**ATTACHMENT 3**

Independent Auditor Interim Advice #1

CLIENTS PEOPLE PERFORMANCE

2 July 2010

Mr Graeme Bleus
Parramatta City Council
30 Darcy Street
PARRAMATTA NSW 2150

Our ref: 22/15161/90771
Your ref:

Dear Graeme

**Audit of 23 Elizabeth Street, Granville, NSW**
**Interim Advice #1 - Comments from Review of Available Reports**

## 1 Introduction

Ian Gregson of GHD Pty Ltd (the Auditor) was engaged by Parramatta City Council (PCC) to conduct a site audit (the Audit) for the property located at 23 Elizabeth Street, Granville, NSW (the Site). The Audit was initiated to facilitate the Development Application (DA) process.

The Auditor conducted a site inspection on 11 June 2010. This Interim Advice has been prepared based on the site inspection and review of the following reports prepared by Environmental Investigation Services (EIS):

- Environmental Investigation Services, *Report to Parramatta City Council on Preliminary Environmental Site Assessment, Proposed Townhouse Development at 23 Elizabeth Street, Granville,* May 2009.
- Environmental Investigation Services, *Report to Parramatta City Council on Stage 2 Environmental Site Assessment for Proposed Townhouse Development at 23 Elizabeth Street, Granville,* August 2009.
- Environmental Investigation Services, *Report to Parramatta City Council on Additional Environmental Site Assessment for Proposed Townhouse Development, 23 Elizabeth Street, Granville,* August 2009.
- Environmental Investigation Services, *Preliminary Acid Sulfate Soil Assessment, Proposed Townhouse Development, 23 Elizabeth Street, Granville*, 21 May 2010.
- Environmental Investigation Services, *Addendum to Previous Reports, Proposed Townhouse Development, 23 Elizabeth Street, Granville*, 29 June 2010.

It is noted that all investigation works were completed prior to the Auditor's engagement.

The following comments are provided from this review to identify issues which need to be addressed in order to plan remediation of the site for redevelopment, and ultimately to determine the suitability of the Site for its proposed use.

Please note that this communication has been provided as *Interim Advice* only, as part of the audit process. The advice does not constitute a site audit report or site audit statement under the provisions of the CLM Act, and does not pre-empt the conclusions, which will be drawn at the end of the audit process. A site audit report and site audit statement will be issued when the audit process has been completed.

The opinions and recommendations offered in this Interim Advice are subject to the attached Limitations.

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## 2 Site identification and proposed land use

The Site is located at 23 Elizabeth Street, Granville, NSW. Site details are as follows:

| | |
|---|---|
| **Street address:** | 23 Elizabeth Street, Granville, NSW, 2142 |
| **Identifier:** | Lots 13 to 16 inclusive, Section 1 in DP 277 |
| **Local government:** | Parramatta City Council |
| **Zoning:** | Special Uses 5A |
| **Site area:** | Approximately 4200 $m^2$ |

The surrounding land use is a mix of medium density residential, industrial and open space land uses.

It is understood that the proposed development includes the removal of remaining facilities at the Site, and construction of twenty townhouses and a partial site basement carpark. The Auditor considers this will present an exposure scenario equivalent to Residential with minimal access to soil (NEHF D) as described in NSW DECC (2006) *Guidelines for the NSW Site Auditor Scheme.*

At the time of the site inspection, the majority of the Site was covered by grit trap screening stockpiles and other material. It is understood that all stockpiles present at the Site will be removed prior to completion of the Audit. These materials were not covered by previous investigations and have not been further considered by the Auditor's review.

Based on discussions during the site inspection, it is understood that all fill materials will be excavated as part of site redevelopment works for the construction of a basement car park across approximately 50% of the Site. Virgin Excavated Natural Material (VENM) sourced from the Site is to be used as backfill, with all filling material to be transported off site for disposal.

It is noted that plans of the proposed development have not yet been provided to the Auditor. It is presumed these will be taken into account in any forthcoming documentation for remediation of the Site.

## 3 Report review

### 3.1 General

This review has evaluated whether the reports provided meet the requirements as outlined in *Guidelines for Consultants Reporting on Contaminated Sites* (the *Consultant Guidelines*) and the *Guidelines for the NSW Site Auditor Scheme* (the *Auditor Guidelines*), and provide a sufficient basis for preparation of a Remedial Action Plan (RAP) for the Site.

