## Appendix 9.2 Asbestos Material Investigation, ASM January 2012

Asbestos Material Investigation Barry Waterfront
Report Number: A0712/030 Visual

ASM Compliance Ltd Hortons House<br>Hortons Yard<br>Llandarcy<br>SA10 6EN<br>Tel- 08448560668<br>Fax- 08448560669



Premises
Barry waterfront
Barry

Commissioned By
Cuddy Group

## Disclaimer

This consultancy contract was completed by ASM Compliance Ltd. on the basis of a defined programme of work and terms and conditions agreed with the Client. We confirm that in preparing this report we have exercised all reasonable skill and care, bearing in mind the project objectives, the agreed scope of works, prevailing site conditions and the degree of manpower and resources allocated to the project, as agreed.

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Any questions or matters arising from this report may be addressed in the first instance to the Project Manager.

| Prepared by | Reviewed by |
| :---: | :---: |
|  |  |
| J Trimble | P. Morgan |
| Senior Consultant | Consultant |

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## Management Summary

## General Recommendations

All ACMs (asbestos containing materials) identified in this Investigation should be managed to avoid the release of asbestos fibres. The Control of Asbestos Regulations 2012 (CAR) places a legal duty, to implement an Asbestos Management Policy to ensure that the asbestos containing materials are correctly managed. Therefore this report makes the following general recommendations: -

- Where appropriate, make safe any unsafe ACMs identified in this report
- If not already in place institute an Asbestos Management Policy, a suitable Asbestos Management Policy would address the following areas:-
- Outline Management and staff responsibilities
- Communications with employees, contractors and others
- Safe systems of work in areas with asbestos materials present
- Procedures for regular inspection and monitoring of identified ACMs
- Emergency procedures for dealing with unplanned/uncontrolled disturbance of ACMs
- Update all existing asbestos information/registers to reflect the findings of this report.

Further assistance is available from ASM Compliance in preparing a suitable Asbestos Management, based on this report content. If requested the detailed register in this report can be supplied in an updatable form for inclusion in your management plan.

## Management Summary

## Summary and Recommendations

This survey is an Asbestos Material investigation of the soil at Barry waterfront

Refer to site schematics for location of trial pits

ASM were initially brought in as a material had been found on the surface of the trial surcharge which had the appearance of sprayed asbestos coating a highly fibrous friable asbestos material. A sample was taken (W-23066 01) of the material and was found to contain Crocidolite asbestos. The area of the surcharge was inspected and a number of pockets of similar asbestos materials were found on the surface. The borrow pit where the material originated was walked through and similar material was found to be present in one area on the surface. The grass area between the surcharge was inspected and a couple of areas of loose flock were found and also a piece of asbestos cement with the flock still attached was present (W23066 02). Insulation debris found to contain amosite asbestos (W23066 05) was found near the work area on the surface of the road from the compound being used by plant. Because of the level of contamination found and no previous information indicating the levels of asbestos contamination a program of initial trial pits was initiated to try to ascertain if the contamination was wide spread or localised to the area found.

Asbestos materials were found in a number of the pits dug a full list can be found in the Results and Detailed Register. In addition to asbestos materials where the fibres are bonded more firmly in the matrix of the material (cement, ropes, gaskets etc) significant pockets of highly friable asbestos materials were found (insulation, spray coatings). Under the CAR 2012 a risk assessment must be carried, out prior to any works being undertaken, to determine if the potential for exposure is high enough for the works to be classified as Licensed Asbestos Works.

As the materials are highly fibrous and/or of low density, most of the work would need to be carried out on them would require the services of a licensed asbestos contractor. Work of this nature requires written notification to be made to the appropriate enforcing authority 14 days prior to its commencement; in exceptional circumstances the enforcement authority may grant a waiver for emergency works.

## Management Summary

However work of very short duration and unlikely to generate significant levels of airborne fibres, may not require a licensed contractor. CAR 2012 still requires the work to be fully risk assessed, carried out by suitable trained staff, properly equipped, utilising a documented method statement which aims to minimise the potential exposure.

Asbestos materials were found at differing levels from the surface down to 3.5 m .

In addition to the visual samples taken random soil samples were taken to test for asbestos fibres in the soil. Asbestos fibres were present in all samples taken including in areas where no visible asbestos contamination was visible. Due to pockets of high levels of asbestos contamination found in areas when visual inspection was undertaken quantification of asbestos in the soil was not undertaken.

