



## Appendix D2

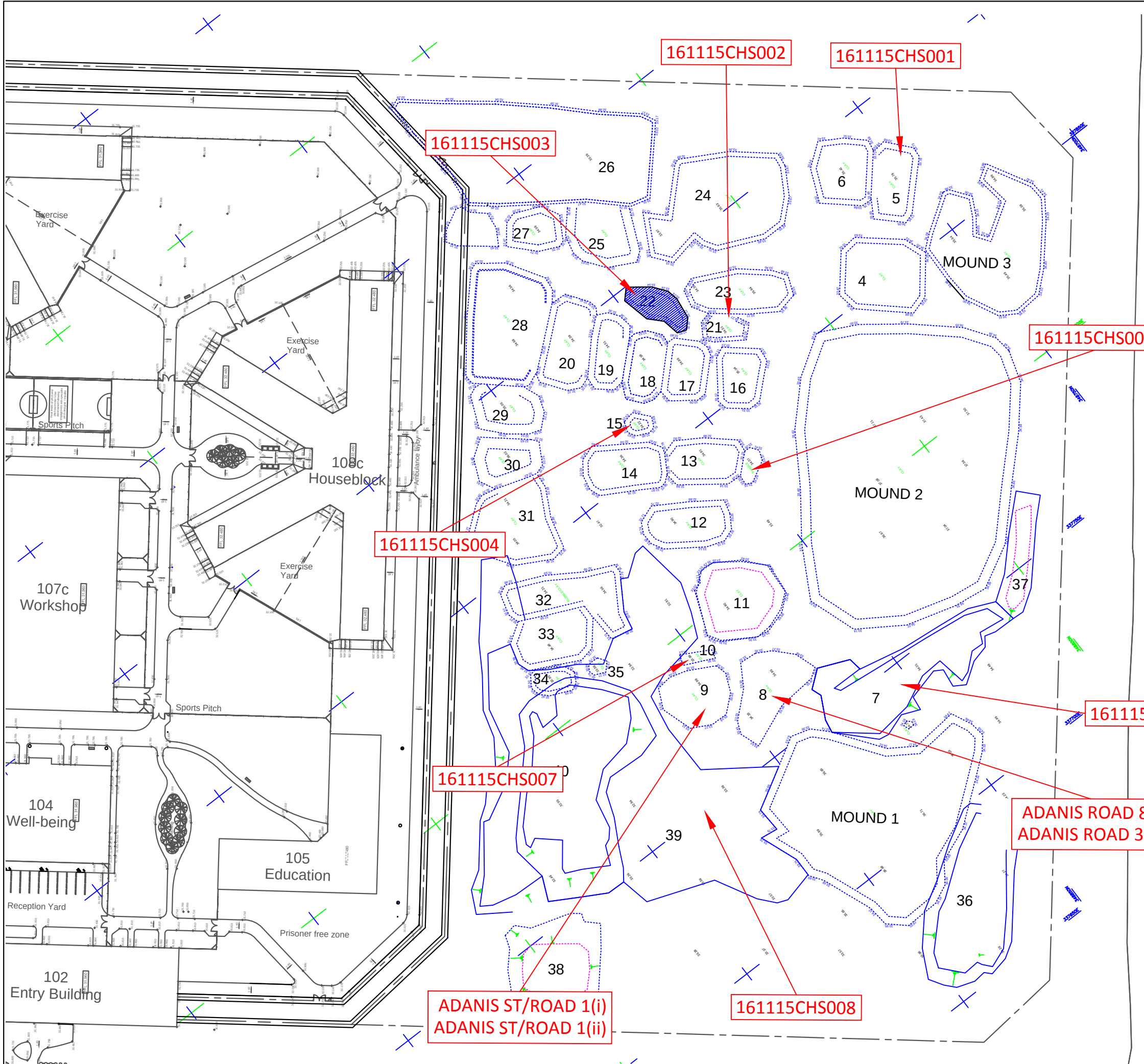
### Service Trench Excavations – Materials Tracking System Example

The information included in this example shows stockpiles of material, each with a sample reference that can be linked to a laboratory test result that shows no asbestos detected.

