APPENDIX 8.6

SUBSURFACE ASBESTOS REPORT

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Subsurface Asbestos Investigation: Main Building Undercroft & South-Eastern Surrounding Area

Nestlé Hayes, Middlesex

Prepared for

Nestlé UK Ltd

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1 GENERAL INTRODUCTION

1.1 Introduction & Objective

Geosyntec Consultants Ltd (Geosyntec) was retained by Nestlé UK Ltd (Nestlé) to conduct a subsurface investigation of the Undercroft that is present below the eastern part of the Main Building, as shown on **Figure 1**. This investigation was carried out to evaluate the potential presence of Asbestos Containing Materials (ACM) within the subsurface soils and to complement the findings of a Refurbishment and Demolition (R&D) Asbestos Survey of the Undercroft void that was performed by Bardon Environmental (Bardon) at the same time.

This focus of this investigation was to better understand the vertical and lateral extent of ACM within the subsurface soils and it comprised of two distinct stages of work, as described below:

- Stage 1 – The area of the Undercroft beneath the Main Building;
- Stage 2 – Outside the south-eastern (SE) corner of the Main Building, plus two infill locations within the Undercroft.

This report presents the findings of both stages of investigation.

1.2 Project Background & Current Understanding

Nestlé commissioned Geosyntec to undertake an intrusive investigation to understand the potential for and the scale of potential liabilities associated with asbestos contamination in soils within the Undercroft.

This requirement arose from a programme of work which was carried out in 2007 to construct a new ramp into the eastern side of the Main Building. As part of the work, an asbestos survey of the void below the ground floor in the vicinity of the ramp encountered ACM lagging on pipes which had deteriorated with ACM debris having fallen to the Undercroft surface (which is open ground rather than hard standing). It was also reported that the Undercroft soils may have become impregnated with ACM down to 0.75-1m below the Undercroft surface, because it is non-surfaced ground at this level.

For the Stage 1 investigation, Nestlé commissioned Bardon to perform a R&D asbestos survey within the Undercroft void from the underside of the Main Building floor slab to the surface of the soil, including the lumps of asbestos that have fallen onto the soil surface. Geosyntec's intrusive investigation was focussed on the soils within the Undercroft, from the soil surface down to typically 1m below the soil surface.

From the results of the Stage 1 investigation it was concluded that the Stage 2 investigation outside the SE corner of the Main Building was required to further assess the potential extent of ACM impacted soils in this area.

1.3 Scope of Works

The scope of works related to the Undercroft soils investigation was carried out in two separate stages. The first stage focused on the area of the Undercroft within the eastern part of the Main Building, and the second stage focused on the area outside the SE corner of the Main Building. Both stages of investigation have been summarised below:

Stage 1 – The area of the Undercroft

The tasks carried out for Stage 1 of the investigation are as follows:

- **Task 1: Development and Refinement of the Scope of Works**
  a) Site meeting with Nestlé management and Bardon to select the preferred and alternative access points into the Undercroft;
  b) Development of the window sampling methodology for the soils within the Undercroft which has to be adapted to account for drilling from the surface of the ground floor within the Main Building via a void space whilst protecting workers from the potential presence of air-borne asbestos fibres;
  c) Day-to-day sequencing of the whole work programme based on the window sampling technique;
  d) Detailing of the refined scope of works to Nestlé and Bardon;
  e) Asbestos-related training and PPE requirements for the drilling operatives; and
  f) Clarification of the optimum laboratory analytical testing methods for asbestos.
- **Task 2: Preliminaries**
  a) Preparation of method statements and risk assessment's to accurately appraise this bespoke drilling technique and ensure potential risks are adequately mitigated;
  b) Place orders with suppliers and subcontractors; and
  c) Provide hydraulic manhole lifter to Nestlé to gain access through the selected manhole covers.
- **Task 3: Sampling of Undercroft Soils**
  a) Concrete coring of Main Building floor at 25 locations;
  b) Window sampling of soils at 21 locations;
  c) Collection and preparation of recovered soil cores for transportation;
  d) Sub-sampling of soil cores and phased laboratory analysis; and
  e) Personal verification/re-assurance monitoring.
- **Task 4: Data Assessment and Reporting**
  a) Interpretation of the lateral and vertical extent of the Undercroft;
  b) Evaluation of the lateral and depth extent of ACM in the subsurface soils; and
  c) Discussion on additional key observations recorded during the investigation.

Following completion of Tasks 1-4 above, it was concluded that a potential 'hotspot' of asbestos was present within the SE corner of the Main Building centred on investigation locations U1, U2 and U3 (See Section 3.2). These results indicated there may be an additional potential source of asbestos contamination outside the SE corner of the Main Building footprint. Therefore, an additional stage of investigation work was devised to provide a greater level of understanding of the potential presence of asbestos in subsurface soil around the SE corner of the building.

A secondary aim of the Stage 2 investigation was to retrieve soil samples for asbestos analysis from an area within the Undercroft that Bardon had been unable to access due to surface water flooding during their R&D asbestos survey of the Undercroft void.

Stage 2 – The area outside the SE corner of the Main Building, plus two infill locations within the Undercroft

The second stage of investigation included the following work elements.

- **Task 6 – Updated Preliminaries:**
  a) Updated method statements and risk assessments for the drilling methods to be used; and
  b) Liaison with suppliers and subcontractors.
- **Task 7 – Drilling and Sampling of Subsurface Soils:**
  a) Concrete coring of 5 locations outside of the SE corner of the Main Building;
  b) Window sampling of 7 locations – 5 outside and 2 within the Main Building;
  c) Sub-sampling of soil cores and phased laboratory analysis; and
  d) Personal verification/re-assurance monitoring.
- **Task 8: Revised Data Assessment and Reporting**
  a) Interpretation and reporting on the lateral and vertical extent of ACM soils within the Undercroft and in the external SE corner of the Main Building.

2 INVESTIGATION WORKS

2.1 Development and Refinement of the Scope of Works & Preliminaries

During a site walkover with both Nestlé and Bardon representatives on 14th February 2014 it was decided that access through the floor of the Main Building at six locations via removable manhole covers would be sufficient to achieve reasonable coverage of the Undercroft area. These locations would be accessed through purpose built asbestos enclosures erected by Bardon with drilling operatives adhering to the procedures and decontamination processes instructed by Bardon. These locations are illustrated on **Figure 2**.

Allowance was also made for soil sampling using hand-held window sampling equipment at 20 locations. These locations were advanced by concrete coring through the Main Building floor with subsequent window sampling proceeding with no asbestos enclosure present but with alternative protective measures being employed to mitigate against the potential release of air borne fibres from the Undercroft into the Main Building. The locations of the cored holes were chosen based upon the visual assessment and surveying information that was provided by Bardon on a daily basis, particularly to avoid services that Bardon observed during their survey.

Method statements and risk assessments were developed for the aforementioned procedures. As site works progressed it was acknowledged by all parties that window sampling through the open manholes within the asbestos enclosures would be relatively time consuming and provide little additional benefit compared to the alternative technique of concrete coring and follow-on drilling. Therefore, the sampling of underlying soils through the open manholes within the asbestos enclosures was substituted with additional sample locations through concrete core holes.

Prior to commencement of the drilling works field operatives completed the Bardon non-licensed asbestos awareness and management training course. Additionally, field personnel also passed face fit tests for their individual respirator protection equipment.

The second stage of investigation works comprised 5 boreholes in external locations around the SE corner of the Main Building. These boreholes were advanced initially by coring through the concrete hardstanding, then by Geotool GTR790 window sampling rig, as previously adopted within our site-wide Phase 2 investigations[1]. For the 2 locations within the Main Building, the hand-held window sampling equipment was used following the same procedures as those completed for the earlier stage of this investigation.

2.2 Site Work

2.2.1 Window Sampling Locations & Sampling Depths

The first stage of the investigation works were completed over a two week period between 25th March and 4th April 2014 with the follow-on investigation works being completed between 2nd and 3rd July 2014.

During the first stage, a total of 21 window sample locations (U1-21) were drilled across the area and an additional 4 locations were cored to only penetrate the Main Building floor slab (C1-4) to investigate the extent of the Undercroft void and an area of flooding reported by Bardon. The distribution of these 25 investigation locations was based on the following:

i. To provide good coverage across the Undercroft investigation area;

ii. To utilise information from Bardon as they progressed their R&D asbestos survey of the Undercroft void;

iii. To take into account other site constraints including forklift truck access routes and subsurface utility corridors; and

iv. To limit (where possible) any identified uncertainties which arise as investigation observations were progressively reviewed.

Figure 2 illustrates the key site characteristics within the Main Building across the Undercroft working area and **Figure 3** presents the initial investigation locations. Photo Plate 1, included as **Appendix A**, illustrates the investigation methodology adopted within the Main Building.

All of the window sample locations through the Undercroft were designed to target the upper one metre of the Undercroft soil profile. This depth of investigation was based on the 2007 ramp construction works during which a sample indicated ACM impacted material at a depth of 0.75m below surface level.

The second stage of investigation works involved taking soil cores at locations C1 and C2 (**Figure 3**), which have subsequently been renamed as U22 and U23. In addition, 5 further window sample locations were drilled outside of the main building to a maximum of 2 metres below ground level (or earlier refusal). **Figure 4** illustrates the complete investigation window sample array.

At all inside and outside locations, the window sampling tube was driven to the target depth or until earlier refusal was reached. The total length of recovered soil core was often

[1] Geosyntec report entitled "Phase 2 Environmental Assessment of the Nestlé Site in Hayes, Middlesex (Final). Project Number: GCU0124024. Dated: June 2014.

less than the total depth of penetration due to compaction within the soil core that was caused by the energy imparted by the window sampler to penetrate the soil profile. For this reason, it has been necessary to interpret the soil profile from the recovered soil core lengths.

2.2.2 Personal Verification and Re-Assurance Monitoring

A programme of personal and re-assurance monitoring for asbestos fibres was commissioned over the two phases of investigation to assess the efficacy of the protective measures that were implemented to mitigate against the risk for potential release of air borne fibres during Geosyntec's site work activities within the Main Building. This monitoring comprised the use of personal sampling units adjacent the wearer's nose and mouth to assess the exposure of the individual, and static sampling to establish ambient airborne fibre levels during or post work activities. This monitoring was performed by an independent asbestos analyst (Tersus) on a daily basis. A copy of the test certificates have been provided within **Appendix C**.

All re-assurance monitoring results were below <0.01fibres/ml (f/ml) which is the criterion for re-occupation of an area following asbestos removal work. All personal monitoring results were <0.08fibres/ml and validated the implemented methodology as successful in minimising potential exposure to airborne fibres.

2.2.3 Sample Collection and Scheduling of Analysis

It was decided that onsite soil sample handling of the internal Undercroft soils represented an additional exposure risk which could be avoided by direct transportation of the soil core, within its plastic recovery liner, to the laboratory for sub-sampling within a negative pressure fume cupboard.

Both ends of the recovered soil core/liner was packed with tissue to minimise potential movement of the soils within the liner during transportation, then it was further sealed with top and bottom caps. The liner was labelled and then placed within a strong cardboard tube for additional protection, which was also sealed at the top and bottom and labelled. Finally the tube was placed and sealed within a red asbestos labelled bag and then wrapped within a secondary clear asbestos awareness bag ready for collection by the courier.

The laboratory was instructed to recover sub-samples from the soil core based on specific measurements along the length of the recovered soil core. For the reasons discussed in Section 2.2.1 above, it should be noted that the soil sample depth intervals shown on the laboratory reports (**Appendix D**) are the measurements along the recovered soil core, and the depths included within the figures and discussed in sections of this report are relative to the top of the soil surface within the Undercroft (metres below Undercroft level – mbul).

Soil collected from the locations outside of the Main Building was sub-sampled onsite and separated into the correct laboratory containers prior to transportation to the laboratory; therefore depths on the laboratory certificates for these samples represent actual depths below ground level.

From the 28 window sample locations (23 inside and 5 outside the Main Building), a total of 88 soil samples were scheduled for asbestos identification screening analysis. This initial analysis indicates the absence or presence of asbestos within the sample, along with the type of asbestos and reporting of whether the asbestos was either present at trace[2] (typically

[2] If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and is inferred by the laboratory to be less than 0.001%.

<0.001%) concentrations or a quantifiable level. Samples within the upper 0.2mbul from each of the investigation locations were usually scheduled for analysis. The testing of deeper samples was also scheduled for the following reasons:

- Field observations of suspected ACM;
- Significant changes in ground composition; and
- Sampling of the base of boreholes for validation purposes.

Following review of the asbestos identification results, subsequent asbestos quantification analysis was undertaken on seven samples which were indicated to contain quantifiable ACM concentrations at levels equal to or greater than the 0.001% threshold. In addition, Waste Acceptance Criteria (WAC) analysis was also completed on ten samples for the purpose of classifying the waste, in case a decision is made to remove the ACM impacted soil from site to licensed landfill.

Additional soil samples were collected by Bardon from the upper 50mm of the surface. Analytical results from these surface soil samples were made available to complement the Geosyntec data. The Bardon surface soil samples locations are illustrated on **Figures 5 and 6.**

3 INVESTIGATION RESULTS

3.1 Re-Evaluated Extent of Undercroft & Identified Characteristics

Based on anecdotal information provided by Nestlé it was inferred that the Undercroft void extended beneath the eastern portion of the Main Building, to the northern and southern extent of the building, as illustrated on **Figure 1**. Based on these assumptions the calculated area of the Undercroft would be approximately 10,200m^2.

Following completion of the 25 intrusive locations within the Main Building it was observed that the Undercroft does not extend across the entire envisaged area, as illustrated by **Figure 5**. Locations U5, U6, U7, U8, U20 and U21 all located with the northern half of the investigation area were found to have no Undercroft void, with Made Ground encountered directly beneath the Main Building floor slab. Similarly the additional C3 and C4 cored locations confirmed the absence of void which supports the assumption that the likely extent of Undercroft runs along column line "L" in a westerly direction.

In addition, the external window sample locations positioned around the SE corner on the Main Building confirmed that the void does not extend outside of the building footprint in this direction. Based upon the re-evaluated inferred extent of the Undercroft the total surface area is reduced from the original estimate of 10,200m^2 to 6,000m^2.

Figures 5 & 7 illustrates the depth from the Main Building floor level to the top of the Undercroft soil surface. In general, the void height increases from approximately 0.9m at the western extremity (also referred to as the rear elevation) to approximately 1.6m along the eastern boundary (also referred to as the front elevation). If an average Undercroft void thickness of 1m is assumed between column lines H and L and a 1.5m void thickness between column lines A and H the approximate Undercroft void space would be 7,500m^3.

Figure 8 illustrates the cross-section through the SE corner of the Main Building which indicates that Undercroft soil surface is approximately level with the ground level outside.

During their asbestos survey of the Undercroft area, Bardon identified three pipe runs with asbestos insulation. Window sample locations U11, U13, U15, U17 and U18 were all located in relatively close proximity to these sources of asbestos as illustrated on **Figures 5 & 7.**

During the first stage of this investigation, standing water was observed in two separate areas of the Undercroft:

- The area in the vicinity of U3, U16 and U15 – During the R&D asbestos survey of the area (25th March 2014) Bardon noted that this area was flooded consequently access for their survey was restricted. During coring of C1 and C2 locations (2nd April 2014) and window sampling (2nd July 2014) no free standing water was observed although the surface soils were wet on each occasion;
- Access hatch 5 (**Figure 2**) – The evening prior to entry into this access point, conditions were observed to be dry. The following morning, standing water was observed within the Undercroft at this location.

The standing water at both locations is not considered to be related to changes in groundwater table elevation. Prior to, and during, the first stage of the Undercroft investigation, no significant rainfall event occurred. It is considered likely, that in both situations, nearby process water lines could have leaked and produced the localised ponding of water. The soil in the cores from C1 & C2 (U22 & U23) locations were observed to be relatively dry with the deeper clay deposits appearing dry to friable in places.

Due to the project specific requirement of retaining the Undercroft soil cores within the plastic liners to mitigate potential health and safety risks associated with the presence of asbestos fibres (as discussed in Section 2.2.3), detailed soil descriptions could not be prepared. However, visual observations of the recovered soil cores through the plastic liner were undertaken onsite and the apparent Made Ground/Superficial deposits interface was recorded and illustrated on **Figure 7**.

Geological logs for the external window sample locations (WS101-WS105) have been prepared and included within **Appendix B.**

3.2 Laboratory Results

3.2.1 ACM Analysis

As discussed in Section 2.2.3, 88 samples where initially scheduled for asbestos screening. Qualitative analysis indicated that 72 of the samples reported "no asbestos detectable", with 9 samples recording "trace" levels of asbestos and the remaining 7 samples reporting "quantifiable" levels of asbestos. Table 1 below summarises the asbestos screening analysis.

Table 1: Summarised Asbestos Identification Results

Asbestos Result	Locations*
No Asbestos Detected	U2, U4, U5, U8, U9, U10, U11, U12, U13, U14, U16, U17, U19, U20, U22, U23 and WS104
Trace Levels Recorded	U1 (0.5-0.6mbul), U2 (0.05-0.25mbul), U3 (0.4-0.5mbul), U6 (0.1- 0.25mbul), U7 (0.03-0.09mbul), WS101 (0.2-0.3mbgl), WS102 (0.25mbgl), WS102 (0.55mbgl) and WS103 (0.5-0.6mbgl)
Quantifiable Levels Recorded	U1 (0.1-0.15mbul), U1 (0.8-1mbul), U2 (0.25-0.6mbul), U15 (0.025-0.2mbul), U18 (0.025-0.2mbul), WS101 (0.7-0.75mbgl) and WS105 (0.4-0.5mbgl)

**Where no specific sample depths are reported then multiple samples analysed throughout the borehole all provided "no asbestos detected" results.*
**mbul – metres below Undercroft soil surface level*

Results indicate that 17 of the 28 locations are free of asbestos at the scheduled sampling depths.

The results showed that in all cases the asbestos present was chrysotile in composition and was observed to be in free fibre form with the exception of WS101 where a fragment of asbestos cement sheet was found within Made Ground at 0.7-0.75mbgl.

Six of the 7 samples that indicated positive asbestos identification results at quantifiable concentrations were scheduled for subsequent asbestos quantification analysis. The asbestos cement debris fragment found in WS101 was not scheduled for quantification testing as the asbestos was present in bonded form.

The quantification analysis indicated that 5 out of the 6 samples analysed contained asbestos concentrations less than 0.001%, with U15 indicating a concentration of 0.001% precisely.

3.2.2 Waste Classification Analysis and Other Contaminants

To assess the broader characteristics of the asbestos impacted soils, selected samples were submitted for additional laboratory analysis and Waste Acceptance Criteria (WAC) testing.

Samples were scheduled for WAC testing from locations U1, U4, U5, U15, U21, WS102, WS103 and WS105. Soil samples were scheduled from U4, U5, U21 and WS103 which did not contain asbestos to allow the loss of ignition and total organic carbon elements of the WAC to be completed[3]. Nevertheless, the close proximity of these samples to the identified asbestos impacted soils provides a good representation of the soil characteristics with regards to WAC.

A summary of the results for this laboratory testing is provided as follows:

- 8 metals were reported above the laboratory Limit of Detection (LOD) – notably mercury (1.7mg/kg at U1 at sample depth 250-400mm) and lead (280mg/kg at WS102 at sample depth 0.55mbgl);
- Total Polycyclic Aromatic Hydrocarbons (PAHs)[4] were reported marginally above the LOD in five out of eight samples tested. The ΣPAH concentration of 4,925mg/kg was reported for a sample of Made Ground at WS102 (0.55mbgl) containing occasional flecks of coal tar. This sample was also analysed for total petroleum hydrocarbons (TPH) for which a concentration of 17,876mg/kg was reported. The TPH mostly comprised of aromatic hydrocarbons predominantly >C16 carbon chain length which is indicative of the presence of coal tar;
- For TPH, 2 other samples were reported above detection limit; 275mg/kg TPH at location U1 (0.25-0.4mbul) and 1,873mg/kg at U21 (0.02-0.1mbul). The U1 result comprised an approximately equal aliphatic/aromatic hydrocarbons split. The U21 result comprised approximately two-thirds aromatic hydrocarbons, all of which is >C21.

Based on the available data, the shallow Made Ground with elevated TPH and PAH concentrations appears to be localised around WS102 with corresponding concentrations at nearby locations (U1, U4 and WS103) all reported to be low or non-detect.

All ten of the samples analysed reported concentrations which would characterise the soils as either inert, non-hazardous, or stable, non-reactive hazardous waste in a non-hazardous

[3] The loss of ignition and total organic carbon tests require the soil sample to be dried prior to being analysed. The laboratory considered this to be a significant health and safety concern where it is known that free asbestos fibres are present and were therefore not able to complete to process in this specific situation.
[4] USEPA 16 cogeners, includes naphthalene. Symbol Σ used for Total (i.e. ΣPAHs = Total PAHs)

landfill. A copy of the laboratory certificates have been provided within **Appendix D**. However, in the event that it is decided to remediate the part of the site that includes WS102 by excavation and offsite disposal to landfill, repeat WAC analyses will be required to classify the excavated materials.

3.2.3 ACM Soil Surface Analysis: Bardon Environmental

To supplement the interpretation of ACM within the Undercroft, test results on surface samples (described as dust/debris) collected by Bardon have been incorporated into this report. The locations and results of this analysis are summarised on **Figure 5** and laboratory certificates enclosed in **Appendix D**.

In total 32 dust/debris samples were collected by Bardon from the near surface Undercroft soils (within the top few millimetres, typically less than about 25mm depth). Chrysotile and amosite asbestos was identified in 8 of the 32 samples, all present within the vicinity of access Hatch 5 (between columns H-I and 17-20) as illustrated within **Figure 5**.

4 DISCUSSION OF RESULTS

The following sections present discussion on the ACM sources and extent of ACM impacted soils encountered during both stages of this investigation.

4.1 Undercroft Locations (U1-U23)

- Bardon found 3 principal sources of ACM during their surveying of the Undercroft void (**Figure 5**). These sources were all in the form of asbestos insulation around utility/process pipes and on the Undercroft surface below these pipelines where the insulation has fallen off and now lays on the Undercroft floor as debris material.
- For all of the soil samples from the Undercroft that are reported to have been impacted with asbestos, the asbestos is in the form of free chrysotile fibres.
- According to the findings of Bardon's R&D asbestos survey, the insulation on the pipe which runs along the southern boundary (garden elevation) of the Undercroft contains amosite, chrysotile and crocidolite asbestos. However, no ACM was recorded within any of the 4 surface samples collected by Bardon within the proximity of this pipe or within the analysed samples from the nearby window sample locations of (U11, U12 and U13);
- From Bardon's survey, the insulation on the pipe which runs parallel to the ramp in the central eastern portion of the Main Building contains amosite, chrysotile and crocidolite. Three surface soil samples taken by Bardon within close proximity showed that asbestos was absent. Soil analysis from the U15 window sample location did indicate that chrysotile asbestos free fibres were present within the upper 25cm of the soil profile at a mass percentage of 0.001% (equal to level of laboratory detection). A lower sample from between 0.3-0.4mbul reports the absence of asbestos from which it can be inferred that impact by ACM is limited to the near surface soils in this location;
- A third asbestos insulated pipe was found by Bardon between columns H–I and 18-21 with insulation that contained chrysotile, crocidolite and amosite. All corresponding surface soil samples taken by Bardon in the vicinity of this pipe (13 in total) also contained these three forms of asbestos. Window samples U17 and U18 are located at each end of this pipe run. Results for U17 samples indicate the absence of ACM at this location. Chrysotile is present within the upper 20cm of the U18 soil

core at a concentration <0.001%. Two deeper U18 samples indicated an absence of asbestos;

- Soil samples collected from U6 and U7 at depths of 0.1–0.25mbul and 0.03-0.09mbul, respectively, contain chrysotile fibres at "trace" levels. Both of these locations are beyond the extent of the Undercroft area. In this case, the free fibres must have been present within the Made Ground that was placed within this area prior to construction of the ground slab;
- Within the SE corner of the Undercroft, window sample locations U1, U2 and U3 all report positive asbestos results with concentrations less than 0.001%. The asbestos was identified as chrysotile and present as free fibres. Within U1, the asbestos fibres were encountered at the maximum drilled depth of 1mbul. At U2, chrysotile fibres were recorded within the top 0.5m of soil with underlying results indicating an absence of asbestos. Within U3, "trace" asbestos concentrations (<0.001%) were reported at 0.4 – 0.5mbul, however soil sampled from above and below these depths reported the absence of asbestos;
- The Service Trenches that extend into the Undercroft area (**Figures 1 and 2**) have been constructed with brick or concrete walls and floor. Bardon carried out asbestos survey work within these Service Trenches. It is considered that ACM present within these sections of Service Trenches remains contained within and isolated from the wider Undercroft area.