Based on the review of reports provided, the Auditor considers that the investigation works undertaken were generally in accordance with relevant NSW regulations and guidelines, and provide a relatively comprehensive description of the Site and the investigation works that have been undertaken. However, there are a number of issues which will need to be taken into account in determination of remediation requirements to make the Site suitable for redevelopment. The issues may be broadly summarised as follows:

- The site history lacks detail on the sources of information, and there is no apparent information from some key sources such as historical certificates of title, Council DA/BA records etc. Hence it is uncertain whether all potential sources of contamination have been identified and investigated.
- Not all potential contaminants of concern in soil and groundwater have been investigated, and further consideration of potential contaminants of concern derived from potential activities of concern (both on-site and off-site) will be required.

- Current waste classification of fill materials is considered limited due to the heterogeneity of the filling material identified across the Site. 'Hotspots' of contamination were identified in the filling, however uncertainty exists regarding the potential of other 'hotspots' which may be present in the filling across the remainder of the Site. It is anticipated that further classification of fill materials for waste disposal purposes will be required during excavation and remediation works, and will be incorporated into the RAP to be prepared for the works.
- An Underground Storage Tank (UST) is likely present in the central portion of the Site, and the proposed remediation strategy will require incorporation into the RAP.
- Further consideration of potential on-site and off-site impacts to groundwater will be required.

More detailed comments against the content of each report are provided in the following sections.

### 3.2 Preliminary Environmental Site Assessment

The Preliminary Environmental Site Assessment (PESA) undertaken by EIS in May 2009 involved the following scope of works:

- Site history review.
- Drilling of six boreholes to depths of between 6.0 m and 6.45 m below ground level (bgl) on a systematic grid.
- Collection of six fill and four natural samples from depths of between 0.1 m and 6.0 m for laboratory analysis.
- Collection of five stockpile samples for laboratory analysis.
- Laboratory analysis of soil samples for a range of analytes including heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc ), Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX), Total Petroleum Hydrocarbons (TPH), Poly Aromatic Hydrocarbons (PAHs), Organochlorine Pesticides (OCPs), Organophosphorous Pesticides (OPPs), asbestos and Toxicity Characteristic Leachate Procedure (TCLP) analysis for lead and PAHs.
- Installation of one groundwater monitoring well to a depth of approximately 6.0 m bgl.
- Sampling and laboratory analysis of one groundwater sample for heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TPH, BTEX, pH, Electrical Conductivity (EC), Total Dissolved Solids (TDS) and hardness.
- Analysis of results and preparation of a report comparing the laboratory results to appropriate guidelines.

#### Site History and Physical Characteristics

EIS provided site history information based on the following:

- Review of historical aerial photographs for the period from 1930 to 2005.
- A review of Development Applications (DA) and Building Approvals (BA) held by PCC.
- A review of regional geology and groundwater conditions, including a review of Department of Water and Energy (DWE) records including a groundwater database search.
- A search of NSW DECC's records for investigation/remediation orders.

It is noted that no PCC records were located for the Site. Based on the review of historical information and inspection of the Site, EIS concluded that the Site had been used as a storage yard since at least 1930, and potential contamination at the Site would be expected to be associated with:

- Potentially contaminated fill material.
- Storage of fuel, paint and lubricants at the Site.
- Storage of potentially contaminated fill material at the Site.
- Potentially contaminating historical activities associated with the use of the Site as a Council depot.

The report provided a general description of the development and operation of the Site, dating back to 1930, however information regarding specific site uses during this time was limited. It is considered that additional information on historical site use should be provided in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (EPA 1997), or the lack of information must otherwise be taken into account in the remediation strategy. Additional information should include the following:

1. Further information regarding the condition/age of buildings and associated infrastructure.
2. A copy of the historical aerial photographs was not included in the report provided. A copy of all supporting documentation for the site history review will be required.
3. Further site history searches including a Dangerous Goods search [subsequently included in the Addendum], trade waste search and review of historical certificates of title.
4. Details regarding previous, current and proposed zoning.
5. Further assessment of potential off-site sources of contamination. (Surrounding land uses are noted to include smash repairers within a residential area to the north of the Site).
6. Further discussion of potential aesthetic issues (e.g. were any visual or olfactory signs of contaminated identified?).
7. Further discussion regarding potential storage of drums, wastes or hazardous materials.

