck wash down. A water cycle management plan accompanied the EA which identifies that 90% of the water required for irrigation, toilet flushing and outdoor deck wash down can be supplied by re-used water (i.e. treated stormwater or rainwater).

Additional measures identified to reduce potable water use include the selection of low flow tapware, water efficient toilets, low water use (or waterless) urinals, low flow showerheads (with button timers), low flow spray heads outdoor wash down and low water use appliances (e.g. dishwashers). The volume of water carried out of pools by visitors to the park will also been reduced by two thirds through designing deck areas to drain water back in to the pool system where possible. Additionally, splashguards to rides and attractions are proposed to further reduce water loss.

Buildings with permanent roofs will have rainwater tanks buried underneath their floor slabs, and the harvested rainwater will be stored and reused for non-potable purposes such as toilet flushing and external deck wash down flowing filtration of sediment and UV sterilisation.

A stormwater detention pond and wetland are proposed in the natural drainage corridor in the northern part of the site. Water collected in the stormwater detention pond will be UV treated before being re-used and any overflow would be discharged in to Blacktown Creek.

In accordance with the EMP, water consumption will be monitored at regular intervals to enable detection of any leaks in the potable and non-potable water supplies, to determine if the site is operating at optimum efficiency and to raise awareness of water consumption and the promotion of responsible water use, which results in reduced water consumption and lower water costs. Collected data from water meters will be used to compare and benchmark water consumption across the theme park. The EMP also identifies that water education for staff and water conservation signage around the park will form part of the operation of the proposal.

Consideration of the green star environmental rating system tools will be used to guide building orientation to apply passive solar design principles where practical. Additionally, insulation of buildings will also be specified to comply with the BCA. Natural ventilation will be accommodated in buildings where possible in amenity blocks, toilets and change rooms, and any air-conditioned areas of buildings will be zoned according to occupancy rate and times.

Gas will be used to supply many of the energy demands on the site, and as the site is not currently serviced by gas, a connection is required to be installed to the nearest gas network approximately 600 m north of the subject site.

The feasibility of solar hot water (with a gas back up) will be determined at the detailed design stage. Additionally, the feasibility of the installation of photovoltaic cells on the roofs of buildings within the site will be explored as an alternative energy source during the detailed design phase of the development.

The EMP also identifies that an Operational Energy Management Plan will be prepared and implemented which outlines actions to minimise energy consumption, energy conservation initiatives, metering and monitoring strategies and measures to promote staff and visitor energy conservation awareness and behaviour.

The preparation and implementation of a Construction Waste Management Plan (CWMP) and an Operational Waste Management Plan (OWMP) will be included in the construction and operational phases of the development respectively. The CWMP will identify the types of waste generated during the demolition and construction works on the site, and will provide estimations of waste targets and identify measures to achieve the construction waste targets. The OWMP will detail the collection, separation, temporary storage and recycling waste generated during the operational phase of the development. The EMP also identifies that the selection of low environmental impact and low embodied energy materials will also be incorporated within the proposal, such as recycled steel, recycled timber or Forest Stewardship Council certified timber, where practical.

The department is satisfied that the proponent has adequately considered the principles of ESD in the proposal. Additionally, the initiatives outlined in the EMP will ensure that further development of ESD initiatives will be implemented at the detailed design stage of the development.