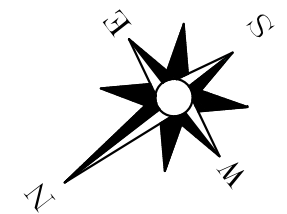
The sample reference codes are configured in the form 161115CHS001 - 161115CHS008, where

- 16 11 15 is the sampling date (i.e. 15 November 2016)
- CHS is the initials of the technician who took the samples; and
- 001-008 are the numbers that appear on the lab test data sheets.

An additional drawing shows the fate of materials from two service trenches (red oblongs) to mound 22 (the origin of sample 161115CHS003, No Asbestos Detected) and its placement as clean cover on the landscaped area near the entrance.



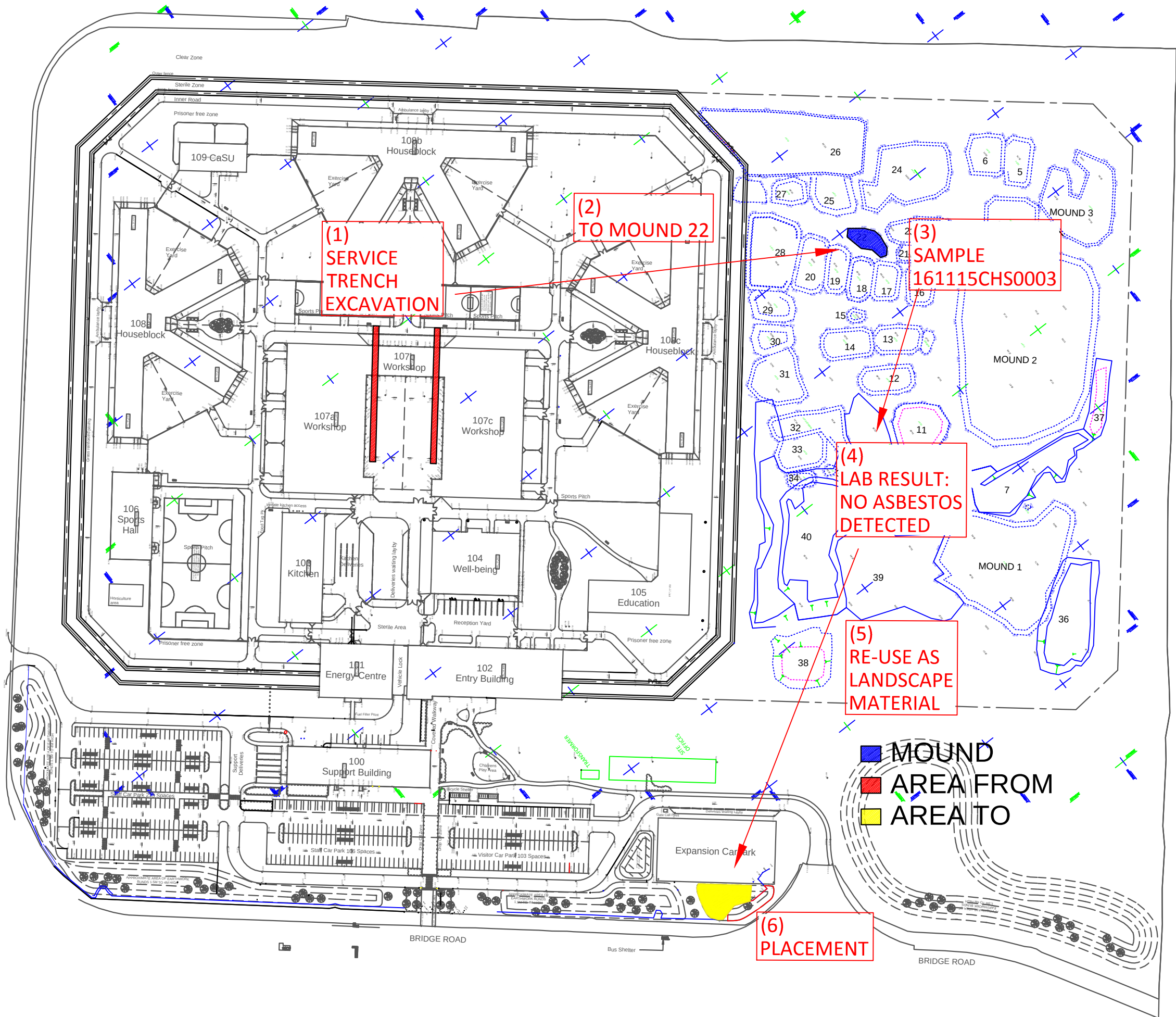
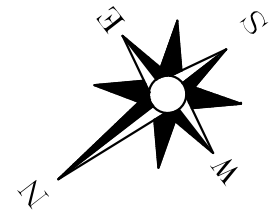
1. Drawing based on Survey Operations Drawing A1 15J079/001, dated Oct 2015