4.2 External SE Main Building Locations (WS101-WS105)

- The results of the second stage of the investigation indicate that trace levels of asbestos fibres, as well as rare/infrequent and small fragments of asbestos cement sheet are present within shallow Made Ground and reworked natural material outside the SE corner of the Main Building.
- Five of the thirty samples analysed contained chrysotile asbestos fibres at trace concentrations plus one sample (WS102) which was reported as a fragment of asbestos cement sheet.
- All six asbestos impacted soil samples were from within 0.75m of the ground surface, and all subsequent samples from below this depth reported "no asbestos detected".
- It is inferred from these results that the original source of this asbestos may potentially be localised and linked to the construction of the building, such as the temporary laydown and preparation of insulation material for the lagging of the Undercroft pipework. Alternatively, it may have been introduced to this location via the materials that were used during the preparation of the subgrade and placement of Made Ground to create the development platform for the construction of the Main Building.
- Depending on the future use for the site, the remedial approach for the asbestos impacted soil generally outside the SE corner of the Main Building must take into consideration the localised shallow hydrocarbons impacted material encountered at WS102.

- When the results for the shallow material at WS102 are compared to Generic Assessment Criteria (GAC) for possible commercial end-use, there are seven individual PAH species that exceed their respective GACs, however, the TPH value (all fractions considered) does not exceed GAC values for human health because the majority of the hydrocarbons present are typically long chain heavy-end fractions. In the case of potential residential end use, screening of the results for the shallow WS102 (0.55mbgl) against GAC values indicates multiple individual PAH and TPH exceedences. In addition, the elevated benzo(a)pyrene concentration of 7.1mg/kg at WS105 (0.4-0.5mbgl) also represents a GAC exceedance for a residential development scenario.

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Geosyntec Consultants trust the information and discussion contained in this report meets all your immediate requirements. Please do not hesitate to contact the undersigned if you have any further comments or questions about any aspect of the work.

Respectfully submitted

On behalf of Geosyntec Consultants

Andrew Morgan
Project Engineer

Mark Harris
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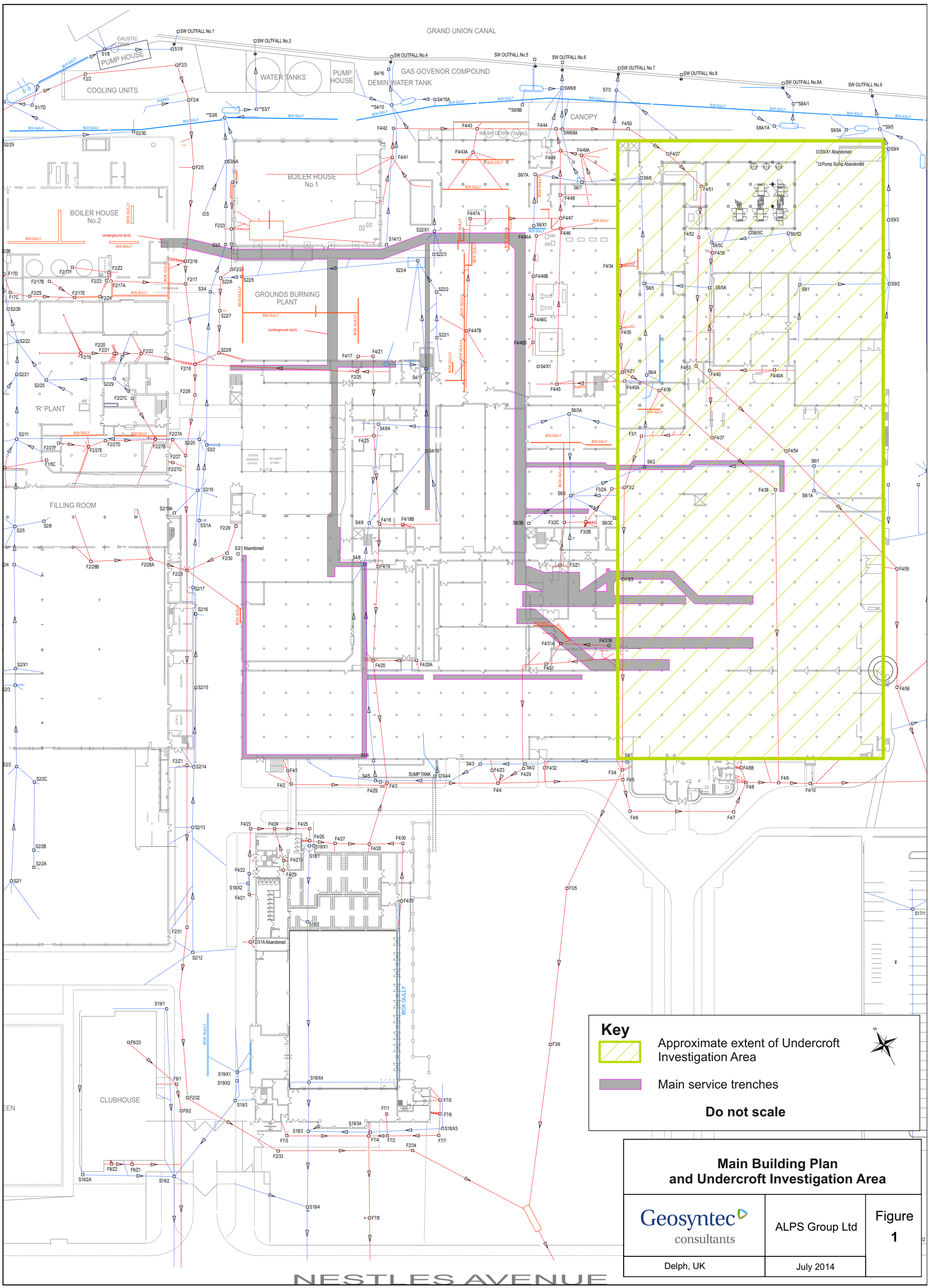
FIGURES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GROUNDS BURNING PLANT
'R' PLANT
FILLING ROOM
CLUBHOUSE
S9/X1 Abandoned
Pump Sump Abandoned
S3/1 Abandoned
F2/31A Abandoned
SUMP TANK
NESTLES AVENUE
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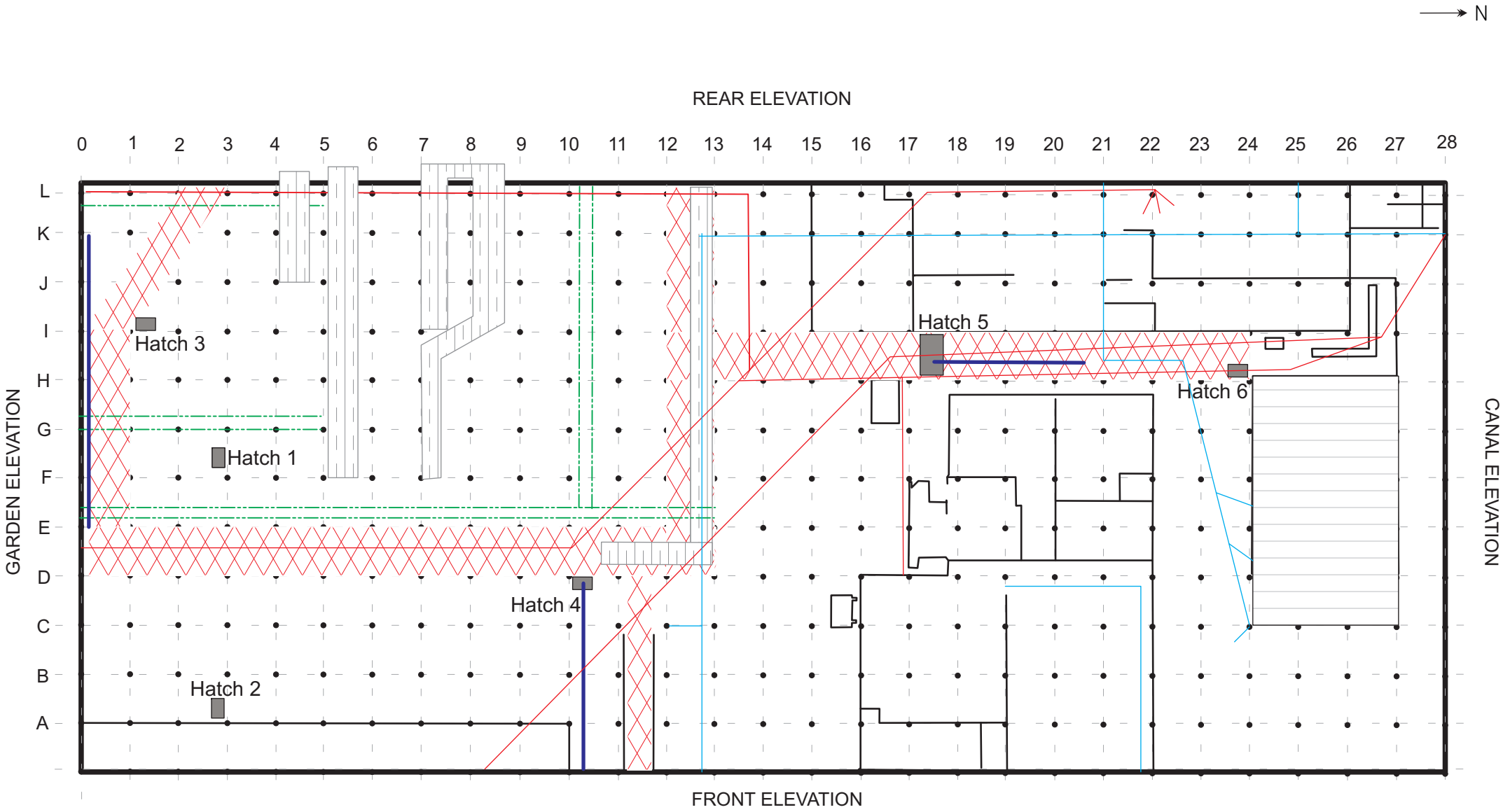
Figure 1
Delph, UK
July 2014



Key

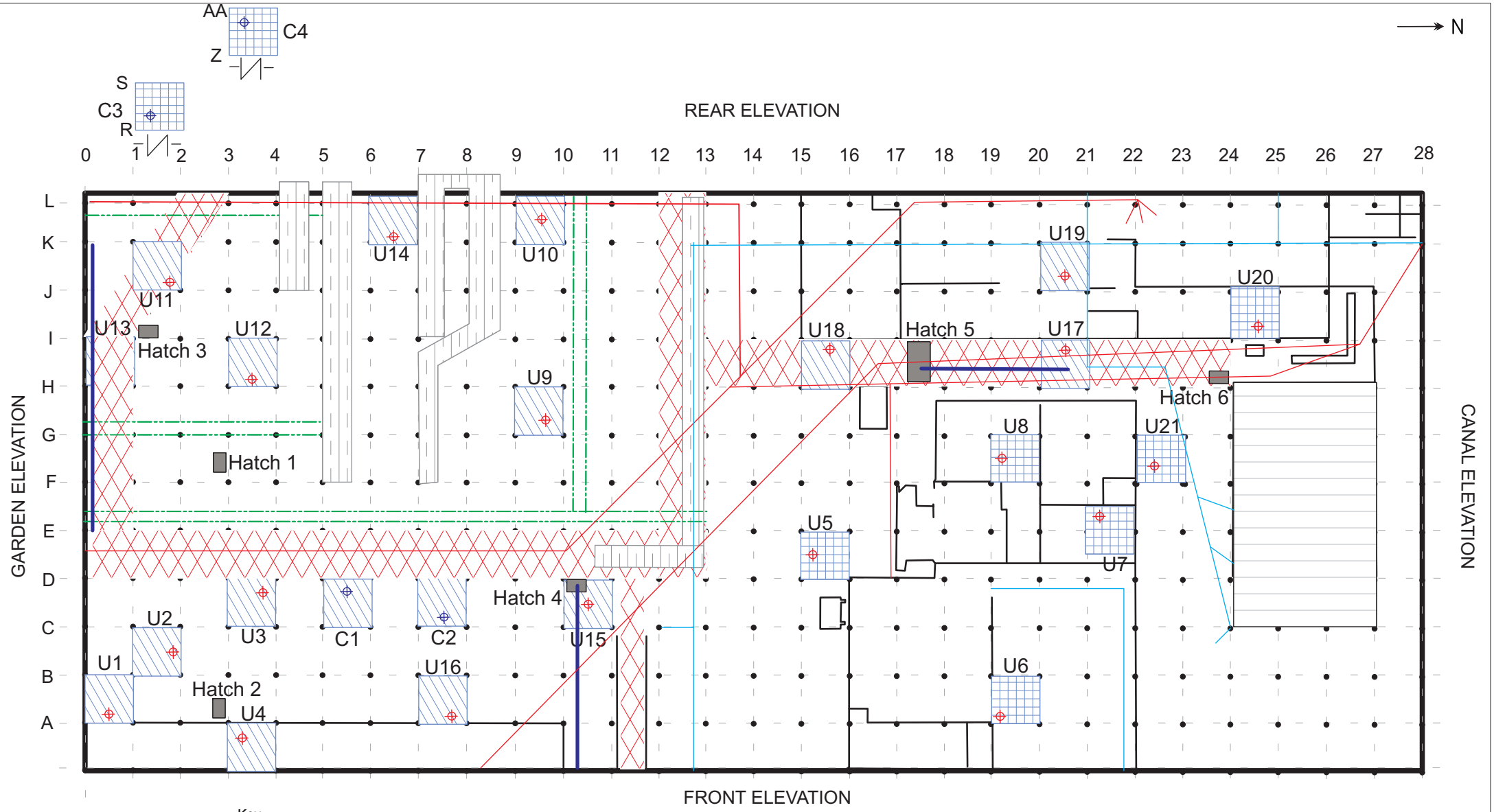
- Main Forklift Truck Access Routes
- Below ground Service Trenches
- Below ground Services / Utilities
- Hatch 1 — Asbestos Surveying Access Points
- Subsurface pipes with asbestos insulation present
- Electrical / Transformer Rooms
- Foul Sewer Lines
- Surface Water Sewer Lines

Approximate Scale

0 10m

Note: Column centres are 5.3m apart.

Investigation Area: Key Characteristics		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure **2**
Delph, UK	April 2014	



Key

- Main Forklift Truck Access Routes
- Below ground Service Trenches
- Below ground Services / Utilities
- Hatch 1 — Asbestos Surveying Access Points
- Electrical / Transformer Rooms
- Subsurface pipes with asbestos insulation present
- Foul Sewer Lines
- Surface Water Sewer Lines
- Window Sample Location
- Cored Only Location
- Undercroft Present
- Undercroft Absent

Approximate Scale

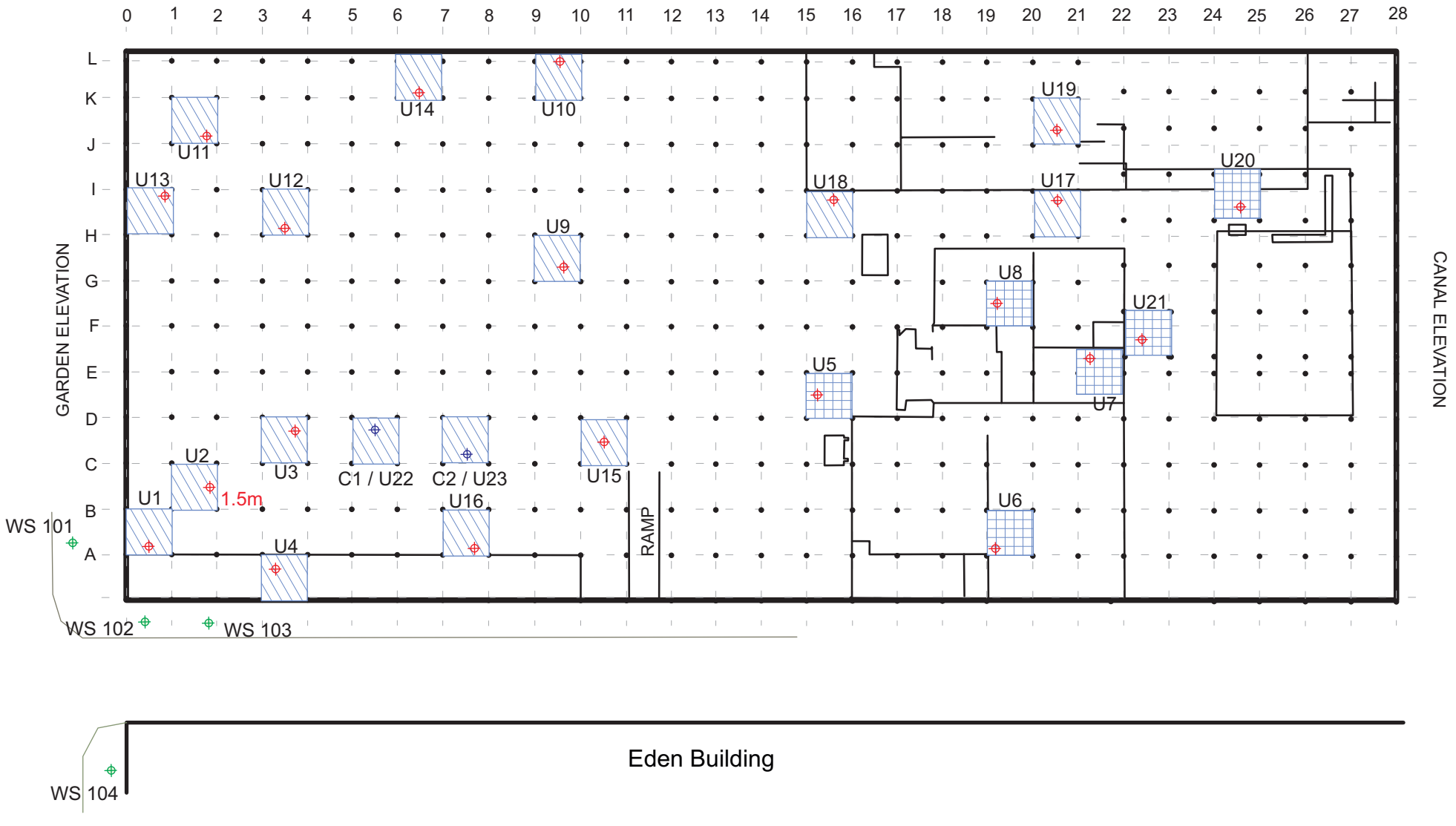
0 10m

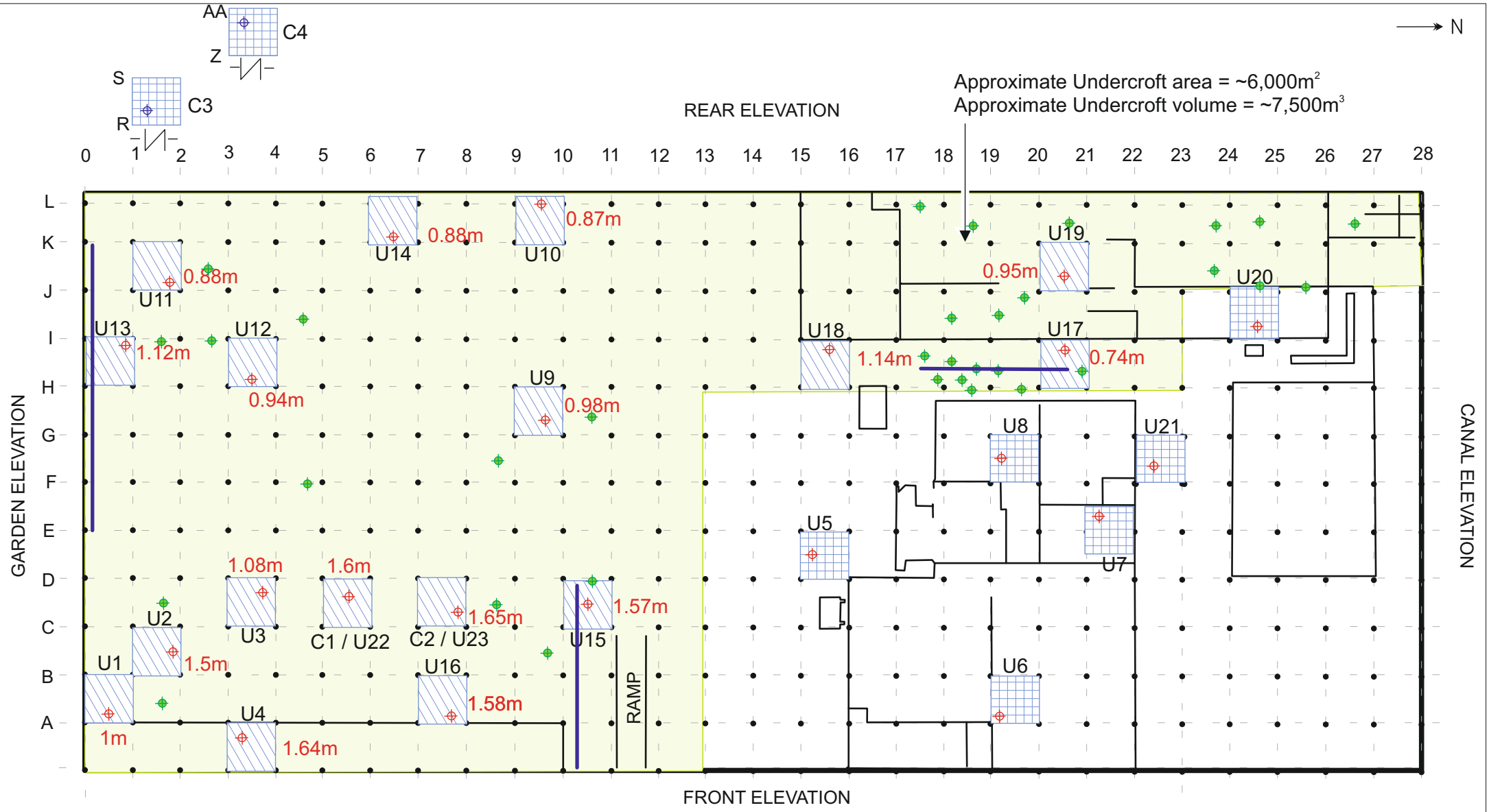
Note: Column centres are 5.3m apart.

Initial Window Sampling & Coring Locations		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 3
Delph, UK	April 2014	

Note: Column centres are 5.3m apart.