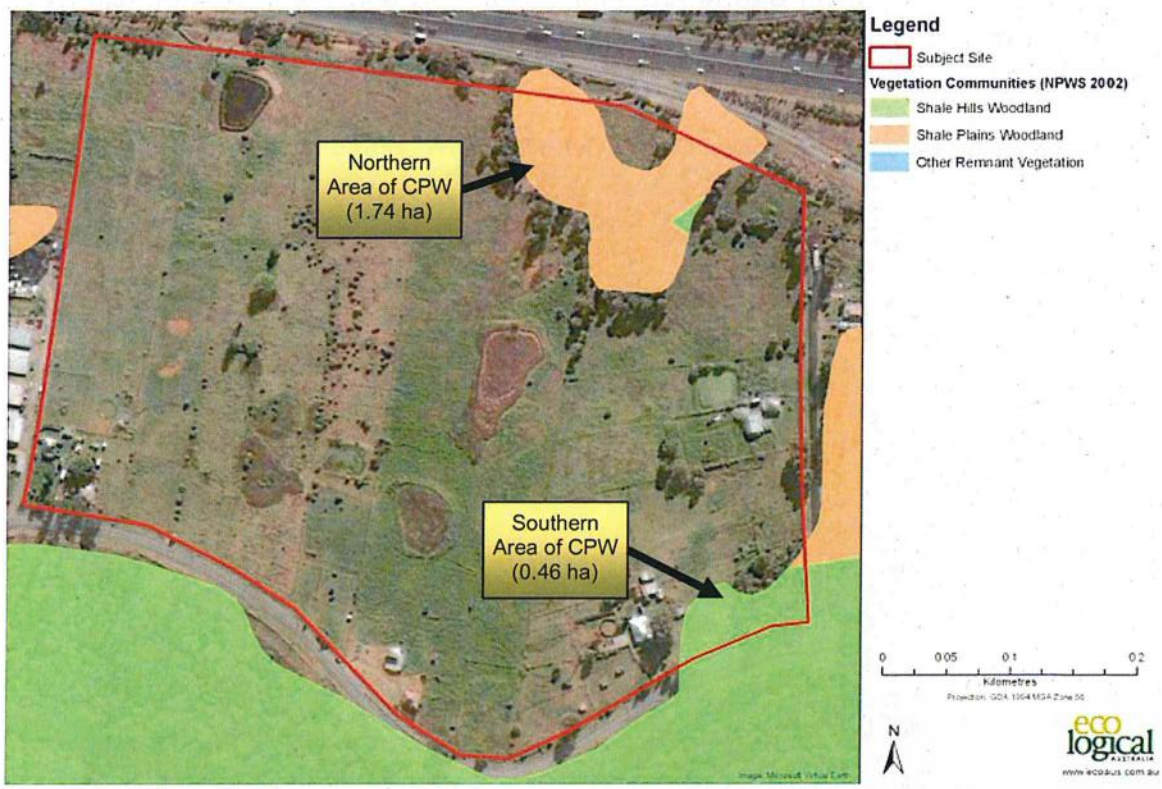
5.5. Ecology

A Biodiversity Impact Statement (BIS) accompanied the EA. The BIS identified that the site contains a variety of remnant native and exotic vegetation, a riparian strip towards the middle of the site, four small farm dams and large expanses of exotic grass / pasturelands.

Additionally, the BIS identified that the site contains two areas of remnant woodland vegetation which were mapped as 'Shale Hills Woodland' and 'Shale Planes Woodland' by the National Parks and Wildlife Service in 2002. Both biometric vegetation types are identified as equivalent vegetation types of 'Cumberland Plain Woodland in the Sydney Basin Bioregion', which is listed as a critically endangered ecological community under the *Threatened Species Conservation Act 1995* (TSC Act). Additionally, both biometric vegetation types are identified as equivalent vegetation types of 'Cumberland Plane Shale Woodlands and Shale Gravel Transition Forest', which are listed as a critically endangered ecological community under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). For the purpose of the assessment in the BIS, as well as this assessment, the two biometric vegetation types were collectively identified as Cumberland Plain Woodland (CPW).

The two areas of CPW identified within the site are located in the north and south-east of the subject site, and collectively occupy an area of 2.2 ha. The two areas of CPW on site are identified in Figure 12.

Figure 12: Vegetation Mapping By National Parks and Wildlife Service 2002



The BIS identifies that the northern area of CPW occupies an area of 1.74 ha and is dominated by Eucalyptus tereticornis (Forest Red Gum) and Eucalyptus molucanna (Grey Box), with Eucalyptus crebra (Narrow-leaved Ironbark) also present. A photo of the northern area of CPW is provided in Figure 13.