From the results an $L$ shaped area of land highly contaminated with asbestos is seen to be present to the west and south of the rising main. To the west of the Rising main (West Pond area) in the trial pits dug only one piece of asbestos cement was found to be present, no soil samples were taken in the area. Due to the incompleteness of previous information and the limited current investigation in the area it is advised that a more comprehensive systematic program of inspection is introduced of the area to confirm if the area is free from contamination.

## Introduction and Survey Information

## Survey Specification and Aims

ASM Compliance Ltd., where instructed by D Evans of Cuddy Group to undertake an investigation of the ground at Barry Waterfront. The purpose of Investigation was ascertain if the ground at Barry waterfront was contaminated with asbestos

The Inspection was carried out by Jon Trimble

## Introduction and Survey Information

## Scope of Survey

As agreed with our client this Inspection was deemed to be for: -
Initial investigation into asbestos contamination at Barry Waterfront.
A program of initial trial pits was initiated to try to ascertain if the contamination was wide spread or localised to the area already found. Location of trail pits can be found in site Schematics

Areas of the soil were excavated to a depth of 4 meters to look for areas of high contamination as found on the surcharge. The soil was removed slowly with each 1 meter depth of Excavated soil inspected for visual signs of asbestos contamination. Location and description of any suspect materials was recorded and material removed for analysis/disposal.

In addition to the visual samples taken random soil samples were taken to test for asbestos fibres in the soil.
Detailed Survey Report and Register
Summary of Asbestos Containing Materials

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 311062.874 | 167277.007 | 1.8m | Spray debris to brick | W-23066-004 | Crocidolite | - | - | - | - |
|  |  |  | 1.8m | Cement debris | W-23066-003 | Chrysotile | - | - | - | - |
| 2 | 311048.723 | 167247.888 | 2 m | Cement debris | $\begin{gathered} \text { As } \\ \text { W-23066-003 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 3 | 311038.704 | 167230.882 | 1m | Cement debris | A0712/030/001 | Chrysotile | - | - | - | - |
| 3 |  |  | 1.8m | Cement debris | A0712/030/001 | Chrysotile |  |  |  |  |
| 3 |  |  | 2.5m | Cement debris | A0712/030/001 | Chrysotile |  |  |  |  |
| 3 |  |  | 2.5 m | Rope | A0712/030/002 | Chrysotile | - | - | - | - |
| 3 |  |  | 3 m | Gasket debris | A0712/030/003 | Chrysotile | - | - | - | - |
| 3 |  |  | 3 m | Cement Debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 4 | 311015.173 | 167216.584 | 1m | Cement debris | A0712/030/004 | Chrysotile | 5948379 |  | Detected |  |
| 4 |  |  | 1.5m | Cement debris | A0712/030/005 | Chrysotile | - | - | - | - |
| 4 |  |  | 2 m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 4 |  |  | 2.3m | Textile | A0712/030/006 | Chrysotile | - | - | - | - |
| 5 | 311006.403 | 167232.119 | 1.3m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | 5948380 |  | Detected |  |
| 5 |  |  | 1.5m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 5 |  |  | 2.0m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 5 |  |  | 2.3m | Cement Debris | A0712/030/008 | Chrysotile | - | - | - | - |

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Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 |  |  | 3.2m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \\ \hline \end{gathered}$ | Chrysotile | - | - | - | - |
| 5 | 311006.403 | 167232.119 | 3.2m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 6 | 310997.24 | 167246.233 | 1.4m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | 5948381 |  | Detected |  |
| 7 | 310991.714 | 167266.659 | 1.6m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | 5948383 | Detected | Detected |  |
| 7 |  |  | 2.7 m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 7 |  |  | 3.1m | Debris on wood | A0712/030/009 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| 8 | 311012.418 | 167261.623 |  | None visible |  |  | 5948384 | Detected | Detected |  |
| 9 | 311027.737 | 167249.723 | 2.5m | Cement debris | $\begin{gathered} \mathrm{As} \\ \text { A0712/030/001 } \\ \hline \end{gathered}$ | Chrysotile | 5948385 |  | Detected | Detected |
| 9 |  |  |  | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \\ \hline \end{gathered}$ | Chrysotile | - | - | - | - |
| 10 | 311034.562 | 167263.145 | 1.4m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \\ \hline \end{gathered}$ | Chrysotile | - | - | - | - |
| 11 | 311064.303 | 167195.267 |  | None Visible | - | - | - | - | - | - |

Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 | 311049.44 | 167198.207 | 3.5 m | Significant amounts insulation debris | A0712/030/010 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| 13 | 311036.141 | 167201.859 | - | None visible | - | - | - | - | - | - |
| 14 | 311011.172 | 167201.211 | - | None visible | - | - | - | - | - | - |
| 15 | 310993.747 | 167202.488 | - | None visible | - | - | - | - | - | - |
| 16 | 310969.66 | 167194.001 | 3.4m | Insulation within sack | A0712/030/011 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| 17 | 310952.865 | 167192.636 |  | None visible |  |  | - | - | - | - |
| 18 | 311011.856 | 167101.75 | 3 m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 19 | 311014.786 | 167101.75 | 2.5m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 20 | 311010.743 | 167113,622 | - | None Visible | - | - |  |  |  |  |
| 21 | 311014.261 | 1671390.653 | - | None Visible | - | - | 5948896 |  | Detected | Detected |
| 22 | 311011.739 | 167148.081 | - | None Visible | - | - | - | - | - | - |
| 23 | 311003.93 | 167161.749 | 3 m | Cement debris | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 24 | 311022.132 | 167163.997 | - | None visible | - | - | - | - | - | - |
| 25 | 311035.09 | 167166.295 | - | None visible | - | - | - | - | - | - |

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Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 26 | 311051.843 | 167166.643 | - | - | - | - | - | - | - | - |
| 27 | 311061.304 | 167166.336 | 1.5m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| 28 | 310967.671 | 167046.222 | - | None visible | - | - | 5948397 | Detected | Detected | Detected |
| 29 | 310984.503 | 167057.596 | - | None visible | - | - | 5948398 |  | Detected |  |
| 30 | 310999.076 | 167059.564 | - | None visible | - | - | 5948399 |  | Trace |  |
| 31 | 311011.96 | 167110.904 | 1m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | 5948400 |  | Detected |  |
| 32 | 311015.308 | 167101.471 | - | None visible | - | - | 5948401 | Detected | Detected |  |
| 33 | 311024.857 | 167081.889 | - | None visible | - | - | 5948402 |  | Detected |  |
| 34 | 311044.699 | 167073.182 | 0.5m | Spray debris | $\begin{gathered} \text { As } \\ \text { W-23066-001 } \end{gathered}$ | Crocidolite | 5948403 |  | Detected |  |
| 35 | 311081.102 | 167068.383 | - | None visible | - | - | - | - | - | - |
| 36 | 311092.48 | 167042.659 | - | None visible | - | - | 5948406 |  | Detected |  |
| 37 | 311097.402 | 167016.665 | 0.5m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | 5948407 |  | Detected |  |
| 38 | 311055.581 | 167043.519 | - | None visible | - | - | 5948410 |  | Detected |  |
| 39 | 310973.789 | 167284.008 | - | None visible | - | - | - | - | - | - |
| 40 | 310963.725 | 167268.356 | - | None visible | - | - | - | - | - | - |
| S1 | 310860.827 | 167026.944 | 2m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S2 | 310858.475 | 167017.797 | - | None visible | - | - | - | - | - | - |
| S3 | 310859.433 | 167010.062 | - | None visible | - | - | - | - | - | - |
| S4 | 310857.706 | 167002.349 | - | None visible | - | - | - | - | - | - |
| S5 | 310869.736 | 166979.651 | - | None visible | - | - | - | - | - | - |
| S6 | 310870.439 | 166965.743 | 3 m | Insulation | A0712/030/012 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |

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Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S6 |  |  | 3 m | Insulation | A0712/030/013 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| S7 | 310886.946 | 166964.006 | - | - | - | - | - | - | - | - |
| S8 | 310906.053 | 166971.847 | 2m | Cement debris | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S9 | 310928.605 | 166987.252 |  | None visible |  |  | - | - | - | - |
| S10 | 310913.708 | 167003.136 | 1.5 m | Cement debris | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S10 |  |  | 1.5 m | Insulation | $\begin{gathered} \text { As } \\ \text { A0712/030/013 } \end{gathered}$ | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| S11 | 310904.41 | 167007.742 | 0.5 m | Spray debris | As W-23066-001 | Crocidolite | - | - | - | - |
| S11 |  |  | 0.5 m | Rope | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S12 | 310904.644 | 167000.593 | - | None visible | - | - | - | - | - | - |
| S13 | 310952.447 | 167191.975 | - | None visible | - | - | - | - | - | - |
| S14 | 310960.694 | 167145.278 | 2.5 m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | ${ }^{-}$ | - |
| S15 | 310985.381 | 166994.421 | - | - | - | - | - | - | Detected |  |
| S16 | 310989.237 | 166966.358 | 2.5 m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | 5948388 |  | Trace |  |
| S17 | 311046.593 | 166940.066 | 2.5 m | Rope | $\begin{gathered} \text { As } \\ \text { A0712/030/002 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S17 |  |  | 2.5 m | Cement debris | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S18 | 311058.048 | 166975.564 | - | - | - | - | - | - |  |  |