Complete Window Sample Investigation Array		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 4
Delph, UK	April 2014	





Window Sample Location

Cored Only Location

Dust/Debris Sample Location

0.982m Distance between floor slab and top of Undercroft surface

Undercroft Present

Undercroft Absent

Re-evaluated inferred extent of undercroft

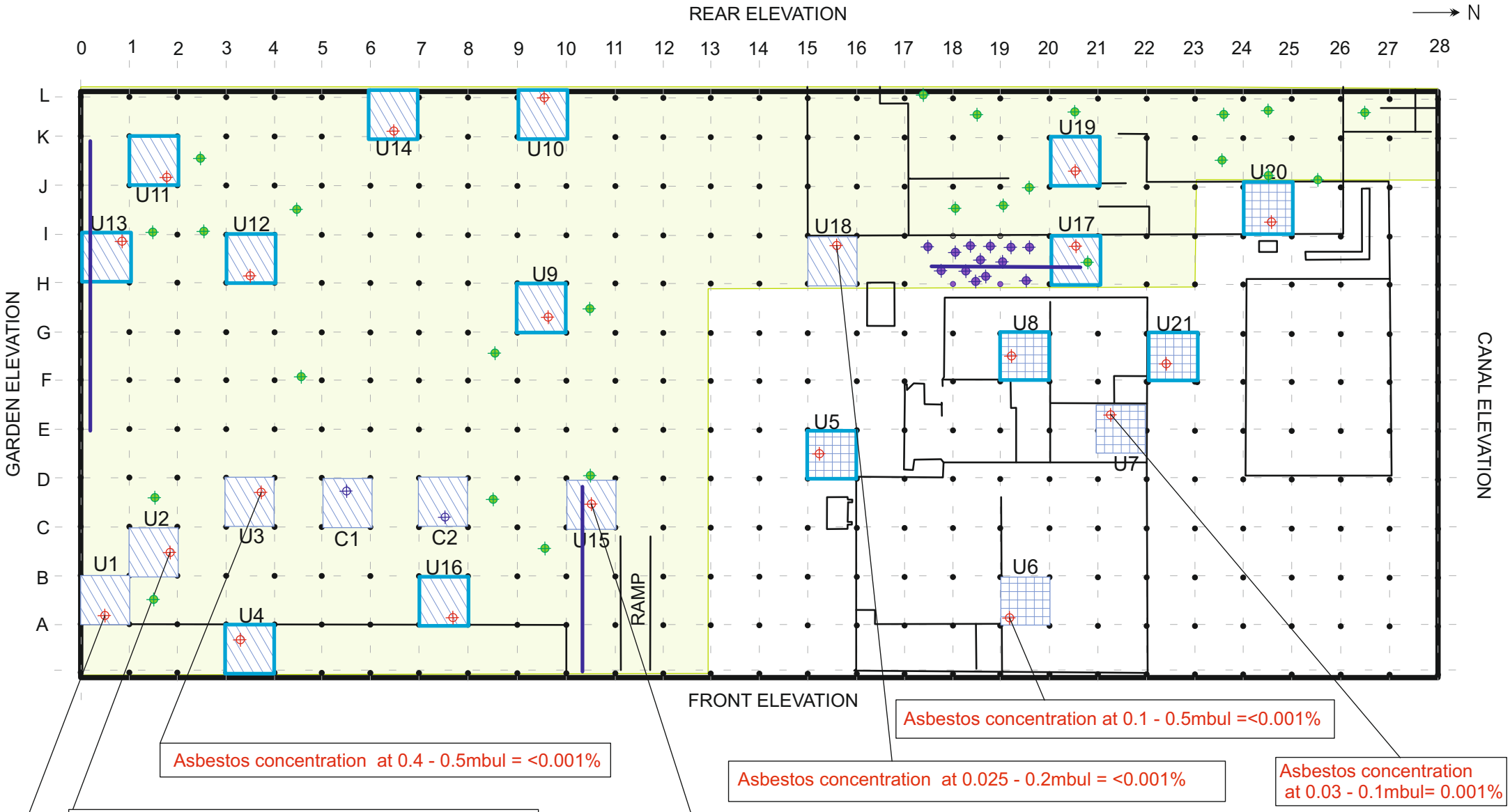
Pipelines with asbestos insulation present

Approximate Scale

0 10m

Note: Column centres are 5.3m apart.

Revised Undercroft Extent Drawing		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 5
Delph, UK	April 2014	



Asbestos concentration at 0.4 - 0.5mbul = <0.001%

Asbestos concentration at 0.1 - 0.5mbul =<0.001%

Asbestos concentration at 0.025 - 0.2mbul = <0.001%

Asbestos concentration at 0.03 - 0.1mbul= 0.001%

Asbestos concentration at 0.005 0 0.25mbul = <0.001%
Asbestos concentration at 0.26-0.6mbul = <0.001%

Asbestos concentration at 0.025 - 0.2mbul = 0.001%

Asbestos concentration at 0.1-0.15mbul = <0.001%
Asbestos concentration at 0.5 - 0.65mbul = <0.001%
Asbestos concentration at 0.8 - 1mbul = <0.001%

mbul - metres below Undercroft level

Note: Column centres are 5.3m apart.

Key

Locations with no asbestos detected.

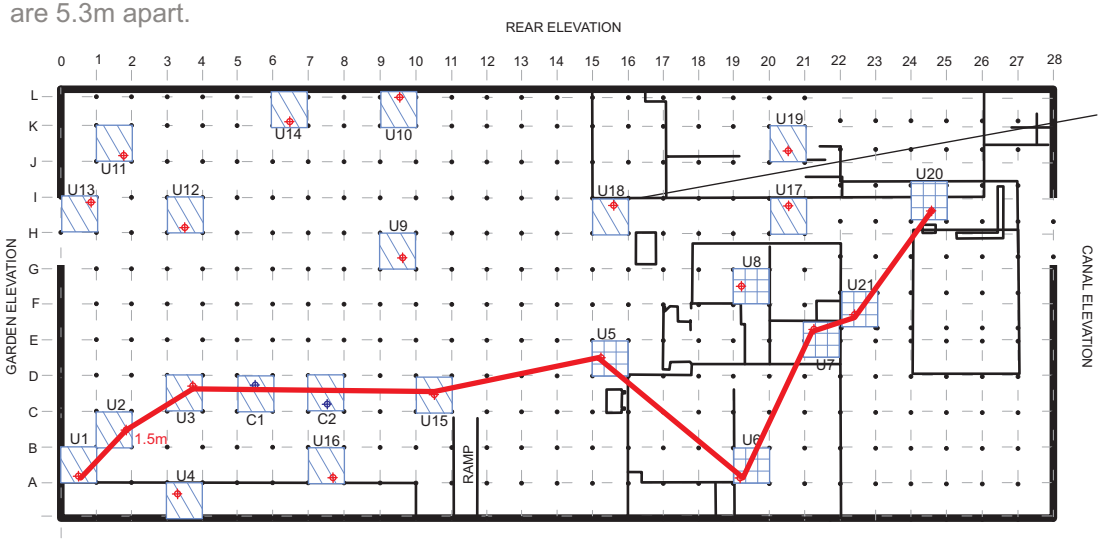
Bardon's: Dust/debris sample - asbestos present

Bardon's: Dust/debris sample - asbestos absent

Asbestos Identification Results

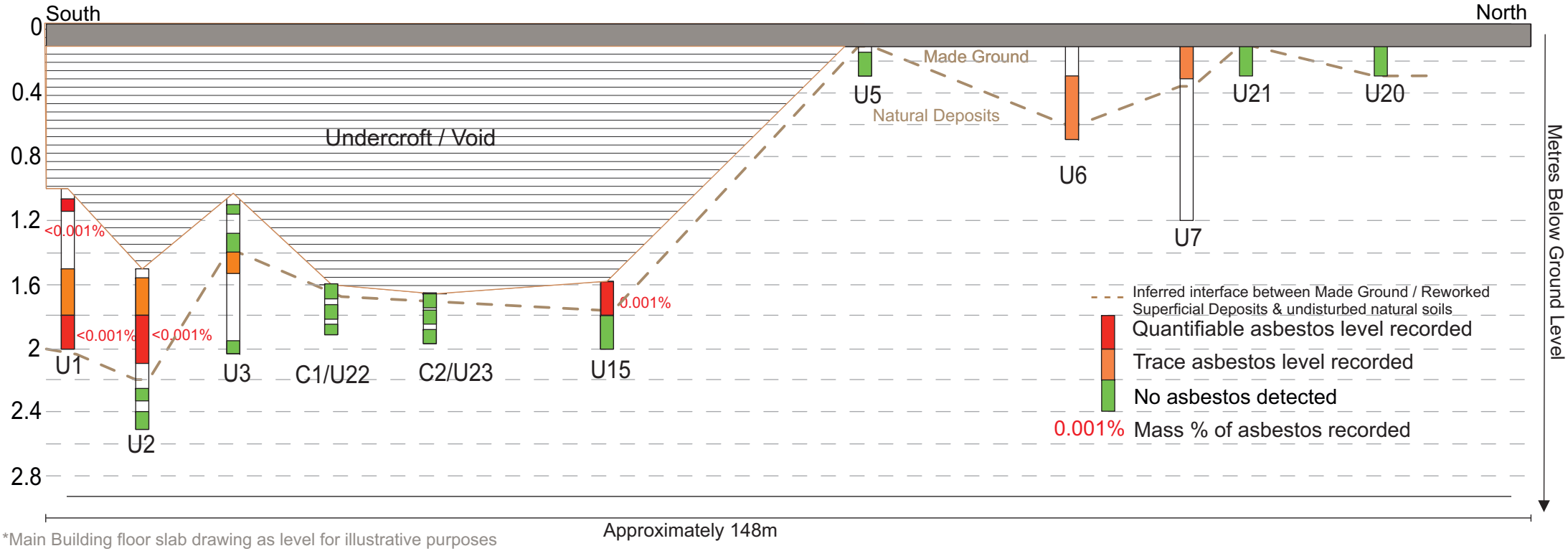
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 6
Delph, UK	April 2014	

Note: Column centres are 5.3m apart.

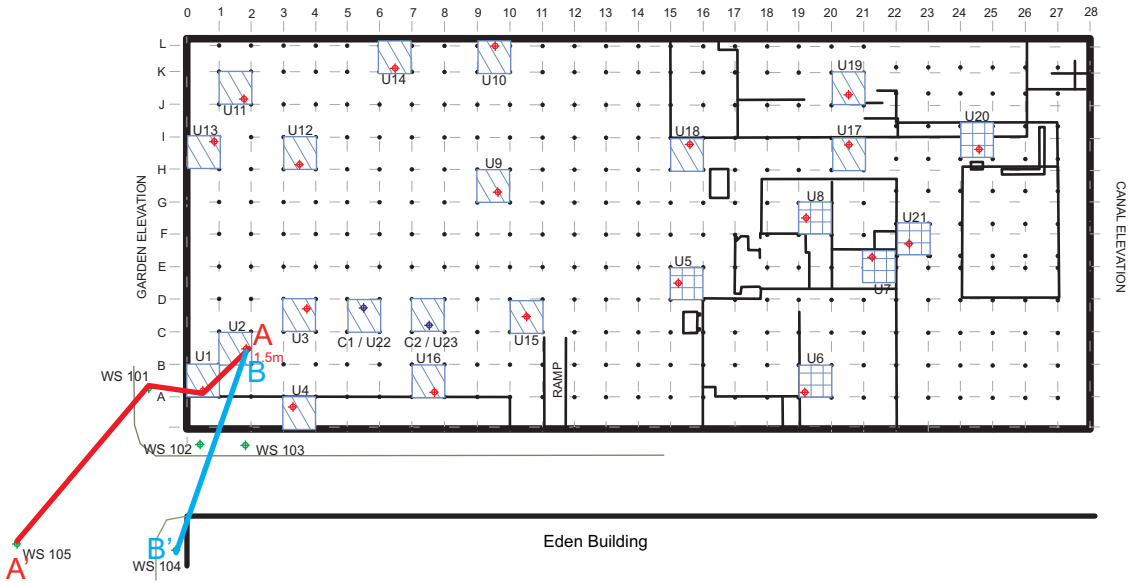


U18 - the only other location to record a positive asbestos ID screened subsequently recorded a quantifiable mass of <0.001%

Undercroft and Asbestos Summary Section		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 7
Delph, UK	April 2014	



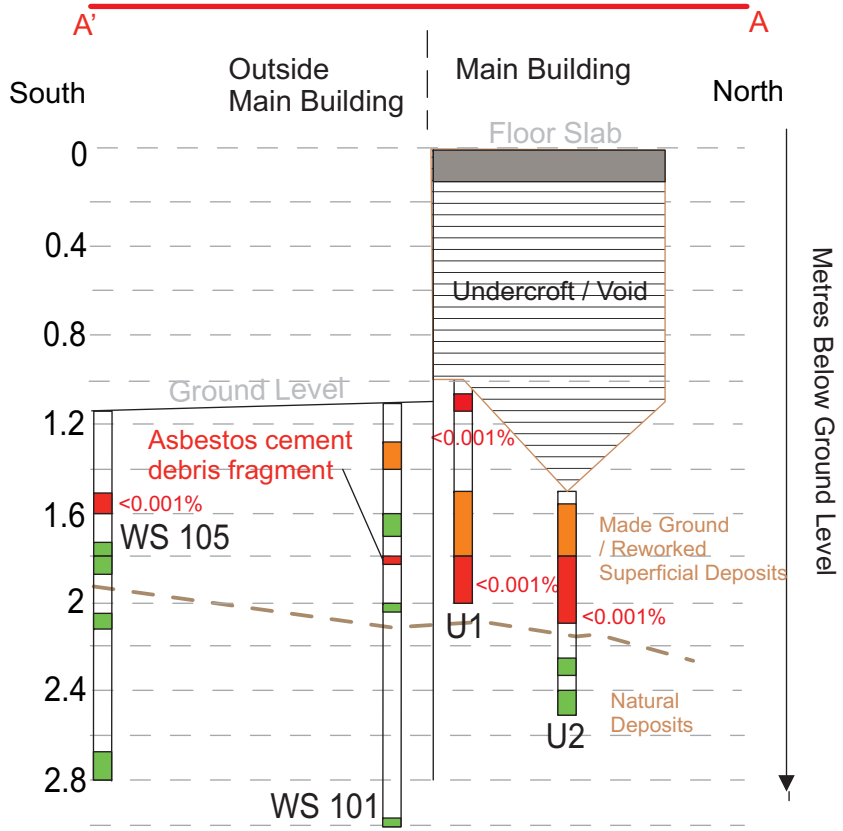
*Main Building floor slab drawing as level for illustrative purposes

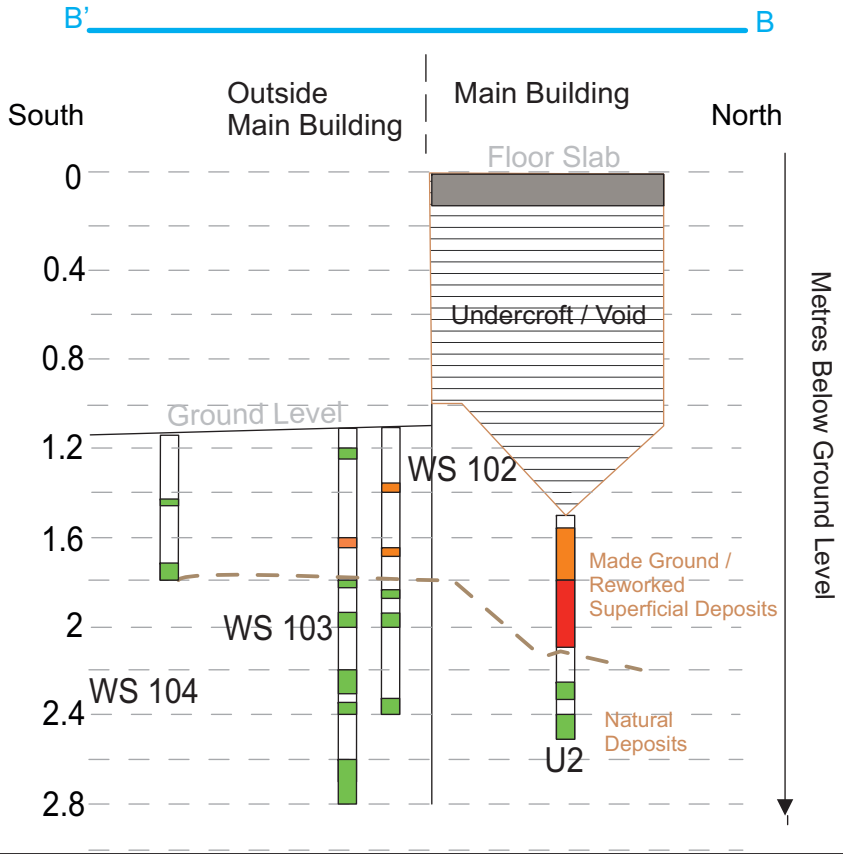


Elevation and Asbestos Summary Section		
Nestle, Hayes	GCU0124025	
Geosyntec consultants	Nestle UK Ltd	Figure 8
Delph, UK	April 2014	

Quantifiable asbestos level recorded
Trace asbestos level recorded
No asbestos detected
0.001% Mass % of asbestos recorded

Note: Column centres are 5.3m apart.





*Main Building floor slab drawing as level for illustrative purposes
** - - - = Inferred interface between Made Ground / Reworked Natural Deposits and Undisturbed natural soils

Geosyntec consultants

APPENDIX A

1) Development of restricted area

2) Service clearance and coring setup

3) Window sampling (drilling) of location

4) Decontaminating of drilling equipment

5) Wrapping of soil core for transportation

6) Gravelly clay observed at the base of soil core

Nestle Hayes ACM Investigation		
Nestle, Hayes	GCU0125026	
Geosyntec consultants	Nestle UK Ltd	Photo Plate 1
Delph, UK	April 2014	

Geosyntec consultants

APPENDIX B

Geosyntec consultants

Client: Nestle Project Number: GCU0124025 Location: Hayes, Middlesex Date Drilled: 02/07/2014 Logged By: JF Driller: Geotron UK Ltd	Borehole Elevation: Borehole Diameter: Installation Diameter: Slot Size: Method: Window Sampling	Borehole Reference: **WS101**
Coordinates: ,		

Depth (m)	Legend	Description	Observations	Sample	Sample / Field Test Result
0		MADE GROUND: Grass underlain by brown topsoil with some rootlets.			
0.20		MADE GROUND: Comprising of brown silty sand with gravel. Gravel and sand is fine to coarse with frequent brick, ceramics, clinker, and ash fragments. Rootlets present throughout.			
1.00		Light brown sandy, silty, CLAY with frequent coarse, angular gravel. (possibly re-worked superficial deposits).			
1.20		Light brown/grey very sandy GRAVEL. Sand and gravel both being fine to coarse and angular to subangular. Gravel is of flint.			
2 2.00					

Notes: Borehole hand dug to 1.2 mbgl.

Geosyntec consultants

Client: Nestle
Project Number: GCU0124025
Location: Hayes, Middlesex
Date Drilled: 03/07/2014
Logged By: JF
Driller: Geotron UK Ltd

Borehole Elevation:
Borehole Diameter:
Installation Diameter:
Slot Size:
Method: Window Sampling

Coordinates: ,

Borehole Reference:

WS102

Depth (m)	Legend	Description	Observations	Sample	Sample / Field Test Result
0		MADE GROUND: Asphalt			
0.08		MADE GROUND: Concrete			
0.20		MADE GROUND: Engineered subbase comprising of brown sand and gravel.			
0.40		MADE GROUND: Medium brown sandy firm CLAY. Sand is fine to coarse. Occasional flecks of shiny, black coal tar like particles.			
0.60		Gravelly Firm to Stiff CLAY. Gravel is fine to coarse and subrounded. Occasional rootlets.			
1.00		Light Brown silty SAND AND GRAVEL. Sand and gravel is fine to coarse and subangular to subrounded. Refusal at 1.3mbgl on dense granular deposits.			
1.30					
2					

Notes: Borehole hand dug to 1.2 mbgl.

Geosyntec consultants

Client: Nestle
Project Number: GCU0124025
Location: Hayes, Middlesex
Date Drilled: 03/07/2014
Logged By: JF
Driller: Geotron UK Ltd

Borehole Elevation:
Borehole Diameter:
Installation Diameter:
Slot Size:
Method: Window Sampling

Coordinates: ,

Borehole Reference:

WS103

Depth (m)	Legend	Description	Observations	Sample	Sample / Field Test Result
0					
0.01		MADE GROUND: Asphalt			
		MADE GROUND: Concrete			
0.26		Medium brown sandy firm-stiff CLAY. Sand is fine to medium. (possibly reworked superficial deposits)			
1.00		Firm to stiff brown CLAY. Rare rootlets and gravel fragments present.			
1.35		Light brown silty SAND AND GRAVEL. Sand and Gravel is fine to coarse and subangular and subrounded. Refusal at 1.9mbgl on dense granular deposits.			
1.90					
2					

Notes: Borehole hand dug to 1.0mbgl.

Geosyntec consultants

Client: Nestle Project Number: GCU0124025 Location: Hayes, Middlesex Date Drilled: 03/07/2014 Logged By: JF Driller: Geotron UK Ltd	Borehole Elevation: Borehole Diameter: Installation Diameter: Slot Size: Method: Window Sampling	Borehole Reference: **WS104**
Coordinates: ,		

Depth (m)	Legend	Description	Observations	Sample	Sample / Field Test Result
0		MADE GROUND: Asphalt and Concrete			
0.35		MADE GROUND: Engineered subbase comprising of brown sand and gravel.			
0.70		MADE GROUND: Concrete. Refusal on concrete at depth			
0.90					
2					

Notes: Borehole hand dug to 0.8 mbgl.

Geosyntec consultants

Client: Nestle
Project Number: GCU0124025
Location: Hayes, Middlesex
Date Drilled: 02/07/2014
Logged By: JF
Driller: Geotron UK Ltd

Borehole Elevation:
Borehole Diameter:
Installation Diameter:
Slot Size:
Method: Window Sampling

Coordinates: ,

Borehole Reference:

WS105

Depth (m)	Legend	Description	Observations	Sample	Sample / Field Test Result
0		MADE GROUND: Concrete			
0.40		MADE GROUND: Light brown/grey very sandy gravel with cobbles of brick. Sand is coarse. Gravel is composed of Flint, is fine to coarse and angular to subangular			
0.60		MADE GROUND: comprising of medium brown silty gravel with sand. Sand is coarse, Gravel is fine to coarse. Angular cobbles of concrete and ash clinker throughout.			
0.85		Medium brown / dark grey sandy SILT with frequent gravel. Gravel is coarse and subangular. (possibly re-worked superficial deposits)			
1.00		Light brown very gravelly SAND. Gravel is medium to coarse and angular. Sand is coarse. Refusal at 1.7m due to dense granular deposits.			
1.70					
2					

Notes: Borehole hand dug to 1.2 mbgl.

Geosyntec
consultants

APPENDIX C

Unit 6
Carrera Court
Church Lane
Dinnington, Sheffield
South Yorkshire, S25 2RG
Tel: 01909 560673

Prospect House
The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038514/YA03 **Date** 26 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001837	Richard Mattimore	sp012	ss5	12	N/A	4.0	10:05	10:20	4.0	15	60	4.00	4	200	0.080	0.0164	<0.08

[PERSONALMONITORINGPLAN]

Comments:
Core drilling of U4
U4
N/A
Core drilling of U4

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.

Any deviations to these standard tests shall be recorded as appropriate. This test type is as stated in HSG248

FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature: : Kenny Rogers Time: 10:45

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature: : Mark Clover Time: 10:45

This is not a certificate of re-occupation.