Figure 13: Northern remnant of Cumberland Plain Woodland

The BIS identifies that the south-east area of CPW occupies an area of approximately 0.46 ha and is dominated by Eucalyptus molucanna, with Eucalyptus tereticornis also present. A photo of the south-east area of CPW is provided in Figure 14.

Figure 14: South east remnant of Cumberland Plain Woodland

The BIS also identified the presence of two threatened bat species which were known to occur on site, namely, the Eastern False Pipistrelle (*Falsistrellus tasmaniensis*) and the Eastern Bent-Wing Bat (*Miniopterus schreibersii oceanensis*). Both species are listed as vulnerable under the TSC Act.

The proposed development involves the clearing of 0.78 hectares of CPW in order to provide sufficient space for a stormwater detention pond and water treatment wetland in the north of the site. Accordingly, the northern area of CPW will reduce from 1.74 ha to 0.96 ha. Additionally, the proposal includes the clearing and excavation of approximately 20 ha of degraded exotic grasslands within the site. The clearing of vegetation and the removal of dead wood and dead trees are listed as key threatening processes under the TSC Act.

The BIS identifies that the impacts associated with the removal of vegetation and earthworks produce a further risk of incremental clearing of a critically endangered ecological community and fragmentation of a critically endangered ecological community. The BIS detailed that mapping undertaken by the National Parks and Wildlife identified that there is approximately 3426 ha of CPW within a 10 km radius of the site (study area). Accordingly, the removal of 0.78 ha of remnant CPW within

the site will be a reduction of approximately 0.03% of existing CPW within the study area.

The BIS also identifies that the CPW areas within the site have remained in a degraded state for many years, with a high prevalence of exotic species, and little management other than horse grazing. The BIS also identified that the areas of CPW have a reduced native understorey and contain exotic shrubs, and the presence of the M4 and surrounding residential areas are existing impediments to the connectivity of the CPW areas within the site to other ecological communities in the surrounding area. Further, notwithstanding the removal of 0.78 ha of CPW within the site, approximately 70% of existing trees within the remainder of the site would be retained, which would minimise potential impacts to canopy species, such as the Eastern False Pipistrelle and the Eastern Bent-wing Bat.

The proponent has indicated that the location and size of the stormwater detention pond and water treatment wetland has been designed to account for the topography of the site, and to make use of as much cleared land as possible. A number of mitigation measures have been identified to minimise the potential disturbance on the retained areas of CPW on the site, including:

- identifying and fencing off all vegetation to be retained, prior to any vegetation removal
- undertaking vegetation clearing during seasons that minimise the risk of impacting on hibernating micobats or breeding woodland birds
- undertaking a pre-start clearing inspection by an ecologist of the proposed disturbance area to identify the presence of any fauna, biological resources, habitat resources and the availability of endemic seed
- implementing the following active clearing practices including:
    - environmental and noxious weeds are controlled within the disturbance area prior to clearing
    - seed collection is undertaken
    - identified habitat trees are inspected prior to felling
    - if no fauna is observed, a bulldozer is used to rip the root zone around the base of the tree
    - the dozer slowly pushes the tree to allow it to fall under its own weight, thereby minimising damage during felling
    - a trained wildlife handler is to be onsite to inspect fallen trees and to attend to any animals which may be injured or require assistance.
- stormwater runoff to be controlled so as to minimise nutrient and contaminant escape to surrounding lands.

As part of the proposal, the remaining 1.42 ha of remnant CPW will be retained and restored on site and an additional one ha of the site will be planted with CPW species, predominantly along the frontage of the site to Reservoir Road to create a buffer between the development and the Prospect Nature Reserve. The proponent identified that a Vegetation Management Plan will be prepared and implemented for areas of remnant and regenerated areas of Cumberland Plain Woodland on the site.