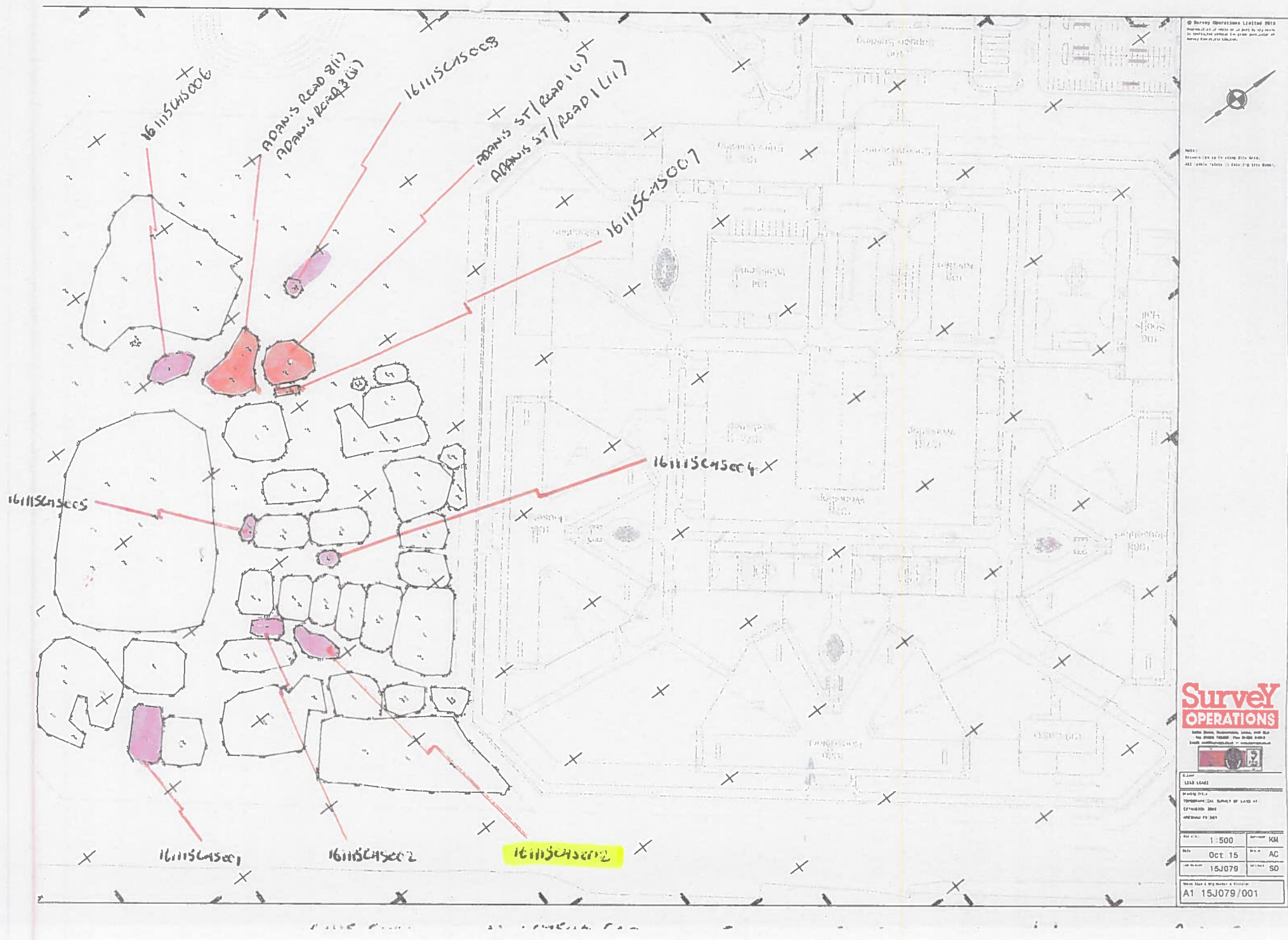
| Rev                                                                                                                                                                                                | Date    | Description | By       | Ckd        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|----------|------------|
| Architect :                                                                                                                                                                                        |         |             |          |            |
| <div><div>Hydrock</div><div>Hydrock Consultants Ltd<br/>4 Lakeside<br/>Festival Park<br/>Stoke-on-Trent<br/>ST1 5RY<br/>T +44 (0)1782 261919<br/>stoke@hydrock.com<br/>www.hydrock.com</div></div> |         |             |          |            |
| Client :                                                                                                                                                                                           |         |             |          |            |
| LEND LEASE CONSTRUCTION (EUROPE) LTD                                                                                                                                                               |         |             |          |            |
| Project Title:                                                                                                                                                                                     |         |             |          |            |
| NORTH WALES PRISON                                                                                                                                                                                 |         |             |          |            |
| Drawing Title:                                                                                                                                                                                     |         |             |          |            |
| Bulk Earthworks Contract<br>Stockpile Sampling Plan                                                                                                                                                |         |             |          |            |
| Reference:                                                                                                                                                                                         |         |             |          |            |
| NWP-HYD-XX-ZZ-DR-G-1005                                                                                                                                                                            |         |             |          |            |
| Hydrock Job No:                                                                                                                                                                                    |         |             |          |            |
| C-14656-C                                                                                                                                                                                          |         |             |          |            |
| Drawn                                                                                                                                                                                              | Checked | Scale @ A3  | Date     | Issue Date |
| LW                                                                                                                                                                                                 | EC      | 1:1,250     | 09/02/17 | 10/02/17   |
| Revision:                                                                                                                                                                                          |         |             | Status:  |            |
| P1                                                                                                                                                                                                 |         |             | S2       |            |