Unit 6
Carrera Court
Church Lane
Dinnington, Sheffield
South Yorkshire, S25 2RG
Tel: 01909 560672

Prospect House
The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038514/YA02 **Date** 26 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001836	Lee Dando	sp062	ss7	12	1016	4.0	10:05	10:20	4.0	15	60	4.00	4.5	200	0.080	0.0185	<0.08

[PERSONALMONITORINGPLAN]

Comments:
Core drilling of U4
U4
N/A
Core drilling of U4

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.

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FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature: KR : Kenny Rogers Time: 10:45

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature: MC : Mark Clover Time: 10:45

This is not a certificate of re-occupation.

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Prospect House
The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038487/YA01 **Date** 27 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001852	mark clover	p5	ss2	8	1010	4.0	09:25	09:40	4.0	15	60	4.00	3	200	0.080	0.0123	<0.08

[PERSONALMONITORINGPLAN]

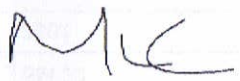
Comments:
sampling undercroft of coffee stores between 1l and 2l
coffee stores
N/A
sampling of undercroft

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.
Any deviations to these standard tests shall be recorded as appropriate. This test type is as stated in HSG248

FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature:  : Kenny Rogers Time: 09:50

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature:  : mark clover Time: 09:50

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Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038487/YA02 **Date** 27 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001853	Richard Mattimore	p5	ss4	8	1010	4.0	10:05	10:20	4.0	15	60	4.00	4.5	200	0.080	0.0185	<0.08

[PERSONALMONITORINGPLAN]

Comments:
core drilling in coffee stores next to 1J
coffee stores
N/A
core drilling by 1J

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.
Any deviations to these standard tests shall be recorded as appropriate. This test type is as stated in HSG248

FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature: KR : Kenny Rogers Time: 10:32

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature: MLC : Mark Clover Time: 10:32

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The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038487/YA02 **Date** 27 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001853	Richard Mattimore	p5	ss4	8	1010	4.0	10:05	10:20	4.0	15	60	4.00	4.5	200	0.080	0.0185	<0.08

[PERSONALMONITORINGPLAN]

Comments:
core drilling in coffee stores next to 1J
coffee stores
N/A
core drilling by 1J

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.

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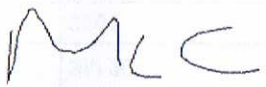
FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature:  : Kenny Rogers Time: 10:32

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature:  : Mark Clover Time: 10:32

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Prospect House
The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

tersus

UKAS TESTING
- 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J038487/YA01 **Date** 27 Mar 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001852	mark clover	p5	ss2	8	1010	4.0	09:25	09:40	4.0	15	60	4.00	3	200	0.080	0.0123	<0.08

[PERSONALMONITORINGPLAN]

Comments:
sampling undercroft of coffee stores between 1l and 2l
coffee stores
N/A
sampling of undercroft

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.
Any deviations to these standard tests shall be recorded as appropriate. This test type is as stated in HSG248

FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature: KR : Kenny Rogers Time: 09:50

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature: MLC : mark clover Time: 09:50

This is not a certificate of re-occupation.

Unit 6
Carrera Court
Church Lane
Dinnington, Sheffield
South Yorkshire, S25 2RG
Tel: 01909 560672

Prospect House
The Hyde Business Park
Bevendean
Brighton, BN2 4JE
Tel: 01273 621100

Personal Test Report

tersus

UKAS TESTING - 1752 -

Contractor's Name Bardon Environmental Ltd **Report Number** J039486/YA01 **Date** 01 Apr 2014

Site Address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF				
Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	458	Centred and block 5 visible	YES

Sample ref	Operative Name	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001870	Richard Mattimore	p5	ss1	12	1008	4.0	10:00	10:20	4.0	20	80	4.00	3	200	0.060	0.0092	<0.06

[PERSONALMONITORINGPLAN]

Comments:
Core drilling between 6K and 7K.
6K and 7K
N/A
Core drilling between 6K and 7K.

Personal (P), usually performed with a 'personal' sampling unit, filter holder adjacent the wearers nose and mouth, to assess the exposure of the individual in relation to compliance with current 'Control of Asbestos Regulations', the suitability of respirator protection and the effectiveness of dust suppression measures, for example. Results are reported in relation to the current control limit.

Any deviations to these standard tests shall be recorded as appropriate. This test type is as stated in HSG248

FOR AND ON BEHALF OF TERSUS CONSULTANCY LTD.

Signature: KR : Kenny Rogers Time: 10:30

CONTRACTOR / CUSTOMER ACKNOWLEDGEMENT

Signature: MC : Mark Clover Time: 10:30

This is not a certificate of re-occupation.

Unit 6
Carrera Court
Church Lane
Dinnington, Sheffield
South Yorkshire, S25 2RG
Tel: 01909 560673

Prospect House
The Hyde Business Park
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Tel: 01273 621100

1752

REASSURANCE TEST REPORT

Job Number: J038514/YA04

Job Number	J038514/YA04	**Report Date**	26 Mar 2014
Customer Name	Bardon Environmental Ltd	**Contractor**	Bardon Environmental Ltd, President Park, President Way, Sheffield, S4 7UR
Customer Address	President Park, President Way, Sheffield, S4 7UR	**Site Address**	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF ,

Scope of Works

Brief Description of Work / Type of ACM / Location of ACM and Work Area / Any ACM to Remain by Design:

Reassurance following core drilling and window sampling of U4.

I confirm that the scope of works has been completed and is ready for Reassurance testing. *

Site Supervisor Name	Mark Clover	Signature	MC
Date	26 Mar 2014	Time	11:00

Preliminary Check of Site Conditions and Job Completeness

Method statement (Plan of work) on site and checked	Yes	DCU intact, operational and clean	Yes
Waste route free from obvious ACMs	Yes	Surrounding areas free from obvious ACMs	Yes

Comments

Reassurance following core drilling and window sampling of U4.

Reassurance (R), static sampling to establish ambient airborne fibre levels during or post work; following 'site assessment for re-occupation', or in association with 'minor'/non licensable work on asbestos. Usually includes a visual assessment (where ACM has been removed or treated) but not a dust disturbance by default. A visual assessment shall not be performed if the sample is obtained during work on ACM. Results are reported in relation to the clearance indicator. The sampling strategy may be dictated by the customer or the analyst ; the area m2 or volume m3 of the work area may be calculated in order to help in generate a reasonable number of measurements. Where damaged ACM remains in situ then air quality may deteriorate after this test and subsequent evaluations of changes to the environmental conditions are not part of this test report. In this case the evaluation of air quality, expressed in fibres per millilitre of air, pertains to the sampling period only. Any deviations to these standard tests shall be recorded as appropriate.

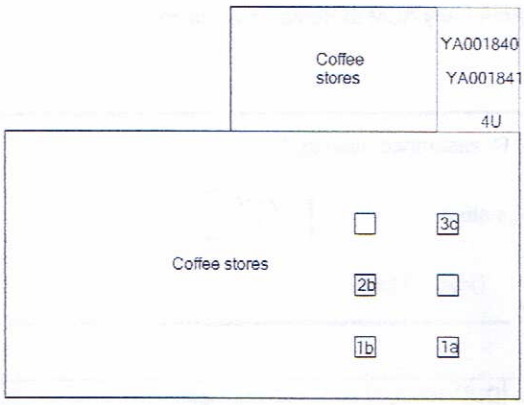
This is not a certificate of re-occupation.

Visual Inspection

Start Time	11:05	Finish Time	11:35
Dust and debris in work area	Yes	Work area dry	Yes
Presence of sprayed sealant	No	Inaccessible areas (if yes please indicate on diagram)	No
Number of visuals undertaken	1		

Approximate Area/Enclosure dimensions — Length: 0 m Width:0 m Height:0 m Approx. Area:0 m^2 Approx. Volume:0 m^3

Site Plan



Comments:

General dust and debris from broken ceiling tiles, holes in plaster board walls. Plant equipment in various places.

REASSURANCE TEST REPORT

Job Number: J038514/YA04

Determination of airborne fibre concentrations

Lab location / Veh. Reg.				BF13KNP			Respirator type			Half Mask and Full Face				Filter Diameter				22 mm
Flow meter reference				V 80460 02			Micrometer reference			SM 20				Temperature at calibration				22°C
Thermometer reference				BTT 11			HSE/NPL Test slide ref.			3861				Pressure at calibration				1000mb
Barometer reference				BTT 11			Microscope reference			N13				Graticule diameter				99 µm
Timer reference				BTT 11			Filter box reference			416				Centred and block 5 visible				YES
Sample ref	Sample (s) location	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Brush Disturbance (mins)	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001840	4U	BF15	ss3	12	1016	8.4	11:05	N/A	11:35	8.4	30	252	8.40	4	200	0.010	0.0036	<0.01
YA001841	4U	BF15	ss4	12	1016	8.4	11:05		11:35	8.4	30	252	8.40	3.5	200			
YA001842	Field Blank	N/A	ss1	12	1016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Field Blank		

Comments:

N/A

REPORTING RESULTS: These results have been obtained and reported under the requirements of our UKAS accreditation to ISO 17025:2005, applying the methods as detailed in HSG248. WHO fibre counting rules are applied, as detailed in HSG248. At least 20 fields must be read, and counting stops when either 100 fibres or 200 fields is reached. The number of fields counted may be reduced where the volume is greater than 480 litres. Opinions and interpretations based on test results are outside the scope of UKAS accreditation. Where the results are < 0.010 f/ml the area has passed relative to the clearance indicator as required for CoR. At least 80% of the results should be < 0.010 f/ml, and all should be < 0.015 f/ml. Results are calculated to three decimal places to distinguish between 0.009 f/l (which is acceptable) and 0.010 f/ml (which is unacceptable). If the sample appears to be uncountable or biased this statement and reasoning shall be noted on the report. Uncertainty budget: sampling and analysis is performed to an estimated level of confidence of 95%. ABBREVIATIONS f/ml: fibres per millilitre of air, l: litre, m: metre, °C: centigrade, mb: millibar, N/A: Not Applicable, NPU: Negative Pressure Unit, FMB Field Media Blank (media check).
FILTER EVALUATION: Discrimination between asbestos and non-asbestos fibres is NOT undertaken in the application of the method for filter evaluation.

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers Signature 

Date 26 Mar 2014 Time 11:50

Air Monitoring

No of measurements taken	1

Final assessment post enclsoure/work area dismantling

Former work area free of dust and debris	No	Waste route free from obvious ACM	Yes

Comments

N/A

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers — Signature KR

Date 26 Mar 2014 — Time 11:55

Contractor/Customer acknowledgement

Name Mark Clover — Company/Organisation Bardon Environmental Ltd

Signature MC — Date 26 Mar 2014

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Dinnington, Sheffield
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1752

REASSURANCE TEST REPORT

Job Number: J038487/YA04

Job Number	J038487/YA04	**Report Date**	27 Mar 2014
Customer Name	Bardon Environmental Ltd	**Contractor**	Bardon Environmental Ltd, President Park, President Way, Sheffield, S4 7UR
Customer Address	President Park, President Way, Sheffield, S4 7UR	**Site Address**	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF ,

Scope of Works

Brief Description of Work / Type of ACM / Location of ACM and Work Area / Any ACM to Remain by Design:

Reassurance following core drilling in coffee stores between 1K and 1H

I confirm that the scope of works has been completed and is ready for Reassurance testing. *

Site Supervisor Name	Mark Clover	Signature	MC
Date	27 Mar 2014	Time	10:40

Preliminary Check of Site Conditions and Job Completeness

Method statement (Plan of work) on site and checked	Yes	Transit route free from obvious ACMs	Yes
Waste route free from obvious ACMs	Yes	Surrounding areas free from obvious ACMs	Yes
Waste disposal / storage area checked and satisfactory	Yes		

Comments

Reassurance following core drilling in coffee stores between 1K and 1H

Reassurance (R), static sampling to establish ambient airborne fibre levels during or post work; following 'site assessment for re-occupation', or in association with 'minor'/non licensable work on asbestos. Usually includes a visual assessment (where ACM has been removed or treated) but not a dust disturbance by default. A visual assessment shall not be performed if the sample is obtained during work on ACM. Results are reported in relation to the clearance indicator. The sampling strategy may be dictated by the customer or the analyst ; the area m2 or volume m3 of the work area may be calculated in order to help in generate a reasonable number of measurements. Where damaged ACM remains in situ then air quality may deteriorate after this test and subsequent evaluations of changes to the environmental conditions are not part of this test report. In this case the evaluation of air quality, expressed in fibres per millilitre of air, pertains to the sampling period only. Any deviations to these standard tests shall be recorded as appropriate.

This is not a certificate of re-occupation.

Air Monitoring

No of measurements taken	1

Final assessment post enclsoure/work area dismantling

Former work area free of dust and debris	No	Waste route free from obvious ACM	Yes

Comments

N/A

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers — Signature KR

Date 27 Mar 2014 — Time 12:07

Contractor/Customer acknowledgement

Name Mark Clover — Company/Organisation Bardon Environmental Ltd

Signature MC — Date 27 Mar 2014

REASSURANCE TEST REPORT

Job Number: J038487/YA04

Determination of airborne fibre concentrations

Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	416	Centred and block 5 visible	YES

Sample ref	Sample (s) location	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Brush Disturbance (mins)	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001856	next to 1l	sp062	ss3	8	1010	8.4	11:10	N/A	11:40	8.4	30	252	8.40	2	200	0.010	0.0017	<0.01
YA001857	next to 1l	sp012	ss4	8	1010	8.4	11:10		11:40	8.4	30	252	8.40	1.5	200			

Comments:

N/A

REPORTING RESULTS: These results have been obtained and reported under the requirements of our UKAS accreditation to ISO 17025:2005, applying the methods as detailed in HSG248. WHO fibre counting rules are applied, as detailed in HSG248. At least 20 fields must be read, and counting stops when either 100 fibres or 200 fields is reached. The number of fields counted may be reduced where the volume is greater than 480 litres. Opinions and interpretations based on test results are outside the scope of UKAS accreditation. Where the results are < 0.010 f/ml the area has passed relative to the clearance indicator as required for CoR. At least 80% of the results should be < 0.010 f/ml, and all should be < 0.015 f/ml. Results are calculated to three decimal places to distinguish between 0.009 f/l (which is acceptable) and 0.010 f/ml (which is unacceptable). If the sample appears to be uncountable or biased this statement and reasoning shall be noted on the report. Uncertainty budget: sampling and analysis is performed to an estimated level of confidence of 95%.
ABBREVIATIONS f/ml: fibres per millilitre of air, l: litre, m: metre, °C: centigrade, mb: millibar, N/A: Not Applicable, NPU: Negative Pressure Unit, FMB Field Media Blank (media check).
FILTER EVALUATION: Discrimination between asbestos and non-asbestos fibres is NOT undertaken in the application of the method for filter evaluation.

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers Signature 

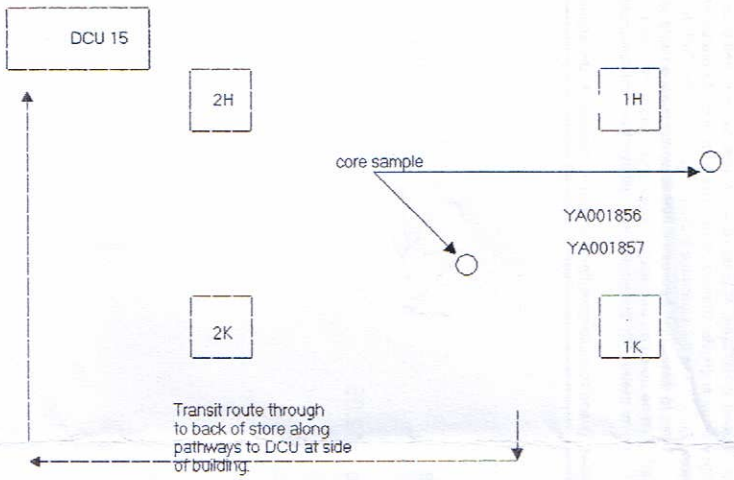
Date 27 Mar 2014 Time 12:05

Visual Inspection

Start Time	11:10	Finish Time	11:20
Dust and debris in work area	No	Work area dry	Yes
Presence of sprayed sealant	No	Inaccessible areas (if yes please indicate on diagram)	No
Number of visuals undertaken	1		

Approximate Area/Enclosure dimensions	Length: 0 m Width:0 m Height:0 m Approx. Area:0 m^2 Approx. Volume:0 m^3

Site Plan



Comments:

ceramic tiles on floor with tape and coffee staining throughout. tiles damaged in various places throughout creating dust and debris

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Tel: 01273 621100

1752

REASSURANCE TEST REPORT

Job Number: J039486/YA03

Job Number	J039486/YA03	**Report Date**	01 Apr 2014
Customer Name	Bardon Environmental Ltd	**Contractor**	Bardon Environmental Ltd, President Park, President Way, Sheffield, S4 7UR
Customer Address	President Park, President Way, Sheffield, S4 7UR	**Site Address**	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF ,

Scope of Works

Brief Description of Work / Type of ACM / Location of ACM and Work Area / Any ACM to Remain by Design:

Reassurance following core drilling between 6K and 7K

I confirm that the scope of works has been completed and is ready for Reassurance testing. *

Site Supervisor Name	Mark Clover	Signature	MC
Date	01 Apr 2014	Time	10:35

Preliminary Check of Site Conditions and Job Completeness

Method statement (Plan of work) on site and checked	Yes	DCU intact, operational and clean	Yes
Surrounding areas free from obvious ACMs	Yes	Waste disposal / storage area checked and satisfactory	Yes

Comments

Reassurance following core drilling between 6K and 7K

Reassurance (R), static sampling to establish ambient airborne fibre levels during or post work; following 'site assessment for re-occupation', or in association with 'minor'/non licensable work on asbestos. Usually includes a visual assessment (where ACM has been removed or treated) but not a dust disturbance by default. A visual assessment shall not be performed if the sample is obtained during work on ACM. Results are reported in relation to the clearance indicator. The sampling strategy may be dictated by the customer or the analyst ; the area m2 or volume m3 of the work area may be calculated in order to help in generate a reasonable number of measurements. Where damaged ACM remains in situ then air quality may deteriorate after this test and subsequent evaluations of changes to the environmental conditions are not part of this test report. In this case the evaluation of air quality, expressed in fibres per millilitre of air, pertains to the sampling period only. Any deviations to these standard tests shall be recorded as appropriate.

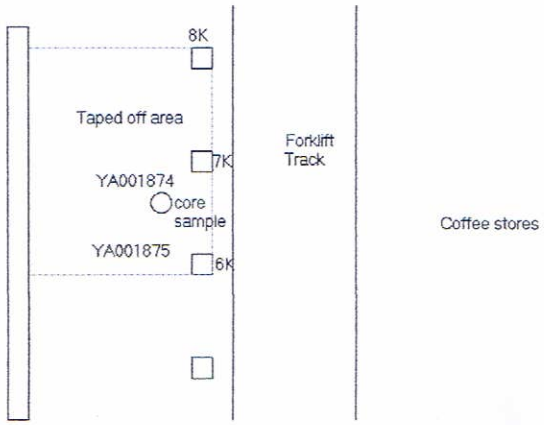
This is not a certificate of re-occupation.

Visual Inspection

Start Time	11:25	Finish Time	11:30
Dust and debris in work area	Yes	Work area dry	Yes
Presence of sprayed sealant	No	Inaccessible areas (if yes please indicate on diagram)	No
Number of visuals undertaken	1		

Approximate Area/Enclosure dimensions — Length: 0 m Width:0 m Height:0 m Approx. Area:0 m^2 Approx. Volume:0 m^3

Site Plan



Comments:

Lino on floor. Coffee staining throughout. White and yellow tape in varios places. General dust and debris as operational stores.

REASSURANCE TEST REPORT

Job Number: J039486/YA03

Determination of airborne fibre concentrations

Lab location / Veh. Reg.	BF13KNP	Respirator type	Half Mask and Full Face	Filter Diameter	22 mm
Flow meter reference	V 80460 02	Micrometer reference	SM 20	Temperature at calibration	22°C
Thermometer reference	BTT 11	HSE/NPL Test slide ref.	3861	Pressure at calibration	1000mb
Barometer reference	BTT 11	Microscope reference	N13	Graticule diameter	99 µm
Timer reference	BTT 11	Filter box reference	458	Centred and block 5 visible	YES

Sample ref	Sample(s) location	Pump ref	Filter Head ref	Temp (°C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Brush Disturbance (mins)	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
YA001874	Between 6K and 7K	sp012	ss2	12	1008	8.4	11:25	N/A	11:55	8.4	30	252	8.40	2.5	200	0.010	0.0022	<0.01
YA001875	Between 6K and 7K	16.2	ss4	12	1008	8.4	11:25		11:55	8.4	30	252	8.40	2	200			

Comments:

REPORTING RESULTS: These results have been obtained and reported under the requirements of our UKAS accreditation to ISO 17025:2005, applying the methods as detailed in HSG248. WHO fibre counting rules are applied, as detailed in HSG248. At least 20 fields must be read, and counting stops when either 100 fibres or 200 fields is reached. The number of fields counted may be reduced where the volume is greater than 480 litres. Opinions and interpretations based on test results are outside the scope of UKAS accreditation. Where the results are < 0.010 f/ml the area has passed relative to the clearance indicator as required for CoR. At least 80% of the results should be < 0.010 f/ml, and all should be < 0.015 f/ml. Results are calculated to three decimal places to distinguish between 0.009 f/l (which is acceptable) and 0.010 f/ml (which is unacceptable). If the sample appears to be uncountable or biased this statement and reasoning shall be noted on the report. Uncertainty budget: sampling and analysis is performed to an estimated level of confidence of 95%. ABBREVIATIONS f/ml: fibres per millilitre of air, l: litre, m: metre, °C: centigrade, mb: millibar, N/A: Not Applicable, NPU: Negative Pressure Unit, FMB Field Media Blank (media check).
FILTER EVALUATION: Discrimination between asbestos and non-asbestos fibres is NOT undertaken in the application of the method for filter evaluation.

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers Signature KR

Date 01 Apr 2014 Time 12:10

Air Monitoring

No of measurements taken	1

Final assessment post enclsoure/work area dismantling

Former work area free of dust and debris	No	Waste route free from obvious ACM	Yes

Comments

N/A

For and on behalf of Tersus Consultancy Ltd.

Kenny Rogers — Signature KR

Date 01 Apr 2014 — Time 12:12

Contractor/Customer acknowledgement

Name Mark Clover — Company/Organisation Bardon Environmental Ltd

Signature MC — Date 01 Apr 2014

BACKGROUND MONITORING REPORT

Job Number: J049788/CG02

Job Number	J049788/CG02	**Report Date**	02 Jul 2014
Customer Name	Geosyntec Consultants	**Contractor**	Geosyntec Consultants, Gatehead Business Park, Delph New Road, Delph, Oldham, OL3 5DE
Customer Address	Gatehead Business Park, Delph New Road, Delph, Oldham, OL3 5DE	**Site Address**	Nestle UK, North Hyde Gardens, Hayes, London, UB3 4RF ,

Scope of Works

Brief Description of Work / Type of ACM / Location of ACM and Work Area / Any ACM to Remain by Design:

Background Airtests During Drilling Into Soil To Sample In Main Building Ground Floor Storage Locations U22 And U23 Within Respirator Zone

I confirm that the scope of works has been completed and is ready for Background Monitoring testing. *

Site Supervisor Name	Andrew Morgan	Signature	
Date	02 Jul 2014	Time	10:12

Preliminary Check of Site Conditions and Job Completeness

No questions have been answered for this stage.

Comments

Background Airtests Only
Permit To Work (Document) In Locations Clearly Displayed On Pillar
Works Carried Out In Respirator Zone Marked Off With Tape
Drilling Into Soil Via Access Points

Background (B), static samples taken to establish ambient airborne fibre levels prior to any activity which may lead to airborne asbestos contamination. Results are reported in relation to the clearance indicator. Any deviations to these standard tests shall be recorded as appropriate.