Issues raised by OEH

OEH provided a submission during the exhibition of the EA and raised concern with the impacts of noise and light from the operation of the proposal on the native fauna within Prospect Nature Reserve to the south of the site. Additionally, OEH did not

consider that the proposed replanting will adequately offset the proposed impact on the critically endangered CPW as:

- the species identified to be used to rehabilitate the woodland area are not species characteristic of CPW
- the key design principles of the landscaping plan did not include conservation and the Vegetation Management Plan (VMP) will be implemented for only five years, and therefore the CPW will degrade thereafter
- the replanting of the CPW is proposed to occur in long linear strips, which will be difficult to maintain.

OEH also raised concerns with the potential water table impacts associated with the stormwater detention basin and wetland on the area of remnant CPW in the north of the site.

In response to issues raised by OEH, the proponent provided a revised landscape plan in the PPR which detailed additional planting along the Reservoir Road frontage to provide a further buffer screen from noise and light between the park and the Prospect Nature Reserve. The proponent also confirmed that potential impacts to groundwater were identified in the geotechnical report and EA which identified that the vegetation was not expected to be impacted significantly due to measures undertaken in the design.

OEH also provided a submission on the PPR which maintained concerns regarding the potential impacts to the water table and the area of remnant CPW in the north of the site. The OEH maintained concern regarding the potential impacts of noise and light on the fauna within the Prospect Nature Reserve and the proposed replanting of CPW to offset the loss of remnant CPW on the site and the adequacy of the VMP to be implemented for 5 years to allow natural resilience of the revegetated CPW areas to prevail. OEH also considered that those areas of the site that are proposed to be revegetated with CPW, that are also within bushfire protection asset protection zones (APZ's), should not be considered as offsets as they will not be able to meet the conservation objectives.

Whilst voluntary, OEH also recommended consideration of the BioBanking Assessment Methodology (BBAM) to allow the offsetting requirements to be calculated in a consistent and transparent way.

In response to OEH's submission on the PPR, the proponent identified that the stormwater detention pond and water treatment wetland will be lined with an impervious membrane to eliminate infiltration and impacts to ground water, and accordingly, there will be no change to the groundwater impact on the survival of the area of remnant CPW in the north of the site.

The proponent also identified that use of the BBAM is unwarranted given the relatively poor condition of the remnant CPW within the site and the relatively small area of CPW proposed to be removed. The proponent has also advised the department that all areas of remnant CPW to be retained and regenerated on the site are not within APZ's, and that the proponent would not object to a condition requiring the VMP being managed in perpetuity for the life of the water theme park.

The department agrees in part with OEH with regards to the issue of the planting along Reservoir Road not being of sufficient width. Although the proponent has advised that it was not intended to be a CPW regeneration area, it is considered that given that no offset has been provided for the loss of CPW, the revegetation of an area along Reservoir road would provide an acceptable offset. This would be in conjunction with the regeneration of those areas to remain.

The department has therefore recommended a condition for the proponent to submit an amended landscape plan, prepared in consultation with the OEH. The width of the revegetated area will need to be negotiated with OEH. The amended landscape plan is to be submitted for the approval of the Director General prior to the issue of the first construction certificate.

Additionally, the department has recommended that the proposed Vegetation Management Plan (VMP) be prepared by a qualified ecologist to conserve and enhance the areas of remnant and regenerated areas of CPW on site, and that the VMP be implemented for the duration of operation of the water theme park. The VMP is also to be prepared in consultation with a bush fire consultant to ensure that bush fire issues are considered and that there is no conflict between the conservation outcome and bush fire requirements such as in the location of APZs.

In summary, the department has considered the proposed removal of 0.78 ha of CPW on merit, and considers that, subject to the recommended conditions of approval and the proponent's Statement of Commitments, the removal is acceptable.

5.6. Bushfire

The southern side of the subject site along Reservoir Road is mapped as Bush Fire Prone Land by council and the NSW Rural Fire Service. A bushfire protection assessment accompanied the EA which provides a review of the proposed development against the aims and objectives of the document "Planning for Bushfire Protection 2006" (PBP).

The site is located directly to the north of an area of Cumberland Plain Woodland (CPW) which surrounds Prospect Reservoir. The bushfire protection assessment identifies that this vegetation has a shrubby understorey and is classified as 'forest' under the PBP.