MATERIAL MOVEMENT PLAN - MOUND 22

1. Drawing based on Survey  
Operations Drawing A1  
15J079/001, dated Oct 2015



| Rev                                                                                                                                                                                                | Date    | Description | By       | Ckd        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------|----------|------------|
| Architect :                                                                                                                                                                                        |         |             |          |            |
| <div><div>Hydrock</div><div>Hydrock Consultants Ltd<br/>4 Lakeside<br/>Festival Park<br/>Stoke-on-Trent<br/>ST1 5RY<br/>T +44 (0)1782 261919<br/>stoke@hydrock.com<br/>www.hydrock.com</div></div> |         |             |          |            |
| Client :                                                                                                                                                                                           |         |             |          |            |
| LEND LEASE CONSTRUCTION<br>(EUROPE) LTD                                                                                                                                                            |         |             |          |            |
| Project Title:                                                                                                                                                                                     |         |             |          |            |
| NORTH WALES PRISON                                                                                                                                                                                 |         |             |          |            |
| Drawing Title:                                                                                                                                                                                     |         |             |          |            |
| Bulk Earthworks Contract<br>Mound 22 Movements                                                                                                                                                     |         |             |          |            |
| Reference:                                                                                                                                                                                         |         |             |          |            |
| NWP-HYD-XX-ZZ-DR-G-1006                                                                                                                                                                            |         |             |          |            |
| Hydrock Job No:                                                                                                                                                                                    |         |             |          |            |
| C-14656-C                                                                                                                                                                                          |         |             |          |            |
| Drawn                                                                                                                                                                                              | Checked | Scale @ A3  | Date     | Issue Date |
| LW                                                                                                                                                                                                 | EC      | 1:2,000     | 09/02/17 | 10/02/17   |
| Revision:                                                                                                                                                                                          |         |             | Status:  |            |
| P1                                                                                                                                                                                                 |         |             | S2       |            |