This is not a certificate of re-occupation.

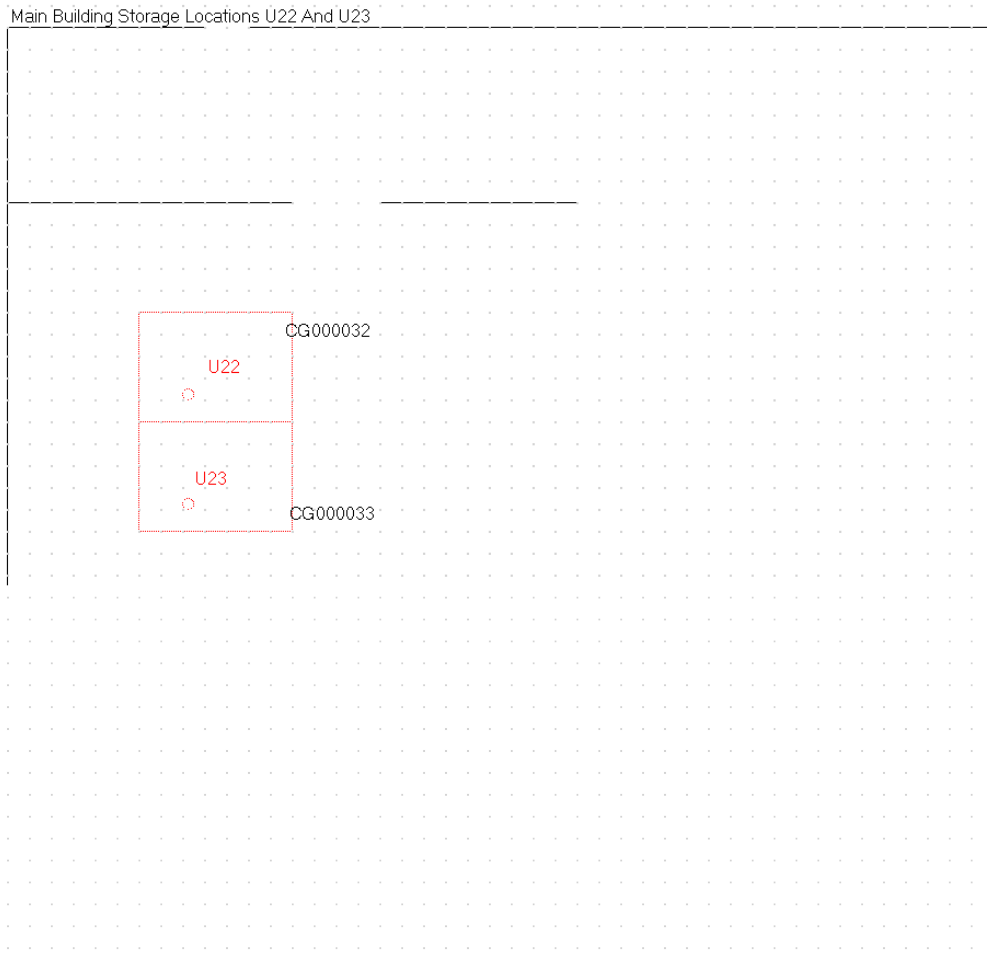
Visual Inspection

No questions have been answered for this stage.

Approximate Area/Enclosure dimensions

Length: 0 m Width:0 m Height:0 m Approx. Area:0 m^2 Approx. Volume:0 m^3

Site Plan



Comments:

None

Determination of airborne fibre concentrations

Lab location / Veh. Reg.	MK60 ETF	Respirator type	None	Filter Diameter	22 mm
Flow meter reference	V-61971-10	Micrometer reference	SM-G-24	Temperature at calibration	23^{o}C
Thermometer reference	LBTT-13	HSE/NPL Test slide ref.	3815	Pressure at calibration	1022mb
Barometer reference	LBTT-13	Microscope reference	A20	Graticule diameter	100 µm
Timer reference	LBTT-13	Filter box reference	488	Centred and block 5 visible	YES

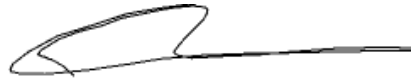
Sample ref	Sample (s) location	Pump ref	Filter Head ref	Temp (^{o}C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Brush Disturbance (mins)	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
CG000032	Areas U22 And U23	SP25	FH82	26	1013	8.6	10:16	N/A	11:16	8.7	60	519	8.65	3	200	0.010	0.0014	<0.01
CG000033	Areas U22 And U23	SP30	FH83	26	1013	8.6	10:18	N/A	11:18	8.6	60	516	8.60	3.5	200	0.010	0.0016	<0.01

Comments:

None

REPORTING RESULTS: These results have been obtained and reported under the requirements of our UKAS accreditation to ISO 17025:2005, applying the methods as detailed in HSG248. WHO fibre counting rules are applied, as detailed in HSG248. At least 20 fields must be read, and counting stops when either 100 fibres or 200 fields is reached. The number of fields counted may be reduced where the volume is greater than 480 litres. Opinions and interpretations based on test results are outside the scope of UKAS accreditation. Where the results are < 0.010 f/ml the area has passed relative to the clearance indicator as required for CoR. At least 80% of the results should be < 0.010 f/ml, and all should be < 0.015 f/ml. Results are calculated to three decimal places to distinguish between 0.009 f/l (which is acceptable) and 0.010 f/ml (which is unacceptable). If the sample appears to be uncountable or biased this statement and reasoning shall be noted on the report. Uncertainty budget: sampling and analysis is performed to an estimated level of confidence of 95%.
ABBREVIATIONS f/ml: fibres per millilitre of air, l: litre, m: metre, ºC: centigrade, mb: millibar, N/A: Not Applicable, NPU: Negative Pressure Unit, FMB Field Media Blank (media check).
FILTER EVALUATION: Discrimination between asbestos and non-asbestos fibres is NOT undertaken in the application of the method for filter evaluation.

For and on behalf of Tersus Consultancy Ltd.

Junaed Islam Signature 

Date 02 Jul 2014 Time 11:36

Air Monitoring

No of measurements taken	2

Final assessment post enclsoure/work area dismantling

No questions have been answered for this stage.

Comments

None

For and on behalf of Tersus Consultancy Ltd.

Junaed Islam — Signature 

Date 02 Jul 2014 — Time 11:40

Contractor/Customer acknowledgement

Name Andrew Morgan — Company/Organisation Geosyntec Consultants

Signature  — Date 02 Jul 2014

REASSURANCE TEST REPORT

Job Number: J049788/CG03

Job Number	J049788/CG03	**Report Date**	02 Jul 2014
Customer Name	Geosyntec Consultants	**Contractor**	Geosyntec Consultants, Gatehead Business Park, Delph New Road, Delph, Oldham, OL3 5DE
Customer Address	Gatehead Business Park, Delph New Road, Delph, Oldham, OL3 5DE	**Site Address**	Nestle UK, North Hyde Gardens, Hayes, London, UB3 4RF ,

Scope of Works

Brief Description of Work / Type of ACM / Location of ACM and Work Area / Any ACM to Remain by Design:

Reassurance Airtests Following Drilling Into Soil To Sample In Main Building Ground Floor Storage Locations U22 And U23 Within Respirator Zone

I confirm that the scope of works has been completed and is ready for Reassurance testing. *

Site Supervisor Name	Andrew Morgan	Signature	
Date	02 Jul 2014	Time	11:52

Preliminary Check of Site Conditions and Job Completeness

Method statement (Plan of work) on site and checked	Yes

Comments

Reassurance Airtests Only
Permit To Work (Document) In Locations Clearly Displayed On Pillar
Works Carried Out In Respirator Zone Marked Off With Tape
Drilling Into Soil Via Access Points

Reassurance (R), static sampling to establish ambient airborne fibre levels during or post work; following 'site assessment for re-occupation', or in association with 'minor'/non licensable work on asbestos. Usually includes a visual assessment (where ACM has been removed or treated) but not a dust disturbance by default. A visual assessment shall not be performed if the sample is obtained during work on ACM. Results are reported in relation to the clearance indicator. The sampling strategy may be dictated by the customer or the analyst ; the area m2 or volume m3 of the work area may be calculated in order to help in generate a reasonable number of measurements. Where damaged ACM remains in situ then air quality may deteriorate after this test and subsequent evaluations of changes to the environmental conditions are not part of this test report. In this case the evaluation of air quality, expressed in fibres per millilitre of air, pertains to the sampling period only. Any deviations to these standard tests shall be recorded as appropriate.

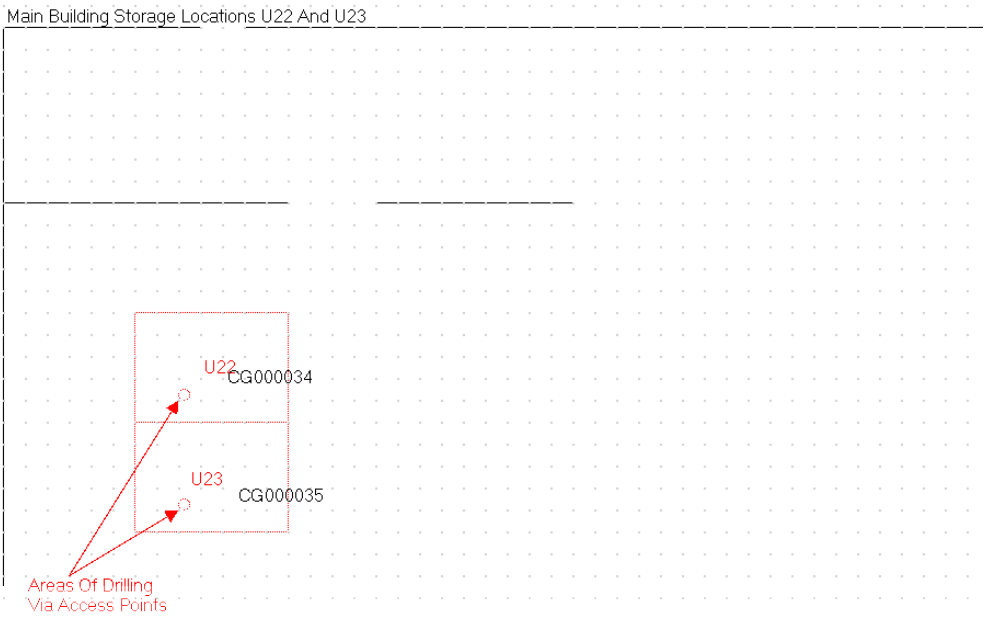
This is not a certificate of re-occupation.

Visual Inspection

Start Time	N/A	Finish Time	N/A
Number of visuals undertaken	0		

Approximate Area/Enclosure dimensions — Length: 0 m Width:0 m Height:0 m Approx. Area:0 m^2 Approx. Volume:0 m^3

Site Plan



Comments:

No Visual Inspection Carried Out

Determination of airborne fibre concentrations

Lab location / Veh. Reg.	MK60 ETF	Respirator type	None	Filter Diameter	22 mm
Flow meter reference	V-61971-10	Micrometer reference	SM-G-24	Temperature at calibration	23^{o}C
Thermometer reference	LBTT-13	HSE/NPL Test slide ref.	3815	Pressure at calibration	1022mb
Barometer reference	LBTT-13	Microscope reference	A20	Graticule diameter	100 µm
Timer reference	LBTT-13	Filter box reference	488	Centred and block 5 visible	YES

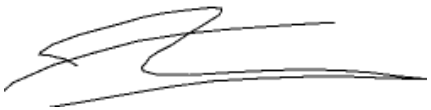
Sample ref	Sample (s) location	Pump ref	Filter Head ref	Temp (^{o}C)	Pressure (mb)	Flow Rate Start	Sample Start Time	Brush Disturbance (mins)	Sample Stop Time	Flow Rate Stop	Duration (mins)	Sample Volume (l)	Average Flow Rate	Fibres	Fields	Limit of Detection (f/ml)	Calculated Result (f/ml)	Reported Result (f/ml)
CG000034	Areas U22 And U23	SP25	FH84	27	1013	8.7	11:58	N/A	12:58	8.7	60	522	8.70	2.5	200	0.010	0.0011	<0.01
CG000035	Areas U22 And U23	SP30	FH85	27	1013	8.6	12:00	N/A	13:00	8.6	60	516	8.60	3.5	200	0.010	0.0016	<0.01
CG000036	Field Blank	N/A	FH87	27	1013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Field Blank		

Comments:

None

REPORTING RESULTS: These results have been obtained and reported under the requirements of our UKAS accreditation to ISO 17025:2005, applying the methods as detailed in HSG248. WHO fibre counting rules are applied, as detailed in HSG248. At least 20 fields must be read, and counting stops when either 100 fibres or 200 fields is reached. The number of fields counted may be reduced where the volume is greater than 480 litres. Opinions and interpretations based on test results are outside the scope of UKAS accreditation. Where the results are < 0.010 f/ml the area has passed relative to the clearance indicator as required for CoR. At least 80% of the results should be < 0.010 f/ml, and all should be < 0.015 f/ml. Results are calculated to three decimal places to distinguish between 0.009 f/l (which is acceptable) and 0.010 f/ml (which is unacceptable). If the sample appears to be uncountable or biased this statement and reasoning shall be noted on the report. Uncertainty budget: sampling and analysis is performed to an estimated level of confidence of 95%.
ABBREVIATIONS f/ml: fibres per millilitre of air, l: litre, m: metre, ºC: centigrade, mb: millibar, N/A: Not Applicable, NPU: Negative Pressure Unit, FMB Field Media Blank (media check).
FILTER EVALUATION: Discrimination between asbestos and non-asbestos fibres is NOT undertaken in the application of the method for filter evaluation.

For and on behalf of Tersus Consultancy Ltd.

Junaed Islam Signature 

Date 02 Jul 2014 Time 13:16

Air Monitoring

No of measurements taken	1

Final assessment post enclsoure/work area dismantling

No questions have been answered for this stage.

Comments

None

For and on behalf of Tersus Consultancy Ltd.

Junaed Islam — Signature 

Date 02 Jul 2014 — Time 13:20

Contractor/Customer acknowledgement

Name Andrew Morgan — Company/Organisation Geosyntec Consultants

Signature  — Date 02 Jul 2014

Geosyntec consultants

APPENDIX D

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

Unit 3 Deeside Point
Zone 3
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CH5 2UA

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Fax: +44 (0) 1244 833781

Geosyntec Consulting
1st Floor
Gatehead Business Park
Delph New Road
Delph
OL3 5DE

4225

Attention :	Mark Harris
Date :	9th April, 2014
Your reference :	Hayes ACM Undercroft
Our reference :	Test Report 14/4298 Batch 1
Location :	Nestle Hayes
Date samples received :	28th March, 2014
Status :	Final report
Issue :	1

Thirty six samples were received for analysis on 28th March, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/4298	1	ZONE 2 U1	50mm-60mm	11	04/04/14	Soil-Silt/Brick/Stone	Free Fibres	Chrysotile	Quantifiable	
14/4298	1	ZONE 2 U1	250mm-400mm	12	04/04/14	soil/stones	Free Fibres	Chrysotile	Trace	
14/4298	1	ZONE 2 U1	400mm-500mm	16	04/04/14	Soil-Clay/Brick/Stone	Free Fibres	Chrysotile	Quantifiable	
14/4298	1	ZONE 2 U2	50mm-200mm	20	04/04/14	Soil-Silt/Brick/Stone	Free Fibres	Chrysotile	Trace	
14/4298	1	ZONE 2 U2	200mm-250mm	21	04/04/14	Soil-Silt/Brick/Stone	Free Fibres	Chrysotile	Quantifiable	
14/4298	1	ZONE 2 U2	600mm-650mm	22	04/04/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/4298	1	ZONE 2 U2	800mm-850mm	23	04/04/14	soil/stones	None	NAD	NAD	
14/4298	1	ZONE 2 U3	50mm-100mm	24	08/04/14	soil/stones/clay	None	NAD	NAD	
14/4298	1	ZONE 2 U3	200mm-350mm	28	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 2 U3	400mm-450mm	29	08/04/14	soil/clay	Free Fibres	Chrysotile	Trace	
14/4298	1	ZONE 2 U3	700mm-750mm	30	08/04/14	soil/stones	None	NAD	NAD	
14/4298	1	ZONE 2 U4	50mm-200mm	34	08/04/14	soil/stones	None	NAD	NAD	
14/4298	1	ZONE 2 U4	250mm-300mm	35	08/04/14	soil/clay/stones	None	NAD	NAD	
14/4298	1	ZONE 2 U4	360mm-390mm	36	08/04/14	soil/stones	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/4298	1	ZONE 3 U5	100mm-200mm	40	08/04/14	clay/stones	None	NAD	NAD	
14/4298	1	ZONE 3 U6	100mm-250mm	41	08/04/14	soil/stones	Free Fibres	Chrysotile	Trace	
14/4298	1	ZONE 3 U7	30mm-90mm	45	08/04/14	soil/stones	Free Fibres	Chrysotile	Trace	
14/4298	1	ZONE 3 U8	40mm-180mm	46	08/04/14	soil/stones	None	NAD	NAD	
14/4298	1	ZONE 1 U9	50mm-15mm	47	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U9	250mm-400mm	51	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U9	500mm-600mm	52	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U9	750mm-800mm	53	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U10	50mm-100mm	54	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U10	150mm-300mm	58	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U10	450mm-550mm	59	08/04/14	soil/clay	None	NAD	NAD	
14/4298	1	ZONE 1 U10	750mm-810mm	60	08/04/14	soil/clay	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/4298						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/4298

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Geosyntec Consulting
1st Floor
Gatehead Business Park
Delph New Road
Delph
OL3 5DE

4225

Attention :	Mark Harris
Date :	9th April, 2014
Your reference :	Hayes ACM Undercroft
Our reference :	Test Report 14/4298 Batch 2
Location :	Nestle Hayes
Date samples received :	3rd April, 2014
Status :	Final report
Issue :	1

Forty two samples were received for analysis on 3rd April, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Simon Gomery BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/4298	2	ZONE1 U11	50mm-200mm	75	08/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U11	250mm-400mm	79	08/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U11	500mm-650mm	83	08/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U11	800mm-890mm	87	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U12	50mm-150mm	91	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U12	200mm-350mm	95	09/04/14	soil/clay/stones	None	NAD	NAD	
14/4298	2	ZONE1 U12	500mm-650mm	99	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE1 U12	750mm-850mm	103	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U13	25mm-200mm	107	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U13	250mm-400mm	111	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U13	550mm-650mm	115	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE1 U14	25mm-200mm	119	08/04/14	soil/stones	None	NAD	NAD	
14/4298	2	ZONE1 U14	250mm-400mm	123	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE1 U14	500mm-650mm	127	09/04/14	Soil/Stone/Clay	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/4298	2	ZONE1 U14	700mm-790mm	131	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE2 U15	25mm-200mm	135	09/04/14	Soil/Clay/Stone	Free Fibres	Chrysotile	Quantifiable	
14/4298	2	ZONE2 U15	300mm-400mm	139	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE2 U16	50mm-200mm	143	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE2 U16	250mm-350mm	147	09/04/14	soil/clay/stones	None	NAD	NAD	
14/4298	2	ZONE2 U16	390mm-480mm	151	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE4 U17	50mm-150mm	155	09/04/14	soil/clay/stones	None	NAD	NAD	
14/4298	2	ZONE4 U17	200mm-280mm	159	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE4 U18	25mm-200mm	163	09/04/14	Soil/Stone	Free Fibres	Chrysotile	Quantifiable	
14/4298	2	ZONE4 U18	250mm-350mm	167	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE4 U18	380mm-470mm	171	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE4 U19	50mm-200mm	175	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE4 U19	300mm-450mm	179	09/04/14	soil/clay	None	NAD	NAD	
14/4298	2	ZONE4 U19	600mm-750mm	183	09/04/14	Soil/Clay/Stone	None	NAD	NAD	
14/4298	2	ZONE4 U19	900mm-1000mm	187	09/04/14	Soil/Stone/Clay	None	NAD	NAD	
14/4298	2	ZONE4 U20	0mm-100mm	191	09/04/14	Soil/Stone/Silt	None	NAD	NAD	
14/4298	2	ZONE 3 U21	20mm-100mm	195	09/04/14	Soil/Stone/Tar	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/4298						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/4298

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Geosyntec Consulting
1st Floor
Gatehead Business Park
Delph New Road
Delph
OL3 5DE

4225

Attention :	Mark Harris
Date :	16th April, 2014
Your reference :	Hayes ACM Undercroft
Our reference :	Test Report 14/4298 Batch 2 Schedule B
Location :	Nestle Hayes
Date samples received :	3rd April, 2014
Status :	Final report
Issue :	1

Forty two samples were received for analysis on 3rd April, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris
JE Job No.: 14/4298

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	132-135	160-163	192-195								LOD/LOR	Units	Method No.
Sample ID	U15	U18	U21										
Depth	25mm-200mm	25mm-200mm	20mm-100mm										
COC No / misc													
Containers	V J T B	V J T B	V J T B										
Sample Date	<>	<>	<>										
Sample Type	Soil	Soil	Soil										
Batch Number	2	2	2										
Date of Receipt	03/04/2014	03/04/2014	03/04/2014										
Arsenic #M	-	-	8.9								<0.5	mg/kg	TM30/PM15
Arsenic	17.2	-	-								<0.5	mg/kg	TM30/PM62
Cadmium #M	-	-	<0.1								<0.1	mg/kg	TM30/PM15
Cadmium	<0.1	-	-								<0.1	mg/kg	TM30/PM62
Chromium #M	-	-	11.7								<0.5	mg/kg	TM30/PM15
Chromium	28.1	-	-								<0.5	mg/kg	TM30/PM62
Copper #M	-	-	35								<1	mg/kg	TM30/PM15
Copper	23	-	-								<1	mg/kg	TM30/PM62
Lead #M	-	-	<5								<5	mg/kg	TM30/PM15
Lead	158	-	-								<5	mg/kg	TM30/PM62
Mercury #M	-	-	<0.1								<0.1	mg/kg	TM30/PM15
Mercury	0.9	-	-								<0.1	mg/kg	TM30/PM62
Nickel #M	-	-	18.9								<0.7	mg/kg	TM30/PM15
Nickel	25.3	-	-								<0.7	mg/kg	TM30/PM62
Selenium #M	-	-	<1								<1	mg/kg	TM30/PM15
Selenium	<1	-	-								<1	mg/kg	TM30/PM62
Sulphur	-	-	0.02								<0.01	%	TM30/PM15
Sulphur	0.02	-	-								<0.01	%	TM30/PM62
Total Sulphate #M	-	-	203								<50	mg/kg	TM50/PM15
Total Sulphate	334	-	-								<50	mg/kg	TM50/PM62
Water Soluble Boron #M	-	-	0.4								<0.1	mg/kg	TM74/PM32
Water Soluble Boron	2.4	-	-								<0.1	mg/kg	TM74/PM61
Zinc #M	-	-	21								<5	mg/kg	TM30/PM15
Zinc	114	-	-								<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
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JE Job No.: 14/4298

Report : Solid

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Please see attached notes for all abbreviations and acronyms