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Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S19 | 311071.014 | 166990.587 | - | None visible | - | - | 5948393 |  | Detected |  |
| S20 | 311071.346 | 167006.314 | - | None visible | - | - | 5948395 |  | Detected |  |
| S21 | 311140.925 | 166997.462 | surface | Insulation debris | W-23066-005 | Amosite | - | - | - | - |
| S21 |  |  | Surface to 0.5 m | Significant amount spray material | A0712/030/015 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| S22 | 311160.417 | 166999.517 | - | None visible | - |  | - | - | - | - |
| S23 | 311196.544 | 166975.437 | - | None visible | - |  | - | - | - | - |
| S24 | 311234.582 | 166950.539 | 1.1m | Cement debris | $\begin{gathered} \hline \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |
| S25 | 311230.964 | 166975.426 | 1m | Significant amount Insulation debris | A0712/030/014 | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
|  |  |  | 1 m | Significant amount spray material | $\begin{gathered} \text { As } \\ \text { A0712/030/015 } \end{gathered}$ | Amosite/ Chrysotile/ Crocidolite | - | - | - | - |
| S26 | 311233.133 | 166987.682 | - | None Visible | - | - | - | - | - | - |
| S27 | 311234.048 | 166998.555 | - | None Visible | - | - | - | - | - | - |
| S28 | 311218.979 | 166980.847 | - | None Visible | - | - | - | - | - | - |
| S29 | 311224.988 | 167018.132 | - | None Visible | - | - | - | - | - | - |
| S30 | 311151.747 | 167033.158 | - | None Visible | - | - | - | - | - | - |
| S31 | 311144.015 | 167045.042 | - | None Visible | - | - | - | - | - | - |
| S32 | 311147.207 | 167072.21 | - | None Visible | - | - | - | - | - | - |
| S33 | 31125.818 | 167125.259 | - | None Visible | - | - | - | - | - | - |
| S34 | 311162.147 | 167209.744 | - | None Visible | - | - | - | - | - | - |
| S35 | 311178.304 | 167209.744 | - | None Visible | - | - | - | - | - | - |

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Detailed Survey Report and Register

| Trial Hole | Eastings | Northings | Level | Visible asbestos materials | Identification | Result | Soil sample investigation | Amosite | Chrysotile | Crocidolite |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S36 | 311179.73 | 167250.294 | - | None Visible | - | - | - | - | - | - |
| S37 | 311168.568 | 167271.274 | - | None Visible | - | - | - | - | - | - |
| S38 | 311240.269 | 167038.677 | - | None Visible | - | - | - | - | - | - |
| S39 | 311226.736 | 167035.088 | - | None Visible | - | - | - | - | - | - |
| S40 | 311238.676 | 167067.002 | - | None Visible | - | - | - | - | - | - |
| S41 | 311257.463 | 167082.662 | - | None Visible | - | - | - | - | - | - |
| S42 | 311279.144 | 167109.359 | - | None Visible | - | - | - | - | - | - |
| S43 | 311326.853 | 167162.916 | - | None Visible | - | - | - | - | - | - |
| S44 | 311291.685 | 167164.689 | - | None Visible | - | - | - | - | - | - |
| S45 | 311274.944 | 167213.664 | - | None Visible | - | - | - | - | - | - |
| S46 | 311260.428 | 167248.999 | - | None Visible | - | - | - | - | - | - |
| S47 | 311264.825 | 167287.327 | - | None Visible | - | - | - | - | - | - |
| S48 | 311297.084 | 167292.696 | - | None Visible | - | - | - | - | - | - |
| S49 | 311317.772 | 167262.102 | - | None Visible | - | - | - | - | - | - |
| S50 | 311360.31 | 167189.588 | 2 m | Cement debris | $\begin{gathered} \text { As } \\ \text { A0712/030/001 } \end{gathered}$ | Chrysotile | - | - | - | - |