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Scale: 1:500  
Horizontal Datum: NZGD 2000  
Vertical Datum: NZVD 1949

**Survey  
OPERATIONS**



Project Name: 16115C45001  
Project Number: 16115C45001

Scale: 1:500  
Date: Oct 15  
Author: 15J079  
Reviewer: AC

Project Number: 16115C45001  
Project Name: 16115C45001



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Redhills  
Room 2:15  
Hollinwood Business Centre  
Albert Street  
Oldham  
OL8 3QL  
  
Attention: Gareth Cooper

## CERTIFICATE OF ANALYSIS

Date: 16 November 2015  
Customer: H\_REDHILLS\_OLD  
Sample Delivery Group (SDG): 151106-11  
Your Reference: N-167590  
Location: North Wales Prison - Wrexham  
Report No: 338198

We received 8 samples on Thursday November 05, 2015 and 8 of these samples were scheduled for analysis which was completed on Thursday November 12, 2015. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

All chemical testing (unless subcontracted) is performed at ALcontrol Hawarden Laboratories.

Approved By:

**Sonia McWhan**  
Operations Manager



CERTIFICATE OF ANALYSIS

|                   |                   |            |                              |                    |        |
|-------------------|-------------------|------------|------------------------------|--------------------|--------|
| SDG:              | 151106-11         | Location:  | North Wales Prison - Wrexham | Order Number:      | 10667  |
| Job:              | H_REDHILLS_OLD-13 | Customer:  | Redhills                     | Report Number:     | 338198 |
| Client Reference: | N-167590          | Attention: | Gareth Cooper                | Superseded Report: |        |

Received Sample Overview

| Lab Sample No(s) | Customer Sample Ref. | AGS Ref. | Depth (m) | Sampled Date |
|------------------|----------------------|----------|-----------|--------------|
| 12387747         | 107A001              |          |           | 05/11/2015   |
| 12387748         | 107A002              |          |           | 05/11/2015   |
| 12387749         | 107A003              |          |           | 05/11/2015   |
| 12387752         | 107A004              |          |           | 05/11/2015   |
| 12387753         | 107A005              |          |           | 05/11/2015   |
| 12387754         | 107A006              |          |           | 05/11/2015   |
| 12387755         | 107A007              |          |           | 05/11/2015   |
| 12387756         | 107A008              |          |           | 05/11/2015   |

Only received samples which have had analysis scheduled will be shown on the following pages.

SDG: 151106-11

Job: H\_REDHILLS\_OLD-13

Client Reference: N-167590

Location: North Wales Prison - Wrexham

Customer: Redhills

Attention: Gareth Cooper

Order Number: 10667

Report Number: 338198

Superseded Report:

|                                                                                                                                                                                 |                                |                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <div><div>SOLID</div><div>Results Legend</div><div><div><input checked="" type="checkbox"/> Test</div><div><input type="checkbox"/> No Determination Possible</div></div></div> | Lab Sample No(s)               | 12387756<br>12387755<br>12387754<br>12387753<br>107A006<br>107A007<br>107A008<br>107A001<br>107A002<br>107A003<br>107A004 |
|                                                                                                                                                                                 | Customer Sample Reference      |                                                                                                                           |
|                                                                                                                                                                                 | AGS Reference                  |                                                                                                                           |
|                                                                                                                                                                                 | Depth (m)                      |                                                                                                                           |
|                                                                                                                                                                                 | Container                      | 1kg TUB<br>1kg TUB<br>1kg TUB<br>1kg TUB<br>1kg TUB<br>1kg TUB<br>1kg TUB<br>1kg TUB                                      |
|                                                                                                                                                                                 | Asbestos ID in Solid Samples   | All<br>NDPs 0 Tests 8<br>X X X X X X X X                                                                                  |
|                                                                                                                                                                                 | Asbestos Quantification - Full | All<br>NDPs 0 Tests 1<br>X                                                                                                |