The subject site is predominantly clear of bush fire prone vegetation, however there are two areas of CPW within the north and south of the subject site that are proposed to be retained and regenerated as part of the proposal. The bushfire protection assessment identifies that these two areas within the site are identified as low hazard vegetation under the PBP.

The bushfire protection assessment provided a number of recommendations to be incorporated in the proposal to comply with the requirements for commercial development under the PBP. All recommendations contained in the bushfire protection assessment were included in the proponent's Statement of Commitment's.

The RFS reviewed the environmental assessment and bushfire protection assessment and provided the following recommendations:

- at the commencement of buildings works and during the operation of the development, the property around buildings adjacent to the 'Remnant' Cumberland Plain Woodland is to be maintained as an inner protection area up to a minimum distance of 10 metres
- at the commencement of buildings works and during the operation of the development, the property around buildings adjacent to the 'Forest' Cumberland Plain Woodland is to be maintained as an inner protection area up to a minimum distance of 35 metres
- a Fire Protection Plan is to be prepared that includes a contact person and contact details, description of works for the construction of asset protection zones and their continued maintenance, particularly in relation to the 'remnant' vegetation within the site
- water, electricity, gas, access roads, construction works, landscaping and emergency and evacuation arrangements are to comply with 'Planning for Bush Fire Protection 2006'
- arrangements for a emergency evacuation plan are to comply with the PBP.

The proposal complies with the requirements of the RFS regarding setbacks of buildings adjacent to the remnant vegetation within the subject site as the minimum APZ of 10 m is provided for the machinery sheds, and the remainder of buildings within the site comprising APZ's of greater than 25 m from the remnant vegetation. Additionally, the proposal complies with the requirements of the RFS regarding setbacks of buildings adjacent to forest vegetation contained within Prospect Reservoir as the minimum APZ provided between enclosed buildings and the forest vegetation contained within Prospect Reservoir is 78 m.

Additionally, in response to the RFS submission, the proponent revised the Statement of Commitments to include the preparation and implementation of a Fire Management Plan and Bushfire Emergency and Evacuation Plan.

The department is satisfied that the proposed recommendations in the bushfire protection assessment in the EA, Statement of Commitments and recommended conditions of approval will provide adequate bushfire protection measures for the proposal.

5.7. Complying Development Code

The application seeks approval of a complying development code (CD Code) under the concept plan to facilitate the progressive development of the future expansion areas of the site. The development of indoor and outdoor recreation facilities, entertainment facilities, amusement centres, ancillary facilities or temporary structures associated with the overall use as a water theme park could be approved as complying development, subject to meeting the requirements of the CD Code.

A complying development certificate would be issued by either council or an accredited private certifier. Development that does not meet the requirements of the CD Code would need to be the subject of a development application to council.

The CD Code includes prescribed standards and conditions that relate to building height and setbacks, structural integrity, safety of rides, codes and standards for building construction, earthworks and tree removal, and consistency with the concept

plan. Table 10 identifies the key development standards of the code, as originally proposed.

Table 10: Key development standards of complying development code as proposed in EA

Element	Standard
Building Envelopes Height and Setbacks	• The height of ride structures is not to exceed 35m above finished ground level. • The height of any building is not to exceed 12 meters above finished ground level. • Buildings other than ride structures are not to exceed the building height plane defined as starting from ground level at the boundary of land to which this code applies between the curtilage of the former historic Policeman's Cottage and the south west corner of this land and St Bartholomew's Church in Prospect. • All building structures other than fences and minor structures such as gate houses, pump housing, below ground structures, are to be setback a minimum of 15m from the property boundary. • The footprint of any building other than a ride structure is not to exceed.
Landscape Plan	• A landscape plan must be included to integrate the landscaping of a new development with the landscaping on the site approved in the Part 3A Concept Plan. Tree removal No tree above 10m in height is to be removed as complying development under this code.
Tree removal	• No tree above 10m in height is to be removed as complying development under this code.