## Example photos of highly friable/ loose asbestos products found at Barry Waterfront



Loose spray coating on surface of surcharge


Loose asbestos insulation out of pit 12


Spray coating on ground between trial pit and surcharge


Bag containing spray material and loose material on plant road to site

| Comments | Examples of fibrous materials at Barry Waterfront. Pockets of severe |
| :--- | :--- | contamination were found in a number of areas of the site

## Recommendations

Under the 2012 Control of Asbestos Regulations most work on this material would usually require a licensed contractor, however any works would have to be risked assessed and the potential fibre release considered before making a final decision

## Example Photos

## Example photos asbestos products found at Barry Waterfront



Gasket material from pit 3


Cement material pit 3

## Comments

Recommendations
Under the 2012 Control of Asbestos Regulations most work on this material would not usually require a licensed contractor, however any works would have to be risked assessed and the potential fibre release considered before making a final decision

## Appendix I Analysis Certificates <br> (TOTAL) Pages 11

BULK SAMPLE ANALYSIS TEST
CERTIFICATE
No: W-23066

0610

## Client Contact:

John Trimble

ASM Compliance Ltd
Horton House
Tank Farm Rd
Llandarcy
Neath
SA10 6EN
Tel: 08448560668
Fax: 08448560669

## Life Environmental Services Ltd Contact:

Kevin Williams

Kingsland House
Kingsland Close
Barton Manor
St Philips
Bristol
BS2 ORJ

Tel: 01179556009
Fax: 01179554555

Site: Barry Waterfront
Date Received: 12/07/2012 Samples taken by David Rolfe (Life Environmental Services Ltd)

| No. | Item | Material | Location/Comments | Asbestos Result |
| :---: | :---: | :---: | :---: | :---: |
| 01 | Flock | Loose Insulation | Surcharge Mound | Crocidolite (Blue) |
| 02 | Flock \& Asbestos Cement | Loose Insulation | Surcharge Mound | Crocidolite (Blue) <br> Chrysotile (White) |
| 03 | Cement Debris | Debris | Pit 01 (1.8m) | Chrysotile (White) |
| 04 | Spray Debris | Debris | Pit 01 (1.8m) | Crocidolite (Blue) |
| 05 | Insulation Debris | Debris | Within Tyre Tracks | Amosite (Brown) |
| 06 | Insulation Debris | Debris | Pit 02 (Within Raised | Nound) Asbestos Detected |

Analyst's Name: James Bolt
Signature:


Test Date: 19/07/2012

## Life Environmental Services

The natural choice for environmental compliance and risk management solutions

| 4 Duckett's Wharf | New Meltham House | Kingsland House | Quayside Bus. Park |
| :--- | :--- | :--- | :--- |
| South Street | Unit 37/38 | Kingsland Close | Francis House |
| Bishop's Stortford | Beresford Way | Barton Manor | George Mann Way |
| Herts | Chesterfield | St Phillips | Hunslet, |
| CM23 3AR | Derbyshire | Bristol | Leeds |
|  | S41 9FG | BS2 0RJ | LS10 1DJ |
| Tel: 01279503117 | Tel: 01246263370 | Tel: 01179556009 | Tel: 01132718534 |
| Fax: 01279503162 | Fax 01246263399 | Fax: 01179554555 | Fax: 01132705599 |

## BULK SAMPLE ANALYSIS TEST

 CERTIFICATENo: W-23066

0610

## TEST NOTES:

1. Samples submitted for examination have been analysed to determine the presence of asbestos fibres using the methods documented in the HSG248: The Analyst Guide for Sampling, Analysis and Clearance Procedures \& in house procedures in section 11 of the Quality Manual.
2. Samples in this test report have been analysed at our Bristol Laboratory. Please note the material description is outside the scope of our UKAS accreditation.
3. This test report shall not be reproduced or copied without the written approval of Life Environmental Services Limited.
4. Opinion and interpretations are outside the scope of accreditation and are not included within this test report.
5. Samples taken by Life Environmental Services Ltd are in accordance with the HSG 248: The Analyst Guide for Sampling, Analysis and Clearance Procedures and HSG 264.
6. Life Environmental Services Ltd is not responsible for sampling errors where they have not taken the sample. 7. Life Environmental Services do not carry out wet sample preparation involving acids when performing fibre identification in the mobile laboratory only.