**Potential Contaminants**

EIS noted that the compounds identified as soil Contaminants of Concern (COC) at the Site included heavy metals, TPH, BTEX, PAHs, OCPs, OPPs, PCBs and asbestos, and in groundwater included heavy metals, TPH, BTEX, and oil and grease. The Auditor notes the following:

8. Potential contaminants of concern for each specific potentially contaminating activity should be clearly defined, and should also include consideration of potential off-site sources.
9. EIS note that storage of fuel, paint and lubricants at the Site was undertaken. Potential contaminants of concern should include solvents, and laboratory analysis should be undertaken in both soil and groundwater for VOCs.
10. Site specific COCs for soil and groundwater were different, however no discussion was provided regarding this. No analysis of PAHs in groundwater was undertaken. Given the significant concentrations of PAHs identified in soils at the Site, additional laboratory analysis of PAHs in groundwater is required.

**Assessment of Results**

The investigations undertaken identified filling material comprising silty sand or silty gravelly sand, with inclusions of gravel, glass, plastic, concrete, brick and metal fragments, to depths of between 0.3 m and 1.8 m. Traces of ash were identified at one location in the filling. The fill profile was underlain by silty clay

and/or sandy silty clay, to depths of between 4.95 m and 5.6 m at three locations, and up to approximately 6.0 m and 6.45 m (limit of investigation) at three locations. Shale bedrock was encountered beneath this at three locations to depths of 6.0 m bgl (limit of investigation). All boreholes were reportedly dry on completion of drilling, with one groundwater monitoring well installed with a measured water level of between 4.15 m and 4.25 m over two groundwater sampling events.

The investigation identified concentrations of benzo(a)pyrene, total PAHs and TPH in soil samples above NEPM HIL 'A' within the shallow fill material at the Site. Elevated concentrations of benzo(a)pyrene were identified at five grid based locations and in one stockpile sample, at concentrations up to 400 mg/kg. Elevated concentrations of total PAHs were identified at three grid based locations, with a maximum concentration of 1154.8 mg/kg identified. Concentrations of TPH C10- C36 were identified at two locations above human health based threshold concentrations for sensitive use, at up to 30400 mg/kg. TPH C6-C9 concentrations were identified at one isolated location in the underlying natural clays at a depth of 4.5 to 4.95 m, with a concentration of 170 mg/kg reported.

EIS considered that further investigation and remediation of the contaminated fill material at BH1, BH3, BH4, BH5 and BH6, and further investigation of the TPH C6-C9 concentrations identified at depth at one location, should be undertaken.

EIS further noted that the fill soils at BH3 and BH5 were classified as Hazardous Waste according to the criteria outlined in NSW DECC (EPA) Waste Classification guidelines, Part 1: Classifying Waste, 2008, and that the remaining soils were classified as General Solid Waste (non-putrescible).

Groundwater was encountered at depths of between 4.15 and 4.25 m. EIS noted that all results were less than the site assessment criteria, however due to the petroleum hydrocarbons identified at depth in the natural soils in the central section of the Site, EIS considered that further assessment of groundwater levels (flow direction) and contaminant levels was required.

The PESA is considered by the Auditor to be generally consistent with standard industry practice and guidelines made or approved by the DECCW, subject to clarification of points 1-10 noted above.

### 3.3 Stage 2 Environmental Site Assessment

The Stage 2 Environmental Site Assessment prepared by EIS in August 2009 involved the following scope of works:

- Review of previous PESA report and findings.
- Ground Penetrating Radar (GPR) survey.
- Drilling of six boreholes to a maximum depth of 6.5 m bgl on a systematic grid.
- Collection and laboratory analysis of eight fill samples and 16 natural samples from depths of up to 6.3 m bgl.
- Installation of three groundwater monitoring wells to depths of approximately 6.0 to 6.5 m bgl. (The previous groundwater monitoring well had been destroyed).
- Collection and laboratory analysis of groundwater samples from three locations.
- Laboratory analysis for a range of analytes including heavy metals, TPH, BTEX, PAHs, OCPs, OPPs, PCBs, asbestos and TCLP (lead and PAHs).
- Analysis of results and preparation of a report comparing the laboratory results to appropriate guidelines.