During assessment, the department raised concern that the development of future facilities under the CD Code, beyond the facilities detailed in the concept plan, may result in additional patrons and associated increases in traffic generation of the site. Further, the department raised concern that there was no assessment of the potential increases in patrons, traffic generation or car parking demand associated with any additional facilities of the park which would be approved under the CD Code.

In response, the proponent identified that complying development in the future expansion stages of the site is aimed at rejuvenating the park and its attractions to keep attendance levels and repeat visitation, and is not expected to increase attendance levels. Additionally, the proponent identified that the external road network would have spare capacity to accommodate any relatively minor increases in traffic associated with complying development. The proponent requested that an additional standard be included in the CD Code requiring a review of the Operational Transport and Traffic Management Plan for any development that results in more than 1 ha of additional rides and facilities.

A complying development code should have no subjective aspects that require further assessment. The department has therefore recommended a condition of approval requiring the CD Code be amended prior to it being formalised by an Order such that to be complying development:

- There is no increase in patron numbers or traffic generation, or parking demand as a consequence of development.
- The capital investment value of the development or works does not exceed $10 million
- Development is consistent with the terms of approval of the approved concept plan.

Additionally, signage should be complying development, subject to the approval of a Signage Strategy (and development is in accordance with that Strategy). A revised CD Code, incorporating the above amendments, is to be provided to the Director-General for approval within one month of the date of concept plan approval.

5.8. Public Interest

The proposal will provide a major recreational and tourism facility that will make a significant contribution to meeting the recreational needs of Western Sydney. The proposal will provide a significant benefit to the local economy and will create approximately 222 full time equivalent construction jobs, and approximately 187 full time equivalent operational jobs. The proposal is also consistent with the Western Sydney Parklands Plan of Management 2020 which identifies the desired future land use of the site to be a major destination for tourism and passive / active recreation.

6. CONCLUSION

The Department has reviewed the environmental assessment and duly considered advice from public authorities as well as issues raised in the public submission in accordance with Section 75I(2) of the EP&A Act. All relevant environmental issues associated with the proposal have been extensively assessed.

The development is consistent with the strategic objectives for the area, being consistent with the Metropolitan Plan for Sydney 2036, the draft North West Subregion Draft Subregional Strategy, and the Western Sydney Parklands Plan of Management 2020.

The proposal is generally consistent with requirements of the relevant planning instruments, policies and objectives. The department has given consideration to the relevant State Environmental Planning Policies and the context of the locality.
The department is of the view that the recommended conditions and implementation of the measures detailed in the proponent's EA and appendices, PPR and appendices and the Statement of Commitments will adequately mitigate the environmental impacts of the proposal.

On balance, the department considers the site to be suitable for the proposed development and that the concept plan and Complying Development Code is in the public interest. Sufficient information has been submitted with the concept plan documentation to allow project approval under section 75P(1)(c) of the EP&A Act for Stage 1 of the concept plan, without the need for any further environmental assessment.

7. RECOMMENDATION

It is recommended that the Deputy Director-General:

a) **Consider** the findings and recommendations of this report;
b) **Approve** the concept plan (MP 10_0190), subject to modifications, under section 75O(1) of the EP&A Act, having considered all relevant matters in accordance with (a) above;
c) **Determine** that under 75P(1)(c) of the EP&A Act, no further environmental assessment is required for Stage 1 of the Concept Plan (MP 10_0190);
d) **Approve** Stage 1 of the concept plan (MP 10_0190), subject to conditions, under section 75J(1) of the EP&A Act;
e) **Determine** that the future stage of the development (excluding Stage 1) are to be subject to Part 4 and Part 5 of the EP&A Act, as relevant;
f) **Determine** that under section 75P(2)(c), the further environmental assessment requirements for any development are outlined in Schedule 5 of the Concept Approval.
g) **Sign** the attached Instrument of Approval (**TAG A)**

Heather Warton
Director
Metropolitan and Regional Projects North

8/12/11

8.12.11

Chris Wilson
Executive Director
Major Projects Assessment

8/12/11

Richard Pearson
Deputy Director-General
Development Assessment & Systems Performance