## Asbestos Identification - Solid Samples

[illegible]

CERTIFICATE OF ANALYSIS

SDG: 151106-11  
Job: H\_REDHILLS\_OLD-13  
Client Reference: N-167590

Location: North Wales Prison - Wrexham  
Customer: Redhills  
Attention: Gareth Cooper

Order Number: 10667  
Report Number: 336198  
Superseded Report:

| Cust. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | Date of Analysis | Analysed By        | Comments |  | Amosite<br>(Brown)<br>Asbestos | Chrysotile<br>(White)<br>Asbestos | Crocidolite<br>(Blue) Asbestos | Fibrous<br>Actinolite | Fibrous<br>Anthrophyllite | Fibrous<br>Tremolite | Non-Asbestos<br>Fibre |
|---------------------------------------------------------------------------------------------------------------------------|------------------|--------------------|----------|--|--------------------------------|-----------------------------------|--------------------------------|-----------------------|---------------------------|----------------------|-----------------------|
|                                                                                                                           |                  |                    |          |  | (#)                            | (#)                               | (#)                            | (#)                   | (#)                       | (#)                  |                       |
| 107A006<br>SOLID<br>05/11/2015 00:00:00<br>09/11/2015 07:42:25<br>151106-11<br>12387754<br>TM048                          | 12/11/15         | Tomasz Pawlikowski |          |  | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)       | Not Detected<br>(#)  | Not Detected          |
| 107A007<br>SOLID<br>05/11/2015 00:00:00<br>10/11/2015 14:10:40<br>151106-11<br>12387755<br>TM048                          | 12/11/15         | Tomasz Pawlikowski |          |  | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)       | Not Detected<br>(#)  | Not Detected          |
| 107A008<br>SOLID<br>05/11/2015 00:00:00<br>10/11/2015 13:59:18<br>151106-11<br>12387756<br>TM048                          | 12/11/15         | Tomasz Pawlikowski |          |  | Not Detected<br>(#)            | Not Detected<br>(#)               | Not Detected<br>(#)            | Not Detected<br>(#)   | Not Detected<br>(#)       | Not Detected<br>(#)  | Not Detected          |

SDG: 151106-11

Job: H\_REDHILLS\_OLD-13

Client Reference: N-167590

Location: North Wales Prison - Wrexham

Customer: Redhills

Attention: Gareth Cooper

Order Number: 10667

Report Number: 338198

Superseded Report:

Asbestos Quantification - Full

| Cst. Sample Ref.<br>Depth (m)<br>Sample Type<br>Date Sampled<br>Date Received<br>SDG<br>Original Sample<br>Method Number | Additional<br>Asbestos<br>Components<br>(Using TM906) | Analysis<br>Comments | Asbestos<br>Quantification -<br>Gravimetric - % |  | Asbestos<br>Quantification -<br>PCOM<br>Evaluation - % |  | Asbestos<br>Quantification -<br>Total - % |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|-------------------------------------------------|--|--------------------------------------------------------|--|-------------------------------------------|
|                                                                                                                          |                                                       |                      | Asbestos<br>Quantification -<br>Gravimetric - % |  | Asbestos<br>Quantification -<br>PCOM<br>Evaluation - % |  | Asbestos<br>Quantification -<br>Total - % |
| 107A003<br><br>SOLID<br>05/11/2015 00:00:00<br>09/11/2015 07:52:29<br>151106-11<br>12867799<br>TM 304                    | None (#)                                              | N/C                  | <0.001 (#)                                      |  | <0.001 (#)                                             |  | <0.001 (#)                                |