### Assessment of Results

The GPR survey undertaken across the central section of the Site indicated the presence of a buried 'object', and EIS noted the object was likely to be an Underground Storage Tank (UST).

Subsurface conditions were generally consistent with the conditions identified in the PESA, and comprised filling to depths of 0.3 to 1.1 m. Slag gravel was reported at three locations, and the fill was noted to typically contain inclusions of igneous gravel. The fill was underlain by silty clay at all locations to depths of approximately 4.5 m and 6.1 m bgl, with a silty sandy clay/silty gravelly clay band identified at two isolated locations. Shale bedrock was encountered beneath the natural soils at all locations, with the exception of BH204, and extended to the limit of investigation of approximately 6.0 to 6.5 m.

Groundwater was encountered at depths of between approximately 2.1 m and 4.1 m bgl. No further discussion regarding the hydrogeological characteristics at the Site (e.g. groundwater flow direction) was provided.

Elevated concentrations of benzo(a)pyrene and total PAHs were identified in the filling, ranging up to concentrations of 10 mg/kg and 104.2 mg/kg respectively.

Elevated concentrations of TPH C6-C9 above protection of human health based threshold concentrations for sensitive use were identified in the underlying natural soils at BH203. The location and concentration identified was consistent with results obtained from the PESA. EIS noted that the light phase hydrocarbon contamination identified in this area was likely to be associated with the UST.

Elevated concentrations of some heavy metals (cadmium, chromium, copper and lead) were identified in groundwater at some locations above site assessment criteria. A detectable concentration of TPH C6-C9 was identified at one location at a concentration of 0.018 mg/L, and was considered likely to be associated with the UST in the central section of the Site.

### Conclusions

EIS concluded that the results generally indicated that the fill in the east and south sections of the Site was impacted by PAH contamination. In addition, the fill in the north-west corner of the Site was impacted by PAHs, and EIS considered that hotspots were also likely to be located through the central section of the Site. Remediation of the PAH impacted material was considered necessary to render the Site suitable for the proposed development. EIS noted that a Remedial Action Plan (RAP) should be prepared for the Site following the completion of additional investigation. EIS noted that the light fraction TPH C6-C9 identified in natural soils at an area were likely to be associated with the UST, and that the RAP should include removal of the UST and remediation of impacted soils.

EIS noted that the removal of the contamination source (the UST and impacted soil) would likely result in relatively rapid natural attenuation of the light fraction petroleum hydrocarbon contamination identified in groundwater at one location. The concentrations of heavy metals exceeding site assessment criteria were considered a result of regional factors rather than site specific contamination.

Based on the elevated concentrations of PAHs in fill soils and BH3 and BH5, EIS noted that the material was classified as Hazardous Waste, and further investigation at these locations was recommended. The remaining fill soils were classified as General Solid Waste (non-putrescible).

The Stage 2 ESA is considered by the Auditor to be generally consistent with standard industry practice and guidelines made or approved by the DECCW. However, there are some matters that require further explanation and/or information, outlined as follows:

11. Further discussion of site hydrogeology should be undertaken in accordance with DEC (2007) *Guidelines for the Assessment and Management of Groundwater Contamination.*
12. Further assessment/discussion of waste classification of fill materials is required.

### 3.4 Additional Environmental Site Assessment

The *Additional Environmental Site Assessment* prepared by EIS in August 2009 involved the following scope of works:

- Review of previous PESA and Stage 2 ESA reports and findings.
- Drilling of sixteen boreholes to delineate the extent of contamination identified at boreholes BH3 and BH5 to depths of approximately 1.5 m bgl.
- Laboratory analysis for a range of analytes including TPH, BTEX and PAHs.
- Analysis of results and preparation of a report comparing the laboratory results to appropriate guidelines.