J E Sample No.	132-135	160-163	192-195								LOD/LOR	Units	Method No.
Sample ID	U15	U18	U21										
Depth	25mm-200mm	25mm-200mm	20mm-100mm										
COC No / misc													
Containers	V J T B	V J T B	V J T B										
Sample Date	<>	<>	<>										
Sample Type	Soil	Soil	Soil										
Batch Number	2	2	2										
Date of Receipt	03/04/2014	03/04/2014	03/04/2014										
PAH MS													
Naphthalene #M	0.10	-	<4.00								<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	-	<3.00								<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	-	<5.00								<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.11	-	<3.00								<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.11	-	<3.00								<0.03	mg/kg	TM4/PM8
Pyrene #	0.11	-	<3.00								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.10	-	<6.00								<0.06	mg/kg	TM4/PM8
Chrysene #M	0.09	-	<2.00								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.13	-	<7.00								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.08	-	<4.00								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
Coronene	<0.04	-	<4.00								<0.04	mg/kg	TM4/PM8
PAH 16 Total	0.8	-	<60.0								<0.6	mg/kg	TM4/PM8
PAH 17 Total	0.83	-	<64.00								<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.09	-	<5.00								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.04	-	<2.00								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	-	98								<0	%	TM4/PM8
Mineral Oil	<30	-	954								<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	-	<0.8								<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	-	<16								<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	-	<28								<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	-	641								<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	-	641								<19	mg/kg	TM5/TM36/PM12/PM16

Client Name: Geosyntec Consulting
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JE Job No.: 14/4298

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Please see attached notes for all abbreviations and acronyms

J E Sample No.	132-135	160-163	192-195								LOD/LOR	Units	Method No.
Sample ID	U15	U18	U21										
Depth	25mm-200mm	25mm-200mm	20mm-100mm										
COC No / misc													
Containers	V J T B	V J T B	V J T B										
Sample Date	<>	<>	<>										
Sample Type	Soil	Soil	Soil										
Batch Number	2	2	2										
Date of Receipt	03/04/2014	03/04/2014	03/04/2014										
TPH CWG													
Aromatics													
>C5-EC7	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	-	<0.8								<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	-	<16								<4	mg/kg	TM5/PM16
>EC16-EC21	<7	-	<28								<7	mg/kg	TM5/PM16
>EC21-EC35	<7	-	1232								<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	-	1232								<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	-	1873								<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	<5	-	<5								<5	ug/kg	TM31/PM12
Benzene #	<5	-	<5								<5	ug/kg	TM31/PM12
Toluene #	<5	-	<5								<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	-	<5								<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	-	<5								<5	ug/kg	TM31/PM12
o-Xylene #	<5	-	<5								<5	ug/kg	TM31/PM12
PCB 28 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 52 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 101 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 118 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 138 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 153 #	<5	-	<100								<5	ug/kg	TM17/PM8
PCB 180 #	<5	-	<100								<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	-	<700								<35	ug/kg	TM17/PM8
Phenol #M	<0.01	-	<0.01								<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	-	1.6								<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	-	<0.3								<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	-	<0.5								<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	-	<0.5								<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	0.79								<0.02	%	TM21/PM24
Sulphide	<10	-	<10								<10	mg/kg	TM106/PM45
Thiocyanate	<0.6	-	<0.6								<0.6	mg/kg	TM107/PM45
ANC at pH4	0.06	-	0.18								<0.03	mol/kg	TM77/PM0
ANC at pH7	<0.03	-	<0.03								<0.03	mol/kg	TM77/PM0

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J E Sample No.	132-135	160-163	192-195									
Sample ID	U15	U18	U21									
Depth	25mm-200mm	25mm-200mm	20mm-100mm									
COC No / misc												
Containers	V J T B	V J T B	V J T B									
Sample Date	<>	<>	<>									
Sample Type	Soil	Soil	Soil									
Batch Number	2	2	2									
Date of Receipt	03/04/2014	03/04/2014	03/04/2014									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Asbestos PCOM Quantification (Fibres)	0.001	<0.001	-								<0.001	mass %	TM65/PM42
Loss on Ignition #	-	-	2.0								<1.0	%	TM22/PM0
pH #M	8.03	-	8.56								<0.01	pH units	TM73/PM11

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	29.7
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	77.1
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/4298**			
Sample No	**134**			
Client Sample No	**U15**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**25mm-200mm**			
Sample Date	**<>**			
Batch No	**2**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	3	5	6
Loss on Ignition (%)	-	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	<30	500	-	-
PAH Sum of 17(mg/kg)	0.83	100	-	-
pH (pH Units)	8.03	-	>6	-
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.06	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**	**mg/kg**		
	mg/l	**mg/kg**			
Arsenic	0.0037	0.037	0.5	2	25
Barium	0.013	0.13	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	0.009	0.09	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.007	0.07	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.003	0.03	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.008	0.08	4	50	200
Chloride	10.4	104	800	15000	25000
Fluoride	0.8	8	10	150	500
Sulphate as SO4	14.21	142.1	1000	20000	50000
Total Dissolved Solids	167	1669	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	10	100	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	2.6
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	97.5
Particle Size <4mm =	>95%		

JEFL Job No	**14/4298**	**Landfill Waste Acceptance Criteria Limits**		
Sample No	**194**			
Client Sample No	**U21**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**20mm-100mm**			
Sample Date	**<>**			
Batch No	**2**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.79	3	5	6
Loss on Ignition (%)	2.0	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.700	1	-	-
Mineral Oil (mg/kg)	954	500	-	-
PAH Sum of 17(mg/kg)	<64.00	100	-	-
pH (pH Units)	8.56	-	>6	-
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.18	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	<0.003	<0.03	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	<0.002	<0.02	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	<0.003	<0.03	4	50	200
Chloride	0.4	4	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	0.49	4.9	1000	20000	50000
Total Dissolved Solids	<35	<350	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	6	60	500	800	1000

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/4298

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
TM17	PCB 7 Congeners and WHO 12 PCBs by GC-MS	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM20	TDS, TSS and TS - gravimetric	PM0	No preparation is required.			AR	Yes

TM21	TOC and TC by Combustion	PM24	Eltra preparation	Yes		AD	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM22	Loss on Ignition (LOI) - gravimetric	PM0	No preparation is required.	Yes		AD	Yes
TM26	Phenols by HPLC	PM0	No preparation is required.			AR	Yes
TM26	Phenols by HPLC	PM21	Methanol : NaOH extraction	Yes	Yes	AR	Yes
TM27	In-House method based on USEPA 9056. Analysis of samples using a Dionex Ion-Chromatograph instrument.	PM0	No preparation is required.			AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM17	CEN PR12457-2 10:1 1 batch leach	Yes		AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes

TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM0	No preparation is required.	Yes		AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM50	Total Sulphate by ICP-OES	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM50	Total Sulphate by ICP-OES	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM60	TOC/DOC by NDIR	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	Yes
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No

TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM77	ANC at pH4 and pH7 by Metrohm	PM0	No preparation is required.			AR	No
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils	Yes	Yes	AR	Yes
TM106	Sulphide by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM107	Thiocyanate by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	

Jones Environmental Laboratory

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Geosyntec Consulting
1st Floor
Gatehead Business Park
Delph New Road
Delph
OL3 5DE

4225

Attention :	Mark Harris
Date :	16th April, 2014
Your reference :	Hayes ACM Undercroft
Our reference :	Test Report 14/4298 Batch 1 Schedule B
Location :	Nestle Hayes
Date samples received :	28th March, 2014
Status :	Final report
Issue :	1

Thirty six samples were received for analysis on 28th March, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris
JE Job No.: 14/4298

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	11	12-15	16	21	31-34	37-40					LOD/LOR	Units	Method No.
Sample ID	U1	U1	U1	U2	U4	U5							
Depth	50mm-60mm	250mm-400mm	400mm-500mm	200mm-250mm	50mm-200mm	100mm-200mm							
COC No / misc													
Containers	B	B V J T	B	B	V J T B	V J T B							
Sample Date	<>	<>	<>	<>	<>	<>							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014							
Arsenic #M	-	-	-	-	9.8	11.0					<0.5	mg/kg	TM30/PM15
Arsenic	-	10.8	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cadmium #M	-	-	-	-	<0.1	<0.1					<0.1	mg/kg	TM30/PM15
Cadmium	-	<0.1	-	-	-	-					<0.1	mg/kg	TM30/PM62
Chromium #M	-	-	-	-	24.5	14.0					<0.5	mg/kg	TM30/PM15
Chromium	-	24.5	-	-	-	-					<0.5	mg/kg	TM30/PM62
Copper #M	-	-	-	-	20	26					<1	mg/kg	TM30/PM15
Copper	-	15	-	-	-	-					<1	mg/kg	TM30/PM62
Lead #M	-	-	-	-	13	52					<5	mg/kg	TM30/PM15
Lead	-	83	-	-	-	-					<5	mg/kg	TM30/PM62
Mercury #M	-	-	-	-	<0.1	0.2					<0.1	mg/kg	TM30/PM15
Mercury	-	1.7	-	-	-	-					<0.1	mg/kg	TM30/PM62
Nickel #M	-	-	-	-	19.1	11.8					<0.7	mg/kg	TM30/PM15
Nickel	-	19.6	-	-	-	-					<0.7	mg/kg	TM30/PM62
Selenium #M	-	-	-	-	<1	<1					<1	mg/kg	TM30/PM15
Selenium	-	<1	-	-	-	-					<1	mg/kg	TM30/PM62
Sulphur	-	-	-	-	<0.01	0.20					<0.01	%	TM30/PM15
Sulphur	-	0.07	-	-	-	-					<0.01	%	TM30/PM62
Total Sulphate #M	-	-	-	-	191	5590					<50	mg/kg	TM50/PM15
Total Sulphate	-	756	-	-	-	-					<50	mg/kg	TM50/PM62
Water Soluble Boron #M	-	-	-	-	0.6	2.9					<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	1.0	-	-	-	-					<0.1	mg/kg	TM74/PM61
Zinc #M	-	-	-	-	41	19					<5	mg/kg	TM30/PM15
Zinc	-	74	-	-	-	-					<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris
JE Job No.: 14/4298

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	11	12-15	16	21	31-34	37-40					LOD/LOR	Units	Method No.
Sample ID	U1	U1	U1	U2	U4	U5							
Depth	50mm-60mm	250mm-400mm	400mm-500mm	200mm-250mm	50mm-200mm	100mm-200mm							
COC No / misc													
Containers	B	B V J T	B	B	V J T B	V J T B							
Sample Date	<>	<>	<>	<>	<>	<>							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014							
PAH MS													
Naphthalene #M	-	<0.04	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	<0.03	-	-	<0.03	<0.03					<0.03	mg/kg	TM4/PM8
Acenaphthene #M	-	<0.05	-	-	<0.05	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene #M	-	<0.04	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene #M	-	0.20	-	-	<0.03	<0.03					<0.03	mg/kg	TM4/PM8
Anthracene #	-	0.06	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Fluoranthene #M	-	0.42	-	-	<0.03	<0.03					<0.03	mg/kg	TM4/PM8
Pyrene #	-	0.36	-	-	<0.03	<0.03					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	0.19	-	-	<0.06	<0.06					<0.06	mg/kg	TM4/PM8
Chrysene #M	-	0.25	-	-	<0.02	<0.02					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	-	0.41	-	-	<0.07	<0.07					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	0.19	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	-	0.15	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	<0.04	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	0.14	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Coronene	-	<0.04	-	-	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	2.4	-	-	<0.6	<0.6					<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	2.37	-	-	<0.64	<0.64					<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	0.30	-	-	<0.05	<0.05					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	0.11	-	-	<0.02	<0.02					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	98	-	-	105	109					<0	%	TM4/PM8
Mineral Oil	-	139	-	-	<30	<30					<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	<0.2	-	-	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	<4	-	-	<4	<4					<4	mg/kg	TM5/PM16
>C16-C21 #M	-	8	-	-	<7	<7					<7	mg/kg	TM5/PM16
>C21-C35 #M	-	122	-	-	<7	<7					<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	130	-	-	<19	<19					<19	mg/kg	TM5/TM36/PM12/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris
JE Job No.: 14/4298

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	11	12-15	16	21	31-34	37-40					LOD/LOR	Units	Method No.
Sample ID	U1	U1	U1	U2	U4	U5							
Depth	50mm-60mm	250mm-400mm	400mm-500mm	200mm-250mm	50mm-200mm	100mm-200mm							
COC No / misc													
Containers	B	B V J T	B	B	V J T B	V J T B							
Sample Date	<>	<>	<>	<>	<>	<>							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014							
TPH CWG													
Aromatics													
>C5-EC7	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	<0.1	-	-	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	<0.2	-	-	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	<4	-	-	<4	<4					<4	mg/kg	TM5/PM16
>EC16-EC21	-	<7	-	-	<7	<7					<7	mg/kg	TM5/PM16
>EC21-EC35	-	145	-	-	<7	<7					<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	145	-	-	<19	<19					<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	275	-	-	<38	<38					<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
Benzene #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
Toluene #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
Ethylbenzene #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
m/p-Xylene #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
o-Xylene #	-	<5	-	-	<5	<5					<5	ug/kg	TM31/PM12
PCB 28 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 52 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 118 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	-	-	<5	<5					<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	-	-	<35	<35					<35	ug/kg	TM17/PM8
Phenol #M	-	<0.01	-	-	<0.01	<0.01					<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	-	-	-	13.9	16.3					<0.1	%	PM4/PM0
Hexavalent Chromium	-	<0.3	-	-	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Free Cyanide	-	<0.5	-	-	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	<0.5	-	-	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	-	-	0.14	0.14					<0.02	%	TM21/PM24
Sulphide	-	<10	-	-	<10	<10					<10	mg/kg	TM106/PM45
Thiocyanate	-	<0.6	-	-	<0.6	<0.6					<0.6	mg/kg	TM107/PM45
ANC at pH4	-	0.34	-	-	0.52	1.03					<0.03	mol/kg	TM77/PM0
ANC at pH7	-	<0.03	-	-	0.06	0.21					<0.03	mol/kg	TM77/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: Hayes ACM Undercroft
Location: Nestle Hayes
Contact: Mark Harris
JE Job No.: 14/4298

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	11	12-15	16	21	31-34	37-40					LOD/LOR	Units	Method No.
Sample ID	U1	U1	U1	U2	U4	U5							
Depth	50mm-60mm	250mm-400mm	400mm-500mm	200mm-250mm	50mm-200mm	100mm-200mm							
COC No / misc													
Containers	B	B V J T	B	B	V J T B	V J T B							
Sample Date	<>	<>	<>	<>	<>	<>							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014	28/03/2014							
Asbestos PCOM Quantification (Fibres)	<0.001	-	<0.001	<0.001	-	-					<0.001	mass %	TM65/PM42
Loss on Ignition #	-	-	-	-	2.3	1.5					<1.0	%	TM22/PM0
pH #M	-	8.18	-	-	8.43	8.41					<0.01	pH units	TM73/PM11

Please see attached notes for all abbreviations and acronyms

CEN 10:1 LEACHATE RESULTS PrEN 12547-2

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	14.1
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	87.7
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/4298**			
Sample No	**15**			
Client Sample No	**U1**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**250mm-400mm**			
Sample Date	**<>**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	3	5	6
Loss on Ignition (%)	-	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	139	500	-	-
PAH Sum of 17(mg/kg)	2.37	100	-	-
pH (pH Units)	8.18	-	>6	-
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.34	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.006	0.06	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.009	0.09	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	<0.003	<0.03	4	50	200
Chloride	1.9	19	800	15000	25000
Fluoride	0.7	7	10	150	500
Sulphate as SO4	45.58	455.6	1000	20000	50000
Total Dissolved Solids	164	1639	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	10	100	500	800	1000

All solid results are expressed on a dry weight basis unless stated otherwise.

CEN 10:1 LEACHATE RESULTS PrEN 12547-2

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	24.3
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	80.5
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/4298**			
Sample No	**33**			
Client Sample No	**U4**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**50mm-200mm**			
Sample Date	**<>**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.14	3	5	6
Loss on Ignition (%)	2.3	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	<30	500	-	-
PAH Sum of 17(mg/kg)	<0.64	100	-	-
pH (pH Units)	8.43	-	>6	-
ANC to pH 7 (mol/kg)	0.06	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.52	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.031	0.31	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	0.0017	0.017	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.004	0.04	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	0.007	0.07	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.007	0.07	4	50	200
Chloride	7.1	71	800	15000	25000
Fluoride	0.8	8	10	150	500
Sulphate as SO4	24.04	240.4	1000	20000	50000
Total Dissolved Solids	122	1220	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	14	140	500	800	1000

All solid results are expressed on a dry weight basis unless stated otherwise.

CEN 10:1 LEACHATE RESULTS PrEN 12547-2

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	17.6
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	85.1
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/4298**			
Sample No	**39**			
Client Sample No	**U5**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**100mm-200mm**			
Sample Date	**<>**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.14	3	5	6
Loss on Ignition (%)	1.5	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	<30	500	-	-
PAH Sum of 17(mg/kg)	<0.64	100	-	-
pH (pH Units)	8.41	-	>6	-
ANC to pH 7 (mol/kg)	0.21	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	1.03	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	<0.0025	<0.025	0.5	2	25
Barium	0.015	0.15	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	0.0017	0.017	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.016	0.16	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	<0.003	<0.03	4	50	200
Chloride	30.2	302	800	15000	25000
Fluoride	0.5	5	10	150	500
Sulphate as SO4	139.26	1392.4	1000	20000	50000
Total Dissolved Solids	543	5429	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	<2	<20	500	800	1000

All solid results are expressed on a dry weight basis unless stated otherwise.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/4298

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance.
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
TM17	PCB 7 Congeners and WHO 12 PCBs by GC-MS	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM20	TDS, TSS and TS - gravimetric	PM0	No preparation is required.			AR	Yes

TM21	TOC and TC by Combustion	PM24	Eltra preparation	Yes		AD	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM22	Loss on Ignition (LOI) - gravimetric	PM0	No preparation is required.	Yes		AD	Yes
TM26	Phenols by HPLC	PM0	No preparation is required.			AR	Yes
TM26	Phenols by HPLC	PM21	Methanol : NaOH extraction	Yes	Yes	AR	Yes
TM27	In-House method based on USEPA 9056. Analysis of samples using a Dionex Ion-Chromatograph instrument.	PM0	No preparation is required.			AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM17	CEN PR12457-2 10:1 1 batch leach	Yes		AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes

TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM0	No preparation is required.	Yes		AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM50	Total Sulphate by ICP-OES	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM50	Total Sulphate by ICP-OES	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM60	TOC/DOC by NDIR	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	Yes
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No

TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes

JE Job No: 14/4298

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM77	ANC at pH4 and pH7 by Metrohm	PM0	No preparation is required.			AR	No
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils	Yes	Yes	AR	Yes
TM106	Sulphide by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM107	Thiocyanate by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	

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For the attention of Given Sigauke

REPORT OF ANALYTICAL EXAMINATION FOR ASBESTOS IN BULK SAMPLE(S)

Job number	J039473
Number of samples	32
Date sampled / received	31 Mar 2014
Date analysed	Kay Michie, 1 Apr 2014
Analyst	Kay Michie
Sampled By	(S) Client Supplied Sample
Site address	Nestle, North Hyde Gardens, Hayes, Middlesex, UB3 4RF

METHOD OF ANALYSIS

The sample(s) were analysed using Polarised Light Microscopy and McCrone Dispersion Staining by the method given in HSG248, Appendix 2. This is an accredited test method under ISO 17025. We disclaim responsibility for the accuracy of information provided by and sampling undertaken by the client. "Trace" is reported as defined in HSG248 where applicable. All opinions and descriptions ie. non asbestos fibre types and material types in this report fall outside the scope of our accreditation.

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS007938	MC/200314/01	Main building	Below ground	Undercroft	Floor beneath old Telecommunications Room	Paper coated fibreboard debris	Asbestos Textiles/Paper	Chrysotile
BS007939	MC/200314/02	Main building	Below ground	Undercroft	Floor beneath old Telecommunications Room	Paper coated fibreboard debris	Asbestos Textiles/Paper	Chrysotile
BS007940	MC/200314/03	Main building	Below ground	Undercroft	Floor to left of columns B1 + B2	Hessian textile	Not applicable	No Asbestos Detected

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS007941	MC/200314/04	Main building	Below ground	Undercroft	Floor to left of column C1	Woven cable sheathing	Not applicable	No Asbestos Detected
BS007942	MC/200314/05	Main building	Below ground	Undercroft	Floor to left of column C1	Woven textile rope debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007943	MC/200314/06	Main building	Below ground	Undercroft	Floor between columns A1 A2 B1 + B2	Dust/debris	Not applicable	No Asbestos Detected
BS007944	MC/200314/07	Main building	Below ground	Undercroft	Floor between columns C1 C2 D1 + D2	Dust/debris	Not applicable	No Asbestos Detected
BS007945	MC/200314/08	Main building	Below ground	Undercroft	Floor between columns F2 + F3	Woven textile rope debris	Asbestos Insulation/Coating	Chrysotile + Crocidolite
BS007946	MC/200314/09	Main building	Below ground	Undercroft	Floor between columns F4 + F5	Dust/debris	Not applicable	No Asbestos Detected
BS007947	MC/200314/10	Main building	Below ground	Undercroft	Floor between columns F1 + F2	Woven textile rope sheathing	Not applicable	No Asbestos Detected
BS007948	MC/200314/11	Main building	Below ground	Undercroft	Floor between columns I1 + I2	Dust/debris	Not applicable	No Asbestos Detected
BS007949	MC/200314/12	Main building	Below ground	Undercroft	Pipework to garden elevation	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007950	MC/200314/13	Main building	Below ground	Undercroft	Pipework to garden elevation	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007951	MC/200314/14	Main building	Below ground	Undercroft	Floor between columns I0 + H0	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007952	MC/200314/15	Main building	Below ground	Undercroft	Pipework to garden elevation	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS007953	MC/200314/16	Main building	Below ground	Undercroft	Pipework to garden elevation	Pipe insulation residue	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007954	MC/200314/17	Main building	Below ground	Undercroft	Floor between columns I2 + I3	Dust/debris	Not applicable	No Asbestos Detected
BS007955	MC/200314/18	Main building	Below ground	Undercroft	Floor of concrete slab between columns I2 + I3	Cement debris	Asbestos Cement	Chrysotile
BS007956	MC/200314/19	Main building	Below ground	Undercroft	Floor to garden elevation	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007957	MC/200314/20	Main building	Below ground	Undercroft	Floor between columns J2 J3 K2 + K3	Dust/debris	Not applicable	No Asbestos Detected
BS007958	MC/200314/21	Main building	Below ground	Undercroft	Floor btween columns I4 I5 J4 + J5	Dust/debris	Not applicable	No Asbestos Detected
BS007959	MC/200314/22	Main building	Below ground	Undercroft	Horizontal pipe beside column C10	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007960	MC/200314/23	Main building	Below ground	Undercroft	Floor beside column C10	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007961	MC/200314/24	Main building	Below ground	Undercroft	Pipework between columns 12C + 13C	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007962	MC/200314/25	Main building	Below ground	Undercroft	Floor between columns 12C + 13C	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007963	MC/200314/26	Main building	Below ground	Undercroft	Pipework between columns 10C + 10D	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS007964	MC/200314/27	Main building	Below ground	Undercroft	Floor between columns 10C + 10D	Pipe insulation debris	Asbestos Insulation/Coating	Amo + Chrys + Croc

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS007965	MC/200314/28	Main building	Below ground	Undercroft	Floor between columns B9 C9 B10 + C10	Dust debris	Not applicable	No Asbestos Detected
BS007966	MC/200314/29	Main building	Below ground	Undercroft	Floor between columns C8 D8 C9 + D9	Dust/debris	Not applicable	No Asbestos Detected
BS007967	MC/200314/30	Main building	Below ground	Undercroft	Floor between columns G10 H10 G11 + H11	Dust/debris	Not applicable	No Asbestos Detected
BS007968	MC/200314/31	Main building	Below ground	Undercroft	Floor between columns F8 G8 F9 + G9	Dust/debris	Not applicable	No Asbestos Detected
BS007969	MC/200314/32	Main building	Below ground	Undercroft	Floor between columns D10 + D11	Woven textile rope debris	Not applicable	No Asbestos Detected

Authorised signatures

Kay Michie

Samantha Banks

UKAS TESTING 1752

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For the attention of Given Sigauke

REPORT OF ANALYTICAL EXAMINATION FOR ASBESTOS IN BULK SAMPLE(S)

Job number	J040345
Number of samples	27
Date sampled / received	8 Apr 2014
Date analysed	Kay Michie, 10 Apr 2014
Analyst	Kay Michie
Sampled By	(S) Client Supplied Sample
Site address	Nestle UK, North Hyde Gardens, Hayes, London, UB3 4RF

METHOD OF ANALYSIS

The sample(s) were analysed using Polarised Light Microscopy and McCrone Dispersion Staining by the method given in HSG248, Appendix 2. This is an accredited test method under ISO 17025. We disclaim responsibility for the accuracy of information provided by and sampling undertaken by the client. "Trace" is reported as defined in HSG248 where applicable. All opinions and descriptions ie. non asbestos fibre types and material types in this report fall outside the scope of our accreditation.