TEST CERTIFICATES ISSUED UNDER HEAD OFFICE UKAS ACCREDITATION No. 0610

## Life Environmental Services

The natural choice for environmental compliance and risk management solutions

| 4 Duckett's Wharf | New Meltham House | Kingsland House | Quayside Bus. Park |
| :---: | :---: | :---: | :---: |
| South Street | Unit 37/38 | Kingsland Close | Francis House |
| Bishop's Stortford | Beresford Way | Barton Manor | George Mann Way |
| Herts | Chesterfield | St Phillips | Hunslet, |
| CM23 3AR | Derbyshire | Bristol | Leeds |
|  | S41 9FG | BS2 ORJ | LS10 1DJ |
| Tel: 01279503117 |  |  |  |
| Fax: 01279503162 | Tel: 01246263370 | Tel: 01179556009 | Tel: 01132718534 |
|  | Fax 01246263399 | Fax: 01179554555 | Fax: 01132705599 |


| SDG: | 120727-72 | Customer: | ASM Compliance Ltd |
| :--- | :--- | :--- | :--- |
| Job: | H_ASMCOM_LLAN-1 | Attention: <br> Client Reference: | Order No.: |

## Asbestos Identification - Soil

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \& \& Date of Analysis \& Analysed By \& Comments \& Amosite (Brown) Asbestos \& Chrysotile (White) Asbestos \& Crocidolite (Blue) Asbestos \& Fibrous Actinolite \& Fibrous Anthophyllite \& Fibrous Tremolite \& Non-Asbestos Fibre \\
\hline \begin{tabular}{l}
Customer Sample Ref. \\
Depth ( m ) \\
Sample Type \\
Date Sampled \\
Date Receieved SDG Original Sample Method Number
\end{tabular} \&  \& 8/8/12 \& Kevin Bowron \& Loose fibres in soil \& Not Detected \& Detected \& Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected \\
\hline Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number \& \begin{tabular}{l}
33 NS Z \\
SOLID \\
120727-72 \\
5948402 \\
тм048
\end{tabular} \& 8/8/12 \& Kevin Bowron \& Loose fibres in soil \& Not Detected \& Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected \\
\hline Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number \& 34 NS Z
SOLID

$\left.\begin{array}{c}120727-72 \\ 594803 \\ \text { TM048 }\end{array}\right]$ \& 8/8/12 \& Kevin Bowron \& Loose fibres in soil \& Not Detected \& Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected <br>
\hline Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number \& 36 NS Z
SOLID
120727-72
5948406
TM048 \& 8/8/12 \& Kevin Bowron \& Loose fibres in soil \& Not Detected \& Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected <br>

\hline Customer Sample Ref. Depth ( m ) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number \& | PIT 9 NS Z |
| :--- |
| solid |
| 120727-72 |
| 5948385 |
| TMO48 | \& 8/8/12 \& Kevin Bowron \& Soil containing

loose fibres \& ACM
debris \& Not Detected \& Detected \& Detected \& Not Detected \& Not Detected \& Not Detected \& Not Detected <br>
\hline
\end{tabular}

| SDG: | 120727-72 | Customer: | ASM Compliance Ltd |
| :--- | :--- | :--- | :--- |
| Job: <br> Client Reference: <br> Location: | H_ASMCOM_LLAN-1 | Attention: <br> Order No.: |  |


|  |  | Date of Analysis | Analysed By | Comments | Amosite (Brown) Asbestos | Chrysotile (White) Asbestos | Crocidolite (Blue) Asbestos | Fibrous Actinolite | Fibrous Anthophyllite | Fibrous Tremolite | Non-Asbestos Fibre |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Sample Ref. <br> Depth (m) <br> Sample Type <br> Date Sampled <br> Date Receieved SDG Original Sample Method Number | S 15 NS Z <br> SOLID <br> 120727-72 <br> 5948387 <br> TM048 | 8/8/12 | Kevin Bowron | Loose fibres in soil | Not Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
| Customer Sample Ref. Depth ( m ) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number | S 16 NS Z <br> SOLID <br> 120727-72 <br> 5948388 <br> TM048 | 8/8/12 | Kevin Bowron | Loose fibres in soil | Not Detected | Trace | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
| Customer Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number | S 18 NS Z <br> SOLID <br> 120727-72 <br> 5948391 <br> TM048 | 8/8/12 | Kevin Bowron | Loose fibres in soil | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
| Customer Sample Ref. Depth (m) <br> Sample Type Date Sampled Date Receieved SDG Original Sample Method Number | S 19 NS Z <br> SOLID <br> 120727-72 <br> 5948393 <br> TM048 | 8/8/12 | Kevin Bowron | Soil containing loose fibres and ACM debris | Not Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |
| Customer Sample Ref. Depth ( m ) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number | S 20 NS Z <br> SOLID <br> 120727-72 <br> 5948395 <br> TM048 | 8/8/12 | Kevin Bowron | Loose fibres in soil | Not Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |

## ALcontrol Laboratories Analytical Services

| SDG: | 120727-72 | Customer: | ASM Compliance Ltd |
| :--- | :--- | :--- | :--- |
| Job: | H_ASMCOM_LLAN-1 | Attention: <br> Client Reference: <br> Order No.: | Mark Williams |
| Location: | The Quays, Barry Waterfront |  |  |

## Asbestos Identification - Soil

|  |  | Date of Analysis | Analysed By | Comments | Amosite (Brown) Asbestos | Chryotile (White) Asbestos | Crocidolite (Blue) Asbestos | Fibrous Actinolite | $\begin{aligned} & \text { Fibrous } \\ & \text { Anthophyllite } \end{aligned}$ | Fibrous Tremolite | Non-Asbestos Fibre |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Sample Ref. <br> Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number | $\begin{gathered} \hline 32 \text { NS Z } \\ \text { SoLID } \\ \\ \hline \begin{array}{c} 120727-72 \\ 594401 \\ \text { TM048 } \end{array} \end{gathered}$ | 8/8/12 | Lauren Sargeant | Soil containing ACM debris | Detected | Detected | Not Detected | Not Detected | Not Detected | Not Detected | Not Detected |

CERTI FI CATE FOR I DENTI FI CATI ON OF ASBESTOS FI BRES
STANDARD PREMIUM
EMERGENCY

| Client: | ASM COMPLIANCE LTD | Analysis Report No. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Address: | HORTON HOUSE HORTONS YARD LLANDARCY SA10 6EN |  | SCO/12/22782 |  |  |
| Attention: | JON TRIMBLE | Report Date. | 25/07/12 |  |  |
|  | BARRY WATERFRONT |  |  |  |  |
| Site Address: |  | Site Ref No . | N/A |  |  |
| Date sample taken: | UNKNOWN | Page No:No. of Samples: | 1 | Of | 1 |
| Date sample received: | 25/07/12 |  | 7 |  |  |
| Date of Analysis: | 25/07/12 | Obtained: | DELIVERED |  |  |

Samples of material, referenced below, have been examined to determine the presence of asbestos fibres, using Scopes Asbestos Analysis "in house" method of transmitted/polarised light microscopy and centre stop dispersion staining, based on HSE's HSG248.
If samples have been DELIVERED the site address and actual sample location is as given by the client at the time of delivery. Scopes Asbestos Analysis Services Limited are not responsible for the accuracy or competence of the sampling by third parties. Under these circumstances Scopes Asbestos Analysis Services Limited cannot be held responsible for the interpretation of the results shown.

| SCOPES <br> SAMPLE | CLIENT <br> SAMPLE No. | Sample Location | Fibre Type Detected |
| :---: | :---: | :---: | :---: |
| 1 | A0712/030/009 | PIT 12- DEBRIS ON WOOD | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 2 | A0712/030/010 | PIT 12- INSULATING DEBRIS | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 3 | A0712/030/011 | PIT 16- INSULATING IN BLANKET | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 4 | A0712/030/012 | PIT 56- INSULATING | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 5 | A0712/030/013 | PIT 56- INSULATING | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 6 | A0712/030/014 | PIT S25- INSULATING | AMOSITE/ CHRYSOTILE/ CROCIDOLITE |
| 7 | A0712/030/015 | PIT S21- SPRAY INSULATION | CROCIDOLITE |
|  |  |  |  |
|  |  |  |  |

KEY: NADIS - No Asbestos Detected in Sample
Note: All samples will be retained for a minimum of six months
Note: This Certificate for Identification of Asbestos Fibres shall not be reproduced except in full without the written approval of the Laboratory.

| Analysed by: | W. JEFFERIES | Authorised signatory: |  |
| :--- | :--- | :--- | :--- |
|  |  | SBOLTON- Q.C.M |  |