The subsurface conditions encountered in the 'BH3' hotspot area comprised fill material to depths of approximately 0.4 and 0.6 m. The filling typically comprised inclusions of slag and/or ash. The fill in locations BH105 to BH108 contained inclusions of asphaltic concrete. The filling was underlain by silty clay to a maximum depth of approximately 1.5 m (limit of investigation) at all locations. (EIS advised during the Auditor's site inspection that the tarry material was evident immediately under the Site pavement in this area)

The subsurface conditions encountered in the 'BH5' hotspot area typically comprised surficial filling to depths of 0.3 and 0.5 m. The filling was grey-brown or brown and included inclusions of igneous and shale gravel. Slag and ash was encountered at two locations. The surficial filling was underlain by silty clay fill material, which extended to depths of approximately 1.2 to 2.7 m. The silty clay fill comprised inclusions of ash and slag, igneous, shale and/or ironstone gravel. The filling was underlain by silty clay at all locations to a maximum depth of approximately 5 m (limit of investigation).

Elevated concentrations of TPH C10-C36 were identified in five shallow fill samples collected from the 'BH3' hotspot area, ranging up to 82 000 mg/kg. Benzo(a)pyrene concentrations were above NEPM HIL 'A' at all locations, up to 940 mg/kg, with total PAH concentrations ranging up to 30 311 mg/kg. The results from samples collected from the underlying natural clay indicated generally low concentrations, indicating the impact is limited to the filling.

Elevated concentrations of TPH and PAHs were also identified in the shallow filling at the 'BH5' hotspot area. EIS concluded that typically the surficial fill soils in this area (sandy fill) to depths of approximately 0.4 to 0.5 m contained contaminant concentrations below the site assessment criteria, typically free of ash and/or slag and therefore suitable for re-use on site. [The Auditor notes that as outlined in Section 9.2.1 of the EIS report, ash and slag were reportedly identified at two locations in the surficial filling in the 'BH5' hotspot area, with a trace of slag and trace of ash identified in the surficial filling at location BH110 at a depth of 0.0-0.2m and at BH111 at a depth of 0.0-0.3m respectively]. Remediation of deeper soils (silty clay fill) was considered necessary to render the Site suitable for the proposed development, as the material typically contained inclusions of ash and/or slag.

Based on the heterogeneity of the filling across the Site, the Auditor considers that differentiation of fill types across the Site has not been adequately demonstrated. It is possible that other 'hotspots' of impacted filling could be present at other locations across the Site which have not been sampled. This will need to be taken into account in the remediation strategy for the Site.

It is understood that the proposed redevelopment involves excavation of all fill materials as part of basement construction works, and reinstatement to required site levels with Virgin Excavated Natural Material (VENM) sourced from the Site. The Auditor considers that the reuse of VENM on site is generally appropriate, given that concentrations of potential contaminants of concern in the underlying natural materials were generally low. The exception to this was the concentrations of TPH C6-C9 identified at one localised area, considered a result of the presence of the UST. Requirements for removal and remediation of the UST area will need to be incorporated into the RAP to be prepared for the Site.

It is considered that additional waste characterisation will be required during excavation of the fill materials to confirm concentrations and waste classification to ensure appropriate disposal.

### 3.5 Preliminary Acid Sulfate Soil Assessment

The *Preliminary Acid Sulfate Soil Assessment* prepared by EIS in May 2010 involved review of background information on acid sulfate soils, including an acid sulfate soil risk map for the area and geological information for the site. The results of previous site investigations were taken into account in the assessment.

EIS concluded that the risk posed to the environment by acid sulfate soil at the development is relatively low, based on the following:

- The risk map indicates the site is located at the boundary of an area with no known occurrence of acid sulfate soil and an area of disturbed terrain.
- The geological map for Sydney indicates the site is likely to be underlain by Ashfield Shale or quaternary aged alluvial deposits, and acid sulfate soils are not usually associated with residual soil profiles.
- Site investigations did not indicate the presence of a soil profile where acid sulfate soils would likely be present.
- The site is at an elevation where acid sulfate soils are not usually encountered.
- Excavations for the proposed basement are likely to only intercept groundwater in the west section of the site, and acid sulfate soils are typically not encountered above the water table.