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008655	MC/200314/33	Main Building	Below ground	Under croft	Floor beneath hatch 5a	Dust and debris	Dust/Debris	Amosite
BS008656	MC/200314/34	Main Building	Below ground	Under croft	Floor to right of column H18	Dust and debris	Dust/Debris	Amosite
BS008657	MC/200314/35	Main Building	Below ground	Under croft	Floor to left of column H18	Dust and debris	Dust/Debris	Amosite

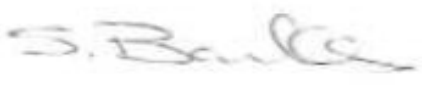
Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008658	MC/200314/36	Main Building	Below ground	Under croft	Floor between columns h18 and i18	Dust and debris	Dust/Debris	Amosite
BS008659	MC/200314/37	Main Building	Below ground	Under croft	Floor between columns h18 and i18	Dust and debris	Dust/Debris	Chrysotile + Amosite
BS008660	MC/200314/38	Main Building	Below ground	Under croft	Floor between columns h18 and i18	Dust and debris	Dust/Debris	Chrysotile + Amosite
BS008661	MC/200314/39	Main Building	Below ground	Under croft	Floor between columns h19 and i19	Dust and debris	Dust/Debris	Amosite
BS008662	MC/200314/40	Main Building	Below ground	Under croft	Floor between columns h19 and i19	Dust and debris	Dust/Debris	Amosite
BS008663	MC/200314/41	Main Building	Below ground	Under croft	Horizontal pipe beneath hatch 5a	Pipe insulation	Asbestos Insulation/Coating	Chrysotile + Amosite
BS008664	MC/200314/42	Main Building	Below ground	Under croft	Horizontal pipe to end wall beneath hatch 5a	Pipe insulation	Asbestos Insulation/Coating	Chrysotile + Amosite
BS008665	MC/200314/43	Main Building	Below ground	Under croft	Floor beneath pipe in hatch 5	Pipe insulation debris	Asbestos Insulation/Coating	Chrysotile + Amosite
BS008666	MC/200314/44	Main Building	Below ground	Under croft	Floor beneath pipe in hatch 5	Pipe insulation debris	Asbestos Insulation/Coating	Chrysotile + Amosite
BS008667	MC/200314/45	Main Building	Below ground	Under croft	Horizontal pipe between columns h19 and h20	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS008668	MC/200314/46	Main Building	Below ground	Under croft	Horizontal pipe between columns h19 and h20	Pipe insulation	Asbestos Insulation/Coating	Amo + Chrys + Croc
BS008669	MC/200314/47	Main Building	Below ground	Under croft	Floor between columns h18 and h19	Dust and debris	Dust/Debris	Chrysotile + Amosite

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008670	MC/200314/48	Main Building	Below ground	Under croft	Floor between columns h19 and h20	Dust and debris	Dust/Debris	Chrysotile
BS008671	MC/200314/49	Main Building	Below ground	Under croft	Floor between columns h18 and h19	Dust and debris	Dust/Debris	Amosite
BS008672	MC/200314/50	Main Building	Below ground	Under croft	Floor between columns h19 and h20	Dust and debris	Dust/Debris	Amo + Chrys + Croc
BS008673	MC/200314/51	Main Building	Below ground	Under croft	Floor between columns h18 and i18	Dust and debris	Not applicable	No Asbestos Detected
BS008674	MC/200314/52	Main Building	Below ground	Under croft	Floor between columns i18 and i19	Dust and debris	Not applicable	No Asbestos Detected
BS008675	MC/200314/53	Main Building	Below ground	Under croft	Floor between columns i19 and i20	Dust and debris	Not applicable	No Asbestos Detected
BS008676	MC/200314/54	Main Building	Below ground	Under croft	Floor between columns h20 and i20	Dust and debris	Not applicable	No Asbestos Detected
BS008677	MC/200314/55	Main Building	Below ground	Under croft	Floor between columns h17-h17-i16 and i17	Dust and debris	Not applicable	No Asbestos Detected
BS008678	MC/200314/56	Main Building	Below ground	Under croft	Floor between columns h15-h16-i15 and i16	Dust and debris	Not applicable	No Asbestos Detected
BS008679	MC/200314/57	Main Building	Below ground	Under croft	Floor between columns h14-h15-i14 and i15	Dust and debris	Not applicable	No Asbestos Detected
BS008680	MC/200314/58	Main Building	Below ground	Under croft	Floor between columns i14-i15-j14 and j15	Dust and debris	Not applicable	No Asbestos Detected
BS008681	MC/200314/59	Main Building	Below ground	Under croft	Floor between columns h18 and i18	Dust and debris	Asbestos Insulation/Coating	Amo + Chrys + Croc

Authorised signatures

Kay Michie

Samantha Banks



UKAS TESTING 1752

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For the attention of Given Sigauke

REPORT OF ANALYTICAL EXAMINATION FOR ASBESTOS IN BULK SAMPLE(S)

Job number	J040911
Number of samples	50
Date sampled / received	14 Apr 2014
Date analysed	Gemma Drury Kay Michie, 16 Apr 2014
Analyst	Gemma Drury Kay Michie
Sampled By	(S) Client Supplied Sample
Site address	Nestle UK, North Hyde Gardens, Hayes, London,

METHOD OF ANALYSIS

The sample(s) were analysed using Polarised Light Microscopy and McCrone Dispersion Staining by the method given in HSG248, Appendix 2. This is an accredited test method under ISO 17025. We disclaim responsibility for the accuracy of information provided by and sampling undertaken by the client. "Trace" is reported as defined in HSG248 where applicable. All opinions and descriptions ie. non asbestos fibre types and material types in this report fall outside the scope of our accreditation.

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008953	MC/200314/60	Main Building	Below Ground	Under Croft	Floor between columns H34 + H24	Dust/Debris	Not applicable	No Asbestos Detected
BS008954	MC/200314/61	Main Building	Below Ground	Under Croft	Floor between columns H21 + H22	Dust/Debris	Not applicable	No Asbestos Detected
BS008955	MC/200314/62	Main Building	Below Ground	Under Croft	Floor between columns H20 H21 I20 + I21	Dust/Debris	Not applicable	No Asbestos Detected

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008956	MC/200314/63	Main Building	Below Ground	Under Croft	Floor between columns H20 H21 I20 + I21	Dust/Debris	Not applicable	No Asbestos Detected
BS008957	MC/200314/64	Main Building	Below Ground	Under Croft	Floor between columns I19 + J19	Dust/Debris	Not applicable	No Asbestos Detected
BS008958	MC/200314/65	Main Building	Below Ground	Under Croft	Floor between columns I18 + J18	Dust/Debris	Not applicable	No Asbestos Detected
BS008959	MC/200314/66	Main Building	Below Ground	Under Croft	Floor between columns J19 + J20	Dust/Debris	Not applicable	No Asbestos Detected
BS008960	MC/200314/67	Main Building	Below Ground	Under Croft	Floor between columns J24 + J25	Dust/Debris	Not applicable	No Asbestos Detected
BS008961	MC/200314/68	Main Building	Below Ground	Under Croft	Floor between columns K17 + K18	Dust/Debris	Not applicable	No Asbestos Detected
BS008962	MC/200314/69	Main Building	Below Ground	Under Croft	Floor between columns J23 J24 K23 + K24	Dust/Debris	Not applicable	No Asbestos Detected
BS008963	MC/200314/70	Main Building	Below Ground	Under Croft	Floor between columns K18 K19 L18 + L19	Dust/Debris	Not applicable	No Asbestos Detected
BS008964	MC/200314/71	Main Building	Below Ground	Under Croft	Floor between columns K23 K24 L23 + L24	Dust/Debris	Not applicable	No Asbestos Detected
BS008965	MC/200314/72	Main Building	Below Ground	Under Croft	Floor between columns K20 K21 L20 + L21	Dust/Debris	Not applicable	No Asbestos Detected
BS008966	MC/200314/73	Main Building	Below Ground	Under Croft	Floor between columns K24 K25 L24 + L25	Dust/Debris	Not applicable	No Asbestos Detected
BS008967	MC/200314/74	Main Building	Below Ground	Under Croft	Floor between columns J26 J27 K26 + K27	Dust/Debris	Not applicable	No Asbestos Detected

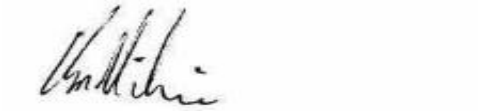
Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008968	MC/200314/75	Main Building	Below Ground	Under Croft	Floor between columns I25 I26 J25 + J26	Dust/Debris	Not applicable	No Asbestos Detected
BS008969	MC/200314/76	Main Building	Below Ground	Service Trench A	Surface of pipe to floor	Pipe insulation residue	Not applicable	No Asbestos Detected
BS008970	MC/200314/77	Main Building	Below Ground	Service Trench A	Surface of pipe to floor	Pipe insulation residue	Not applicable	No Asbestos Detected
BS008971	MC/200314/78	Main Building	Below Ground	Service Trench A	Surface of pipe to floor	Pipe insulation residue	Not applicable	No Asbestos Detected
BS008972	MC/200314/79	Main Building	Below Ground	Service Trench B	Pipe to ceiling	Woven textile sheathing	Not applicable	No Asbestos Detected
BS008973	MC/200314/80	Main Building	Below Ground	Service Trench B	Floor beneath Hatch B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008974	MC/200314/81	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008975	MC/200314/82	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008976	MC/200314/83	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008977	MC/200314/84	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008978	MC/200314/85	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
BS008979	MC/200314/86	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008980	MC/200314/87	Main Building	Below Ground	Service Trench B	Floor to Trench B	Insulation debris	Insulation	Amo + Chrys + Croc
Beige loose insulation. Damp								
BS008981	MC/200314/88	Main Building	Below Ground	Service Trench C	Pipe to right hand wall towards stores lobby	Pipe insulation	Insulation	Amo + Chrys + Croc
BS008982	MC/200314/89	Main Building	Below Ground	Service Trench C	Upper small bore pipe	Pipe insulation	Insulation	Amo + Chrys + Croc
BS008983	MC/200314/90	Main Building	Below Ground	Service Trench C	Lower large bore pipe	Pipe insulation	Insulation	Amo + Chrys + Croc
BS008984	MC/200314/91	Main Building	Below Ground	Service Trench C	Small bore pipe to right hand wall	Pipe insulation	Insulation	Crocidolite
BS008985	MC/200314/92	Main Building	Below Ground	Service Trench C	Flange to upper small bore pipe	Gasket	Gaskets	Chrysotile
BS008986	MC/200314/93	Main Building	Below Ground	Service Trench D	Ceiling pipe 4M from Hatch D	Woven textile ducting	Not applicable	No Asbestos Detected
BS008987	MC/200314/94	Main Building	Below Ground	Service Trench D	Floor to trench. Start of right hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008988	MC/200314/95	Main Building	Below Ground	Service Trench D	Floor to trench. End of right hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008989	MC/200314/96	Main Building	Below Ground	Service Trench D	Floor to trench. Start of left hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008990	MC/200314/97	Main Building	Below Ground	Service Trench D	Floor to trench. Centre of left hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008991	MC/200314/98	Main Building	Below Ground	Service Trench D	Floor to trench. End of left hand duct	Dust/Debris	Not applicable	No Asbestos Detected

Sample ref. no.	Customer ref. no.	Building	Floor level	Room	Position	Item	Material	Conclusion
BS008992	MC/200314/99	Main Building	Below Ground	Service Trench E	Floor beneath Hatch E	Dust/Debris	Not applicable	No Asbestos Detected
BS008993	MC/200314/100	Main Building	Below Ground	Service Trench E	Floor 4M from Hatch E	Dust/Debris	Not applicable	No Asbestos Detected
BS008994	MC/200314/101	Main Building	Below Ground	Service Trench E	Floor to start of right hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008995	MC/200314/102	Main Building	Below Ground	Service Trench E	Floor to centre of right hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008996	MC/200314/103	Main Building	Below Ground	Service Trench E	Floor to centre of left hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008997	MC/200314/104	Main Building	Below Ground	Service Trench E	Floor to end of left hand duct	Dust/Debris	Not applicable	No Asbestos Detected
BS008998	MC/200314/105	Main Building	Below Ground	Service Trench E Towards Canal	Floor 5metres from Hatch E	Dust/Debris	Not applicable	No Asbestos Detected
BS008999	MC/200314/106	Main Building	Below Ground	Service Trench E Towards Canal	Floor below water. 15metres from Hatch E	Dust/Debris	Not applicable	No Asbestos Detected
BS009000	MC/200314/107	Main Building	Below Ground	Service Trench E Towards Canal	Floor below water. 35metres from Hatch E	Dust/Debris	Not applicable	No Asbestos Detected
BS009001	MC/200314/108	Main Building	Below Ground	Service Trench F (right hand duct)	Floor 10metres from Main Trench	Dust/Debris	Not applicable	No Asbestos Detected
BS009002	MC/200314/109	Main Building	Below Ground	Service Trench F	Floor 45metres from Hatch F below water	Dust/Debris	Not applicable	No Asbestos Detected

Authorised signatures

Kay Michie



Kay Michie

Jones Environmental Laboratory

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Geosyntec Consulting
30-32 Botanic Road
Glasnevin
Dublin
Ireland

4225

Attention :	Andrew Morgan
Date :	21st July, 2014
Your reference :	GCU0124025
Our reference :	Test Report 14/7722 Batch 1 Schedule A
Location :	Nestle, Hayes
Date samples received :	4th July, 2014
Status :	Final report
Issue :	1

Thirty five samples were received for analysis on 4th July, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Kim Mills
Project Co-ordinator

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	2	4	5	7	9	10	12	14	16	17	LOD/LOR	Units	Method No.
Sample ID	WS101	WS101	WS101	WS101	WS101	WS105	WS105	WS105	WS105	WS105			
Depth	0.2-0.3	0.5-0.6	0.7-0.75	1.1-1.15	1.9-2.0	0.4-0.5	0.65-0.7	0.95-1.0	0.7-0.75	1.6-1.7			
COC No / misc													
Containers	B	B	B	B	B	B	B	B	B	B			
Sample Date	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
Arsenic #	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Sulphur	-	-	-	-	-	-	-	-	-	-	<0.01	%	TM30/PM15
Sulphur	-	-	-	-	-	-	-	-	-	-	<0.01	%	TM30/PM62
Total Sulphate #	-	-	-	-	-	-	-	-	-	-	<50	mg/kg	TM50/PM15
Total Sulphate	-	-	-	-	-	-	-	-	-	-	<50	mg/kg	TM50/PM62
Water Soluble Boron #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	2	4	5	7	9	10	12	14	16	17	LOD/LOR	Units	Method No.
Sample ID	WS101	WS101	WS101	WS101	WS101	WS105	WS105	WS105	WS105	WS105			
Depth	0.2-0.3	0.5-0.6	0.7-0.75	1.1-1.15	1.9-2.0	0.4-0.5	0.65-0.7	0.95-1.0	0.7-0.75	1.6-1.7			
COC No / misc													
Containers	B	B	B	B	B	B	B	B	B	B			
Sample Date	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
PAH MS													
Naphthalene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #	-	-	-	-	-	-	-	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #	-	-	-	-	-	-	-	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #	-	-	-	-	-	-	-	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene #	-	-	-	-	-	-	-	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	-	-	-	-	-	-	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene #	-	-	-	-	-	-	-	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	-	-	-	-	-	-	-	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
Coronene	-	-	-	-	-	-	-	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	-	-	-	-	-	-	-	-	<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	-	-	-	-	-	-	-	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	-	-	-	-	-	-	-	-	-	<0	%	TM4/PM8
Mineral Oil (C10-C40)	-	-	-	-	-	-	-	-	-	-	<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #	-	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #	-	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	2	4	5	7	9	10	12	14	16	17	LOD/LOR	Units	Method No.
Sample ID	WS101	WS101	WS101	WS101	WS101	WS105	WS105	WS105	WS105	WS105			
Depth	0.2-0.3	0.5-0.6	0.7-0.75	1.1-1.15	1.9-2.0	0.4-0.5	0.65-0.7	0.95-1.0	0.7-0.75	1.6-1.7			
COC No / misc													
Containers	B	B	B	B	B	B	B	B	B	B			
Sample Date	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
TPH CWG													
Aromatics													
>C5-EC7	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	-	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	-	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35	-	-	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	-	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	-	-	-	-	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Benzene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Toluene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
Ethylbenzene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
m/p-Xylene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
o-Xylene #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM31/PM12
PCB 28 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	-	-	-	-	<35	ug/kg	TM17/PM8
Phenol #	-	-	-	-	-	-	-	-	-	-	<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium	-	-	-	-	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM76
Free Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM24
Sulphide	-	-	-	-	-	-	-	-	-	-	<10	mg/kg	TM106/PM45
Thiocyanate	-	-	-	-	-	-	-	-	-	-	<0.6	mg/kg	TM107/PM45
ANC at pH4	-	-	-	-	-	-	-	-	-	-	<0.03	mol/kg	TM77/PM0
ANC at pH7	-	-	-	-	-	-	-	-	-	-	<0.03	mol/kg	TM77/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	2	4	5	7	9	10	12	14	16	17	LOD/LOR	Units	Method No.
Sample ID	WS101	WS101	WS101	WS101	WS101	WS105	WS105	WS105	WS105	WS105			
Depth	0.2-0.3	0.5-0.6	0.7-0.75	1.1-1.15	1.9-2.0	0.4-0.5	0.65-0.7	0.95-1.0	0.7-0.75	1.6-1.7			
COC No / misc													
Containers	B	B	B	B	B	B	B	B	B	B			
Sample Date	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014	02/07/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
Loss on Ignition #	-	-	-	-	-	-	-	-	-	-	<1.0	%	TM22/PM0
pH #	-	-	-	-	-	-	-	-	-	-	<0.01	pH units	TM73/PM11
Mass of Dry Sample	45.7	45.9	50.1	47.3	52.4	46.7	51.5	53.1	49.5	53.4	<0.1	g	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	19	21-24	25	27	28	29-32	33-36	39	40	41	LOD/LOR	Units	Method No.
Sample ID	WS102	WS102	WS102	WS104	WS104	WS103	WS103	U23	U23	U23			
Depth	0.25	0.55	0.77	0.35-0.45	0.6-0.7	0.3	0.75-0.9	0.0-0.04	0.04-0.08	0.08-0.15			
COC No / misc													
Containers	B	V J T B	B	B	B	V J T B	V J T B	T	T	T			
Sample Date	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	02/03/2014	02/03/2014	02/03/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
Arsenic #	-	NDP	-	-	-	-	9.9	-	-	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	12.8	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #	-	NDP	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	0.6	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #	-	NDP	-	-	-	-	40.4	-	-	-	<0.5	mg/kg	TM30/PM15
Chromium	-	15.2	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #	-	NDP	-	-	-	-	20	-	-	-	<1	mg/kg	TM30/PM15
Copper	-	18	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #	-	NDP	-	-	-	-	22	-	-	-	<5	mg/kg	TM30/PM15
Lead	-	280	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #	-	NDP	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM30/PM15
Mercury	-	<0.1	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #	-	NDP	-	-	-	-	25.2	-	-	-	<0.7	mg/kg	TM30/PM15
Nickel	-	14.3	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #	-	NDP	-	-	-	-	<1	-	-	-	<1	mg/kg	TM30/PM15
Selenium	-	<1	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Sulphur	-	NDP	-	-	-	-	0.02	-	-	-	<0.01	%	TM30/PM15
Sulphur	-	0.13	-	-	-	-	-	-	-	-	<0.01	%	TM30/PM62
Total Sulphate #	-	NDP	-	-	-	-	154	-	-	-	<50	mg/kg	TM50/PM15
Total Sulphate	-	6187	-	-	-	-	-	-	-	-	<50	mg/kg	TM50/PM62
Water Soluble Boron #	-	NDP	-	-	-	-	1.3	-	-	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	1.1	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #	-	NDP	-	-	-	-	54	-	-	-	<5	mg/kg	TM30/PM15
Zinc	-	55	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	19	21-24	25	27	28	29-32	33-36	39	40	41	LOD/LOR	Units	Method No.
Sample ID	WS102	WS102	WS102	WS104	WS104	WS103	WS103	U23	U23	U23			
Depth	0.25	0.55	0.77	0.35-0.45	0.6-0.7	0.3	0.75-0.9	0.0-0.04	0.04-0.08	0.08-0.15			
COC No / misc													
Containers	B	V J T B	B	B	B	V J T B	V J T B	T	T	T			
Sample Date	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	02/03/2014	02/03/2014	02/03/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
PAH MS													
Naphthalene #	-	27.78$_F$	-	-	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	11.28$_F$	-	-	-	-	<0.03	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #	-	108.62$_F$	-	-	-	-	<0.05	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene #	-	145.60$_F$	-	-	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #	-	761.54$_F$	-	-	-	-	0.15	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene #	-	348.71$_F$	-	-	-	-	0.08	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #	-	980.50$_F$	-	-	-	-	0.35	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene #	-	756.72$_F$	-	-	-	-	0.29	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	329.32$_F$	-	-	-	-	0.22	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene #	-	319.68$_F$	-	-	-	-	0.18	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	-	467.81$_F$	-	-	-	-	0.24	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	309.51$_F$	-	-	-	-	0.18	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	-	173.05$_F$	-	-	-	-	0.10	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	33.16$_F$	-	-	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	152.13$_F$	-	-	-	-	0.08	-	-	-	<0.04	mg/kg	TM4/PM8
Coronene	-	23.89$_F$	-	-	-	-	<0.04	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	4925.4$_F$	-	-	-	-	1.9	-	-	-	<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	4949.30$_F$	-	-	-	-	1.87	-	-	-	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	336.82$_F$	-	-	-	-	0.17	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	130.99$_F$	-	-	-	-	0.07	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	128$_F$	-	-	-	-	112	-	-	-	<0	%	TM4/PM8
Mineral Oil (C10-C40)	-	242	-	-	-	-	<30	-	-	-	<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #	-	1.7	-	-	-	-	<0.2	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #	-	52	-	-	-	-	<4	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #	-	76	-	-	-	-	<7	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #	-	97	-	-	-	-	<7	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	227	-	-	-	-	<19	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	19	21-24	25	27	28	29-32	33-36	39	40	41	LOD/LOR	Units	Method No.
Sample ID	WS102	WS102	WS102	WS104	WS104	WS103	WS103	U23	U23	U23			
Depth	0.25	0.55	0.77	0.35-0.45	0.6-0.7	0.3	0.75-0.9	0.0-0.04	0.04-0.08	0.08-0.15			
COC No / misc													
Containers	B	V J T B	B	B	B	V J T B	V J T B	T	T	T			
Sample Date	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	02/03/2014	02/03/2014	02/03/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
TPH CWG													
Aromatics													
>C5-EC7	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	49.5 D	-	-	-	-	<0.2	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	1031 D	-	-	-	-	<4	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21	-	6906 D	-	-	-	-	<7	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35	-	9662 D	-	-	-	-	<7	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	17649 D	-	-	-	-	<19	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	17876 D	-	-	-	-	<38	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
Benzene #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
Toluene #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
Ethylbenzene #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
m/p-Xylene #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
o-Xylene #	-	<5	-	-	-	-	<5	-	-	-	<5	ug/kg	TM31/PM12
PCB 28 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	<100 E	-	-	-	-	<5	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<700 E	-	-	-	-	<35	-	-	-	<35	ug/kg	TM17/PM8
Phenol #	-	1.90 D	-	-	-	-	<0.01	-	-	-	<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	NDP	-	-	-	-	21.2	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium	-	<0.3	-	-	-	-	<0.3	-	-	-	<0.3	mg/kg	TM38/PM76
Free Cyanide	-	<0.5	-	-	-	-	<0.5	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #	-	<0.5	-	-	-	-	<0.5	-	-	-	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	NDP	-	-	-	-	0.27	-	-	-	<0.02	%	TM21/PM24
Sulphide	-	13	-	-	-	-	<10	-	-	-	<10	mg/kg	TM106/PM45
Thiocyanate	-	<0.6	-	-	-	-	<0.6	-	-	-	<0.6	mg/kg	TM107/PM45
ANC at pH4	-	1.06	-	-	-	-	0.06	-	-	-	<0.03	mol/kg	TM77/PM0
ANC at pH7	-	0.23	-	-	-	-	<0.03	-	-	-	<0.03	mol/kg	TM77/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	19	21-24	25	27	28	29-32	33-36	39	40	41	LOD/LOR	Units	Method No.
Sample ID	WS102	WS102	WS102	WS104	WS104	WS103	WS103	U23	U23	U23			
Depth	0.25	0.55	0.77	0.35-0.45	0.6-0.7	0.3	0.75-0.9	0.0-0.04	0.04-0.08	0.08-0.15			
COC No / misc													
Containers	B	V J T B	B	B	B	V J T B	V J T B	T	T	T			
Sample Date	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	02/03/2014	02/03/2014	02/03/2014			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014			
Loss on Ignition #	-	NDP	-	-	-	-	4.9	-	-	-	<1.0	%	TM22/PM0
pH #	-	11.38	-	-	-	-	8.16	-	-	-	<0.01	pH units	TM73/PM11
Mass of Dry Sample	50.0	45.4	47.1	51.3	51.5	50.8	47.0	41.8	41.1	49.0	<0.1	g	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	42	43	44									
Sample ID	U22	U22	U22									
Depth	0.0-0.05	0.05-0.11	0.11-0.17									
COC No / misc												
Containers	T	T	T									
Sample Date	02/03/2014	02/03/2014	02/03/2014									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/07/2014	04/07/2014	04/07/2014									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Arsenic #	-	-	-								<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-								<0.5	mg/kg	TM30/PM62
Cadmium #	-	-	-								<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-								<0.1	mg/kg	TM30/PM62
Chromium #	-	-	-								<0.5	mg/kg	TM30/PM15
Chromium	-	-	-								<0.5	mg/kg	TM30/PM62
Copper #	-	-	-								<1	mg/kg	TM30/PM15
Copper	-	-	-								<1	mg/kg	TM30/PM62
Lead #	-	-	-								<5	mg/kg	TM30/PM15
Lead	-	-	-								<5	mg/kg	TM30/PM62
Mercury #	-	-	-								<0.1	mg/kg	TM30/PM15
Mercury	-	-	-								<0.1	mg/kg	TM30/PM62
Nickel #	-	-	-								<0.7	mg/kg	TM30/PM15
Nickel	-	-	-								<0.7	mg/kg	TM30/PM62
Selenium #	-	-	-								<1	mg/kg	TM30/PM15
Selenium	-	-	-								<1	mg/kg	TM30/PM62
Sulphur	-	-	-								<0.01	%	TM30/PM15
Sulphur	-	-	-								<0.01	%	TM30/PM62
Total Sulphate #	-	-	-								<50	mg/kg	TM50/PM15
Total Sulphate	-	-	-								<50	mg/kg	TM50/PM62
Water Soluble Boron #	-	-	-								<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-								<0.1	mg/kg	TM74/PM61
Zinc #	-	-	-								<5	mg/kg	TM30/PM15
Zinc	-	-	-								<5	mg/kg	TM30/PM62