BULK 001-VER 5 12-AUGUST-09-QCM

CERTI FI CATE FOR IDENTI FI CATI ON OF ASBESTOS FI BRES
STANDARD PREMIUM

EMERGENCY

| Client: | ASM COMPLIANCE LTD | Analysis Report No. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Address: | HORTON HOUSE HORTONS YARD LLANDARCY SA10 6EN |  | SCO/12/22660 |  |  |
| Attention: | JON TRIMBLE | Report Date. | 25/07/12 |  |  |
|  | BARRY WATERFRONT |  |  |  |  |
| Site Address: |  | Site Ref No . |  | /A |  |
| Date sample taken: | UNKNOWN | Page No:No. of Samples: | 1 | Of | 1 |
| Date sample received: | 25/07/12 |  | 6 |  |  |
| Date of Analysis: | 25/07/12 | Obtained: | DELIVERED |  |  |

Samples of material, referenced below, have been examined to determine the presence of asbestos fibres, using Scopes Asbestos Analysis "in house" method of transmitted/polarised light microscopy and centre stop dispersion staining, based on HSE's HSG248.
If samples have been DELIVERED the site address and actual sample location is as given by the client at the time of delivery. Scopes Asbestos Analysis Services Limited are not responsible for the accuracy or competence of the sampling by third parties. Under these circumstances Scopes Asbestos Analysis Services Limited cannot be held responsible for the interpretation of the results shown.

| SCOPES <br> SAMPLE | CLIENT <br> SAMPLE No. | Sample Location | Fibre Type Detected |
| :---: | :---: | :---: | :---: |
| 1 | A0712/030/001 | PIT 3- CEMENT | CHRYSOTILE |
| 2 | A0712/030/002 | PIT 3- ROPE | CHRYSOTILE |
| 3 | A0712/030/003 | PIT 3- GASKET | CHRYSOTILE |
| 4 | A0712/030/004 | PIT 4- CEMENT | CHRYSOTILE |
| 5 | A0712/030/005 | PIT 4- CEMENT | CHRYSOTILE |
| 6 | A0712/030/006 | PIT 4- TEXTILE | CHRYSOTILE |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

KEY: NADIS - No Asbestos Detected in Sample
Note: All samples will be retained for a minimum of six months
Note: This Certificate for Identification of Asbestos Fibres shall not be reproduced except in full without the written approval of the Laboratory.

| Analysed by: | J. BARNETT | Authorised signatory: |  |
| :--- | :--- | :--- | :--- |
|  |  | SBOLTON- Q.C.M |  |

BULK 001-VER 5 12-AUGUST-09-QCM

CERTI FI CATE FOR I DENTI FI CATI ON OF ASBESTOS FI BRES
STANDARD

EMERGENCY

| Client: | ASM COMPLIANCE LTD | Analysis Report No. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Address: | HORTON HOUSE HORTONS YARD LLANDARCY SA10 6EN |  | SCO/12/22757 |  |  |
| Attention: | JON TRIMBLE | Report Date. | 25/07/12 |  |  |
|  | BARRY WATERFRONT |  | N/A |  |  |
| Site Address: |  | Site Ref No.Page No: |  |  |  |
| Date sample taken: | UNKNOWN |  | 1 | Of | 1 |
| Date sample received: | 25/07/12 | Page No: No. of Samples: | 2 |  |  |
| Date of Analysis: | 25/07/12 | Obtained: |  | ERE |  |

Samples of material, referenced below, have been examined to determine the presence of asbestos fibres, using Scopes Asbestos Analysis "in house" method of transmitted/polarised light microscopy and centre stop dispersion staining, based on HSE's HSG248.
If samples have been DELIVERED the site address and actual sample location is as given by the client at the time of delivery. Scopes Asbestos Analysis Services Limited are not responsible for the accuracy or competence of the sampling by third parties. Under these circumstances Scopes Asbestos Analysis Services Limited cannot be held responsible for the interpretation of the results shown.

| SCOPES <br> SAMPLE | CLIENT <br> SAMPLE No. | Sample Location | Fibre Type Detected |
| :---: | :---: | :---: | :---: |
| 1 | A0712/0301/07 | PIT 4 - DEBRIS ON BRICK | NADIS |
| 2 | A0712/0301/08 | PIT 5 - CEMENT WITH POSSI BLE SPRAY ON | CHRYSOTILE |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

KEY: NADIS - No Asbestos Detected in Sample
Note: All samples will be retained for a minimum of six months
Note: This Certificate for Identification of Asbestos Fibres shall not be reproduced except in full without the written approval of the Laboratory.

| Analysed by: | M ZHOU | Authorised signatory: |  |
| :--- | :--- | :--- | :--- |
|  |  | Print name: | SBOLTON- Q.C.M |

BULK 001-VER 5 12-AUGUST-09-QCM
(TOTAL) Pages 1

Appendix II Site Schematics