### 3.6 Addendum to Previous Reports

The *Addendum to Previous Reports* was prepared by EIS in June 2010 in response to a request by the Auditor following review of the previous investigation reports. Additional information provided in this addendum included the following:

- A records search for licenses to store dangerous goods was undertaken through WorkCover, and did not indicate the existence of any licences, including underground storage tanks, at the site.
- A conceptual site model was provided, incorporating the following:
  - Groundwater levels measured on 21 July 2009 were used to create a groundwater contour plan, which showed that groundwater levels fall towards the south-east of the site.
  - Contour plans were also created for natural soil and bedrock levels, which showed that natural soil levels fall to the east towards the creek, and bedrock levels fall to the south-east across the site. EIS consider that the groundwater at the site is influenced by the bedrock and may be representative of a perched groundwater table.

- Mobile contaminants would be expected to move down to the rock surface and migrate laterally downslope from the source. The movement of contaminants would be expected to be associated with groundwater flow and seepage at the top of or above the bedrock. [The Auditor notes that groundwater levels as recorded are several metres above the bedrock].
- Based on groundwater flow direction and likely association with bedrock contours, EIS consider that potential off-site contaminant sources (if present) would be located to the west or north-west, and potential receptors for contamination originating from the site would be located to the south-east. EIS consider that monitoring well MW202 is located such that off-site contamination entering the site would likely be detected, and MW1 and MW203 are located such that contamination originating from the site and leaving the site would likely be detected.

- Clarification was provided regarding the area covered by the ground penetrating radar scan.

Based on the above, EIS consider that the conclusions and recommendations of their latest report [the *Additional Environmental Assessment*, August 2009] remain valid, including:

- Preparation of an RAP to outline measures to be taken to render the site suitable for the proposed land use;
- Additional investigation, possibly in the form of validation sampling and analysis, during or prior to excavation of the 'Hazardous Waste' and 'Restricted Solid Waste'; and
- Following remediation of the site, additional groundwater sampling and analyses to check for residual TPH and/or PAH contamination.

As noted from review of the previous investigation reports, the Auditor considers the mechanics workshop to the north-west of the site may be a potential source of off-site contamination that might not be detected by the monitoring wells presently on the site. In addition, VOCs and PAHs have not yet been analysed in groundwater. The Auditor generally agrees with EIS's recommendations, provided comments in this Interim Advice are taken into account, and notes that groundwater sampling and analysis may have to be expanded beyond the existing well network, particularly if the wells are destroyed by the remediation works. These issues could be addressed in the RAP.

## 4 Duty to Report Contamination

EIS state in their reports that Section 60 of the CLM Act sets out a positive duty on a land owner, or person whose activities have caused contamination, to notify the DECCW if they are or become aware that contamination exists on a site that generally poses 'an unacceptable risk to human health or the environment, given the site's current or approved use', however the reports do not further discuss whether a duty to notify the DECCW has arisen as a result of the investigations undertaken.

The *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* (DECC June 2009) provides triggers for the reporting of contamination for the purposes of s. 60(3) of the CLM Act 1997. The guideline document assists in application of the CLM Act, and states that a landowner or person whose activities have contaminated land is required to notify DECCW that land is contaminated if the triggers of DECC 2009 are exceeded and if certain other factors are met. Based on these guidelines, the Auditor considers that notification triggers for on-site soil contamination (for total PAHs and benzo(a)pyrene) have been exceeded, and a person foreseeably may be exposed to the contamination (particularly during remediation and redevelopment of the site). If the site has not already been notified to DECCW under the CLM Act, then Council should consider their obligations in this regard.

## 5 Conclusions and Recommendations

Based on the review of reports provided, the Auditor considers that the investigation works undertaken were generally in accordance with relevant NSW regulations and guidelines, and the combined information generally meets the requirements for a Stage 2 Detailed Investigation as described in *SEPP 55 – Remediation of Land* and the associated DUAP/EPA *Managing Land Contamination Planning Guidelines* (1998). As such, the Auditor considers that there is sufficient information available for an informed planning decision to be made regarding redevelopment of the land. Based on Section 4.3 of the DUAP/EPA *Planning Guidelines*, the Auditor suggests that an appropriate approach may be to issue a deferred commencement consent requiring an RAP to be reviewed by an Auditor to determine whether the RAP is appropriate to remediate the site to a condition suitable for the proposed development, and imposing conditions on the consent requiring remediation to be carried out and validated either before other work commences or before occupation of the site.