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	42	43	44									
Sample ID	U22	U22	U22									
Depth	0.0-0.05	0.05-0.11	0.11-0.17									
COC No / misc												
Containers	T	T	T									
Sample Date	02/03/2014	02/03/2014	02/03/2014									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/07/2014	04/07/2014	04/07/2014									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
PAH MS													
Naphthalene #	-	-	-								<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	-	-								<0.03	mg/kg	TM4/PM8
Acenaphthene #	-	-	-								<0.05	mg/kg	TM4/PM8
Fluorene #	-	-	-								<0.04	mg/kg	TM4/PM8
Phenanthrene #	-	-	-								<0.03	mg/kg	TM4/PM8
Anthracene #	-	-	-								<0.04	mg/kg	TM4/PM8
Fluoranthene #	-	-	-								<0.03	mg/kg	TM4/PM8
Pyrene #	-	-	-								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	-	-								<0.06	mg/kg	TM4/PM8
Chrysene #	-	-	-								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	-	-	-								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	-	-								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	-	-	-								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	-	-								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	-	-								<0.04	mg/kg	TM4/PM8
Coronene	-	-	-								<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	-								<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-								<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	-	-								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	-	-								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	-	-								<0	%	TM4/PM8
Mineral Oil (C10-C40)	-	-	-								<30	mg/kg	TM5/PM16
TPH CWG													
Aliphatics													
>C5-C6 #	-	-	-								<0.1	mg/kg	TM36/PM12
>C6-C8 #	-	-	-								<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-								<0.1	mg/kg	TM36/PM12
>C10-C12 #	-	-	-								<0.2	mg/kg	TM5/PM16
>C12-C16 #	-	-	-								<4	mg/kg	TM5/PM16
>C16-C21 #	-	-	-								<7	mg/kg	TM5/PM16
>C21-C35 #	-	-	-								<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-								<19	mg/kg	TM5/TM36/PM12/PM16

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	42	43	44									
Sample ID	U22	U22	U22									
Depth	0.0-0.05	0.05-0.11	0.11-0.17									
COC No / misc												
Containers	T	T	T									
Sample Date	02/03/2014	02/03/2014	02/03/2014									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/07/2014	04/07/2014	04/07/2014									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
TPH CWG													
Aromatics													
>C5-EC7	-	-	-								<0.1	mg/kg	TM36/PM12
>EC7-EC8	-	-	-								<0.1	mg/kg	TM36/PM12
>EC8-EC10 #	-	-	-								<0.1	mg/kg	TM36/PM12
>EC10-EC12	-	-	-								<0.2	mg/kg	TM5/PM16
>EC12-EC16	-	-	-								<4	mg/kg	TM5/PM16
>EC16-EC21	-	-	-								<7	mg/kg	TM5/PM16
>EC21-EC35	-	-	-								<7	mg/kg	TM5/PM16
Total aromatics C5-35	-	-	-								<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-								<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	-	-	-								<5	ug/kg	TM31/PM12
Benzene #	-	-	-								<5	ug/kg	TM31/PM12
Toluene #	-	-	-								<5	ug/kg	TM31/PM12
Ethylbenzene #	-	-	-								<5	ug/kg	TM31/PM12
m/p-Xylene #	-	-	-								<5	ug/kg	TM31/PM12
o-Xylene #	-	-	-								<5	ug/kg	TM31/PM12
PCB 28 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-								<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-								<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-								<35	ug/kg	TM17/PM8
Phenol #	-	-	-								<0.01	mg/kg	TM26/PM21
Natural Moisture Content	-	-	-								<0.1	%	PM4/PM0
Hexavalent Chromium	-	-	-								<0.3	mg/kg	TM38/PM76
Free Cyanide	-	-	-								<0.5	mg/kg	TM89/PM45
Total Cyanide #	-	-	-								<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	-								<0.02	%	TM21/PM24
Sulphide	-	-	-								<10	mg/kg	TM106/PM45
Thiocyanate	-	-	-								<0.6	mg/kg	TM107/PM45
ANC at pH4	-	-	-								<0.03	mol/kg	TM77/PM0
ANC at pH7	-	-	-								<0.03	mol/kg	TM77/PM0

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	42	43	44									
Sample ID	U22	U22	U22									
Depth	0.0-0.05	0.05-0.11	0.11-0.17									
COC No / misc												
Containers	T	T	T									
Sample Date	02/03/2014	02/03/2014	02/03/2014									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	04/07/2014	04/07/2014	04/07/2014									
Loss on Ignition #	-	-	-								<1.0	%	TM22/PM0
pH #	-	-	-								<0.01	pH units	TM73/PM11
Mass of Dry Sample	42.2	43.7	47.1								<0.1	g	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	21.9
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	82.0
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/7722**			
Sample No	**23**			
Client Sample No	**WS102**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**0.55**			
Sample Date	**03/07/2014**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	NDP	3	5	6
Loss on Ignition (%)	NDP	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.700	1	-	-
Mineral Oil (mg/kg)	242	500	-	-
PAH Sum of 17(mg/kg)	4949.30	100	-	-
pH (pH Units)	11.38	-	>6	-
ANC to pH 7 (mol/kg)	0.23	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	1.06	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	0.0042	0.042	0.5	2	25
Barium	0.013	0.13	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	0.020	0.20	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.008	0.08	0.5	10	30
Nickel	0.003	0.03	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	<0.003	<0.03	4	50	200
Chloride	12.8	128	800	15000	25000
Fluoride	0.4	4	10	150	500
Sulphate as SO4	28.83	288.2	1000	20000	50000
Total Dissolved Solids	307	3069	4000	60000	100000
Phenol	0.38	3.8	1	-	-
Dissolved Organic Carbon	21	210	500	800	1000

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	20.8
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	82.8
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/7722**			
Sample No	**35**			
Client Sample No	**WS103**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**0.75-0.9**			
Sample Date	**03/07/2014**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	0.27	3	5	6
Loss on Ignition (%)	4.9	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	<30	500	-	-
PAH Sum of 17(mg/kg)	1.87	100	-	-
pH (pH Units)	8.16	-	>6	-
ANC to pH 7 (mol/kg)	<0.03	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.06	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	0.0040	0.040	0.5	2	25
Barium	0.074	0.74	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	0.0024	0.024	0.5	10	70
Copper	0.015	0.15	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.005	0.05	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	0.026	0.26	0.5	10	50
Antimony	<0.002	<0.02	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.032	0.32	4	50	200
Chloride	22.6	226	800	15000	25000
Fluoride	1.5	15	10	150	500
Sulphate as SO4	50.95	509.3	1000	20000	50000
Total Dissolved Solids	493	4928	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	15	150	500	800	1000

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/7722	1	WS101	0.2-0.3	2	11/07/14	Soil	Free Fibres	Chrysotile	Trace	
14/7722	1	WS101	0.5-0.6	4	11/07/14	Soil	None	NAD	NAD	
14/7722	1	WS101	0.7-0.75	5	11/07/14	Soil	Asbestos Cement Debris	Chrysotile	Quantifiable	
14/7722	1	WS101	1.1-1.15	7	11/07/14	Soil	None	NAD	NAD	
14/7722	1	WS101	1.9-2.0	9	11/07/14	Soil	None	NAD	NAD	
14/7722	1	WS105	0.4-0.5	10	11/07/14	Soil / Stones	Free Fibres	Chrysotile	Quantifiable	
14/7722	1	WS105	0.65-0.7	12	11/07/14	Soil / Stones	None	NAD	NAD	
14/7722	1	WS105	0.95-1.0	14	11/07/14	Soil / Stones	None	NAD	NAD	
14/7722	1	WS105	0.7-0.75	16	10/07/14	Soil/Stone	None	NAD	NAD	
14/7722	1	WS105	1.6-1.7	17	11/07/14	Soil / Stones	None	NAD	NAD	
14/7722	1	WS102	0.25	19	10/07/14	Soil/Stone/Brick	Free Fibres	Chrysotile	Trace	
14/7722	1	WS102	0.55	24	10/07/14	Soil-Silt/Brick/Stone/Veg	Free Fibres	Chrysotile	Trace	
14/7722	1	WS102	0.77	25	10/07/14	Soil/Stone	None	NAD	NAD	
14/7722	1	WS104	0.35-0.45	27	10/07/14	Soil/Stone	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/7722	1	WS104	0.6-0.7	28	10/07/14	Soil/Stone	None	NAD	NAD	
14/7722	1	WS103	0.3	32	11/07/14	Soil/Stone	None	NAD	NAD	
14/7722	1	WS103	0.75-0.9	36	10/07/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/7722	1	U23	0.0-0.04	39	11/07/14	Soil/Clay	None	NAD	NAD	
14/7722	1	U23	0.04-0.08	40	11/07/14	Soil/Stone	None	NAD	NAD	
14/7722	1	U23	0.08-0.15	41	11/07/14	Soil/Clay	None	NAD	NAD	
14/7722	1	U22	0.0-0.05	42	11/07/14	Soil/Clay	None	NAD	NAD	
14/7722	1	U22	0.05-0.11	43	11/07/14	Soil/Clay	None	NAD	NAD	
14/7722	1	U22	0.11-0.17	44	11/07/14	Soil/Clay	None	NAD	NAD	

Client Name: Geosyntec Consulting **Matrix : Solid**
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
14/7722	1	WS102	0.55	21-24	Asbestos detected in sample

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/7722

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x2 Dilution
D	x10 Dilution
E	x20 Dilution
F	x50 Dilution

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes		AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
TM17	PCB 7 Congeners and WHO 12 PCBs by GC-MS	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM20	TDS, TSS and TS - gravimetric	PM0	No preparation is required.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation	Yes		AD	Yes

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM22	Loss on Ignition (LOI) - gravimetric	PM0	No preparation is required.	Yes		AD	Yes
TM26	Phenols by HPLC	PM0	No preparation is required.			AR	Yes
TM26	Phenols by HPLC	PM21	Methanol : NaOH extraction	Yes		AR	Yes
TM27	In-House method based on USEPA 9056. Analysis of samples using a Dionex Ion-Chromatograph instrument.	PM0	No preparation is required.			AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes		AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM17	CEN PR12457-2 10:1 1 batch leach	Yes		AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM0	No preparation is required.	Yes		AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM76	As received samples are extracted using Sodium Hydroxide			AR	Yes
TM50	Total Sulphate by ICP-OES	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes		AD	Yes
TM50	Total Sulphate by ICP-OES	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM60	TOC/DOC by NDIR	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes		AR	No

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes		AD	Yes
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM77	ANC at pH4 and pH7 by Metrohm	PM0	No preparation is required.			AR	No
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils	Yes		AR	Yes
TM106	Sulphide by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
TM107	Thiocyanate by CFA	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	

Jones Environmental Laboratory

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Geosyntec Consulting
30-32 Botanic Road
Glasnevin
Dublin
Ireland

Attention :	Andrew Morgan
Date :	22nd July, 2014
Your reference :	GCU0124025
Our reference :	Test Report 14/7722 Batch 1 Schedule B
Location :	Nestle, Hayes
Date samples received :	4th July, 2014
Status :	Final report
Issue :	1

Thirty five samples were received for analysis on 4th July, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	10										Please see attached notes for all abbreviations and acronyms		
Sample ID	WS105												
Depth	0.4-0.5												
COC No / misc													
Containers	B												
Sample Date	02/07/2014												
Sample Type	Soil												
Batch Number	1										LOD/LOR	Units	Method No.
Date of Receipt	04/07/2014												
Asbestos PCOM Quantification (Fibres)	<0.001										<0.001	mass %	TM65/PM42

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/7722						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/7722

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	Yes

Jones Environmental Laboratory

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Geosyntec Consulting
30-32 Botanic Road
Glasnevin
Dublin
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4225

Attention :	Andrew Morgan
Date :	15th July, 2014
Your reference :	GCU00124-025
Our reference :	Test Report 14/7724 Batch 1
Location :	Nestle Hayes
Date samples received :	4th July, 2014
Status :	Final report
Issue :	1

Eight samples were received for analysis on 4th July, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: GCU00124-025
Location: Nestle Hayes
Contact: Andrew Morgan
JE Job No.: 14/7724

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1	2	3	4	5	6	7	8			LOD/LOR	Units	Method No.
Sample ID	WS102	WS102	WS103	WS103	WS103	WS103	WS103	WS103					
Depth	1.0-1.1	1.25-1.3	0.5-0.6	0.7-0.75	0.9-1.0	1.2-1.3	1.35-1.45	1.7-1.9					
COC No / misc													
Containers	B	B	B	B	B	B	B	B					
Sample Date	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014	03/07/2014					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	1	1	1	1	1	1	1	1					
Date of Receipt	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014	04/07/2014					
Mass of Dry Sample	53.7	53.8	50.7	49.1	43.0	49.1	47.8	48.1			<0.1	g	PM4/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Geosyntec Consulting
Reference: GCU00124-025
Location: Nestle Hayes
Contact: Andrew Morgan

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/7724	1	WS102	1.0-1.1	1	10/07/14	soil/stones	None	NAD	NAD	
14/7724	1	WS102	1.25-1.3	2	10/07/14	soil/stones	None	NAD	NAD	
14/7724	1	WS103	0.5-0.6	3	10/07/14	soil/stones	Free Fibres	Chrysotile	Trace	
14/7724	1	WS103	0.7-0.75	4	10/07/14	soil	None	NAD	NAD	
14/7724	1	WS103	0.9-1.0	5	10/07/14	soil	None	NAD	NAD	
14/7724	1	WS103	1.2-1.3	6	10/07/14	soil/stones	None	NAD	NAD	
14/7724	1	WS103	1.35-1.45	7	10/07/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/7724	1	WS103	1.7-1.9	8	10/07/14	Soil-Clay/Brick/Stone	None	NAD	NAD	

Client Name: Geosyntec Consulting
Reference: GCU00124-025
Location: Nestle Hayes
Contact: Andrew Morgan

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/7724						

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NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/7724

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If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
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DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
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ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range

JE Job No: 14/7724

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	

Jones Environmental Laboratory

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4225

Attention :	Andrew Morgan
Date :	31st July, 2014
Your reference :	GCU0124025
Our reference :	Test Report 14/7722 Batch 1 Schedule C
Location :	Nestle, Hayes
Date samples received :	4th July, 2014
Status :	Final report
Issue :	1

Thirty five samples were received for analysis on 4th July, 2014. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Geosyntec Consulting
Reference: GCU0124025
Location: Nestle, Hayes
Contact: Andrew Morgan
JE Job No.: 14/7722

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	10										Please see attached notes for all abbreviations and acronyms		
Sample ID	WS105												
Depth	0.4-0.5												
COC No / misc													
Containers	B												
Sample Date	02/07/2014												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	04/07/2014												
											LOD/LOR	Units	Method No.
PAH MS													
Naphthalene #	<0.80 D										<0.04	mg/kg	TM4/PM8
Acenaphthylene	1.10 D										<0.03	mg/kg	TM4/PM8
Acenaphthene #	<1.00 D										<0.05	mg/kg	TM4/PM8
Fluorene #	<0.80 D										<0.04	mg/kg	TM4/PM8
Phenanthrene #	1.84 D										<0.03	mg/kg	TM4/PM8
Anthracene #	1.48 D										<0.04	mg/kg	TM4/PM8
Fluoranthene #	13.92 D										<0.03	mg/kg	TM4/PM8
Pyrene #	14.23 D										<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	8.90 D										<0.06	mg/kg	TM4/PM8
Chrysene #	6.36 D										<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	11.94 D										<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	7.08 D										<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	4.03 D										<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.80 D										<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	4.27 D										<0.04	mg/kg	TM4/PM8
Coronene	<0.80 D										<0.04	mg/kg	TM4/PM8
PAH 17 Total	75.15 D										<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	8.60 D										<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	3.34 D										<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	122 D										<0	%	TM4/PM8
Mineral Oil (C10-C40)	79										<30	mg/kg	TM5/PM16
MTBE #	<5										<5	ug/kg	TM31/PM12
Benzene #	<5										<5	ug/kg	TM31/PM12
Toluene #	<5										<5	ug/kg	TM31/PM12
Ethylbenzene #	<5										<5	ug/kg	TM31/PM12
m/p-Xylene #	<5										<5	ug/kg	TM31/PM12
o-Xylene #	<5										<5	ug/kg	TM31/PM12
PCB 28 #	<5										<5	ug/kg	TM17/PM8
PCB 52 #	<5										<5	ug/kg	TM17/PM8
PCB 101 #	<5										<5	ug/kg	TM17/PM8
PCB 118 #	<5										<5	ug/kg	TM17/PM8
PCB 138 #	<5										<5	ug/kg	TM17/PM8
PCB 153 #	<5										<5	ug/kg	TM17/PM8
PCB 180 #	<5										<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35										<35	ug/kg	TM17/PM8
ANC at pH4	0.66										<0.03	mol/kg	TM77/PM0
ANC at pH7	0.31										<0.03	mol/kg	TM77/PM0
pH #	9.30										<0.01	pH units	TM73/PM11

Mass of sample taken (kg)	-	Moisture Content Ratio (%) =	7.1
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	93.4
Particle Size <4mm =	>95%		

		Landfill Waste Acceptance Criteria Limits		
JEFL Job No	**14/7722**			
Sample No	**10**			
Client Sample No	**WS105**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Depth/Other	**0.4-0.5**			
Sample Date	**02/07/2014**			
Batch No	**1**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	3	5	6
Loss on Ignition (%)	-	-	-	10
Sum of BTEX (mg/kg)	<0.025	6	-	-
Sum of 7 PCBs (mg/kg)	<0.035	1	-	-
Mineral Oil (mg/kg)	79	500	-	-
PAH Sum of 17(mg/kg)	75.15	100	-	-
pH (pH Units)	9.30	-	>6	-
ANC to pH 7 (mol/kg)	0.31	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.66	-	to be evaluated	to be evaluated

Eluate Analysis	**10:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg**		
	C_{10}	**A_{10}**			
	mg/l	**mg/kg**	**mg/kg**		
Arsenic	0.0081	0.081	0.5	2	25
Barium	0.013	0.13	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	0.0015	0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.002	0.02	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	0.026	0.26	0.5	10	50
Antimony	0.006	0.06	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.005	0.05	4	50	200
Chloride	22.1	221	800	15000	25000
Fluoride	1.8	18	10	150	500
Sulphate as SO4	22.44	224.5	1000	20000	50000
Total Dissolved Solids	136	1361	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	4	40	500	800	1000

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 14/7722

SOILS

Please note we are only MCERTS accredited for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
OC	Outside Calibration Range
A	x5 Dilution
D	x20 Dilution

JE Job No: 14/7722

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM17	PCB 7 Congeners and WHO 12 PCBs by GC-MS	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM20	TDS, TSS and TS - gravimetric	PM0	No preparation is required.			AR	Yes
TM26	Phenols by HPLC	PM0	No preparation is required.			AR	Yes
TM27	In-House method based on USEPA 9056. Analysis of samples using a Dionex Ion-Chromatograph instrument.	PM0	No preparation is required.			AR	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM17	CEN PR12457-2 10:1 1 batch leach	Yes		AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM0	No preparation is required.	Yes		AR	Yes
TM60	TOC/DOC by NDIR	PM0	No preparation is required.			AR	Yes
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes		AR	No
TM77	ANC at pH4 and pH7 by Metrohm	PM0	No preparation is required.			AR	No
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.			AR	