CERTIFICATE OF ANALYSIS

|                   |                   |            |                              |                    |        |
|-------------------|-------------------|------------|------------------------------|--------------------|--------|
| SDG:              | 151106-11         | Location:  | North Wales Prison - Wrexham | Order Number:      | 10667  |
| Job:              | H_REDHILLS_OLD-13 | Customer:  | Redhills                     | Report Number:     | 338198 |
| Client Reference: | N-167590          | Attention: | Gareth Cooper                | Superseded Report: |        |

Table of Results - Appendix

| Method No | Reference                                                                              | Description                                 | Wet/Dry Sample <sup>1</sup> | Surrogate Corrected |
|-----------|----------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------|---------------------|
| ASB_PREP  |                                                                                        |                                             |                             |                     |
| TM 304    |                                                                                        |                                             |                             |                     |
| TM048     | HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures | Identification of Asbestos in Bulk Material |                             |                     |

<sup>1</sup> Applies to Solid samples only. DRY indicates samples have been dried at 35°C. NA = not applicable

SDG: 151106-11

Job: H\_REDHILLS\_OLD-13

Client Reference: N-167590

Location: North Wales Prison - Wrexham

Customer: Redhills

Attention: Gareth Cooper

Order Number: 10667

Report Number: 338198

Superseded Report:

Test Completion Dates

| Lab Sample No(s)               |  | 12387747    | 12387748    | 12387749    | 12387752    | 12387753    | 12387754    | 12387755    | 12387756    |
|--------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Customer Sample Ref.           |  | 107/A001    | 107/A002    | 107/A003    | 107/A004    | 107/A005    | 107/A006    | 107/A007    | 107/A008    |
| AGS Ref.                       |  |             |             |             |             |             |             |             |             |
| Depth                          |  |             |             |             |             |             |             |             |             |
| Type                           |  |             |             |             |             |             |             |             |             |
| Asbestos ID in Solid Samples   |  | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 | 12-Nov-2015 |
| Asbestos Quantification - Full |  | SOLID       | SOLID       | SOLID       | SOLID       | SOLID       | SOLID       | SOLID       | SOLID       |

|                   |                   |            |                              |                    |        |
|-------------------|-------------------|------------|------------------------------|--------------------|--------|
| SDG:              | 151106-11         | Location:  | North Wales Prison - Wrexham | Order Number:      | 10667  |
| Job:              | H_REDHILLS_OLD-13 | Customer:  | Redhills                     | Report Number:     | 338198 |
| Client Reference: | N-167590          | Attention: | Gareth Cooper                | Superseded Report: |        |

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests; flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TTCS and SVOC TTCS.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt, unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERIS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERIS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible. The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP -No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals -total metals must be requested separately.

11. Results relate only to the items tested.

12. LODs for wet tests reported on a dry weight basis are not corrected for moisture content.

13. Surrogate recoveries - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix effect.

14. Product analyses -Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethylphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences, in both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.

22. We are accredited to MCERIS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GC/ID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5 -C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only, it is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GC/MS should be utilised.

Sample Deviations

|   |                                                                 |
|---|-----------------------------------------------------------------|
| 1 | Container with headspace provided for volatiles analysis        |
| 2 | Incorrect container received                                    |
| 3 | Deviation from method                                           |
| 4 | Holding time exceeded before sample received                    |
| 5 | Samples exceeded holding time before preservation was performed |
| 6 | Samples on date not provided                                    |
| 7 | Sample holding time exceeded in laboratory                      |
| 8 | Sample holding time exceeded due to sampled on date             |
| 9 | Sample Holding Time exceeded - Late arrival of instructions.    |

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005)

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using Alcontrol Laboratories (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005)

| Asbestos Type     | Comments    |
|-------------------|-------------|
| Crysotile         | Widespread  |
| Amosite           | Brown/Black |
| Crocidolite       | Blue/Black  |
| Fibrous Asbestos  |             |
| Fibrous Amphibole |             |
| Fibrous Tremolite |             |

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than:- Trace - Where only one or two asbestos fibres were identified

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