The Auditor considers that the issues raised during this review of available reports may be addressed during preparation of an RAP, and should include or otherwise take into account the following:

- Further discussion regarding site conditions, including discussion on condition of infrastructure currently on site, any aesthetic issues and storage of potentially contaminated materials.
- Further site history review, including review of zoning information and provision of site history documentation sources.
- Clarification of potential contaminants of concern from each specific potentially contaminating activity including consideration of potential off-site sources.
- Further consideration of groundwater contamination undertaken in accordance with DEC (2007) *Guidelines for the Assessment and Management of Groundwater Contamination.*
- Provisions for further classification of fill materials for waste disposal purposes during excavation and remediation works.
- The proposed remediation strategy for the Underground Storage Tank (UST) that is likely present in the central portion of the Site.
- A soil management plan and waste management plan for the excavation works proposed as part of site redevelopment.
- Procedures to deal with any uncertainties remaining in characterisation of the Site, to ensure these are taken into account in remediation and validation.

Pending remediation of the site, Council should consider their duty to notify site contamination to the DECCW under section 60 of the CLM Act 1997.

This letter should be regarded as interim advice to the overall review and site audit process and should not be considered a Site Audit Statement under the *CLM Act, 1997*. This interim advice will subsequently be referred to and provided as an attachment to the final Site Audit Report.

I trust these comments are sufficiently clear. Please contact me if you have any questions or require further information.

Yours sincerely

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Attachments: Limitations to Interim Advice

## Limitations to Interim Advice

Whereas these current opinions and recommendations have been provided as interim guidance to assist in the assessment and management of contamination issues at the site, this guidance should not be regarded as "approval" of any proposed investigations or remedial activities, as such approval is beyond the scope of an independent review. The NSW DEC *Guidelines for the NSW Site Auditor Scheme* (2006) contains a description of the site assessment and audit process, which includes the following:

- A site audit is the second in two tiers of work in the site assessment and remediation process.
- The **'first tier' is the work of a contaminated site consultant**, generally engaged by the site owner or developer. The contaminated site consultant designs and conducts a site assessment and any necessary remediation and validation, and documents the processes and information in reports; and
- The **'second tier' is the site audit** which involves a site auditor independently and at arm's length reviewing, for one of the audit purposes stated in the CLM Act, the consultant's assessment, remediation and validation plans or reports. The material outcomes of a site audit are a site audit report and site audit statement.

The purpose of the auditor's review is to assess whether the works undertaken (or proposed to be undertaken) comply with current regulations, standards and guidelines, and that the site has been assessed, remediated and validated to a standard appropriate for the proposed land use. In the first instance, the contaminated land consultant should be satisfied that the work to be conducted conforms to all appropriate regulations, standards and guidelines; and is appropriate, based on the site's historical land use, physical characteristics and proposed land use.

This interim review and advice do not constitute an audit under the provisions of the Contaminated Land Management (CLM) Act 1997, and do not pre-empt the conclusions, which will be drawn at the end of the audit process. A site audit report and site audit statement will be issued when the audit process has been completed.

It is the nature of contaminated site investigations that the degree of variability in site conditions cannot be completely known and no sampling and analysis program can eliminate all uncertainty concerning the condition of the site. Professional judgement must be exercised in the collection and interpretation of the data. In the conduct of this review, in particular, reliance has been placed on data provided in the various site investigation and assessment reports. The Auditor is unable to provide certification outside of areas over which he had some control or is reasonably able to check, and does not accept responsibility for inaccuracies in information provided for review as part of this Audit.

In conducting this review and preparing the report, current guidelines for assessment and management of contaminated land were referred to. This work has been conducted in good faith with GHD Pty Ltd's understanding of the client's brief and generally accepted practice for environmental consulting.

No representation or warranty, express or implied, is made as to the relevance, accuracy, completeness or fitness for purpose of this document in respect of any particular user's circumstances. Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice in respect of, their situation.

PCC may use all reports produced as a result of the performance of the Audit services for the purposes of sale or development of the property. GHD consents to all such reports being disclosed to third parties in connection with the sale or development of the property if PCC causes documentation made available to the third parties for the purposes of sale or development of the property to include statement that any such reports are:

- Supplied for information purposes only; and
- The third party cannot rely on any such report without the prior written consent of the person who prepared the relevant report.