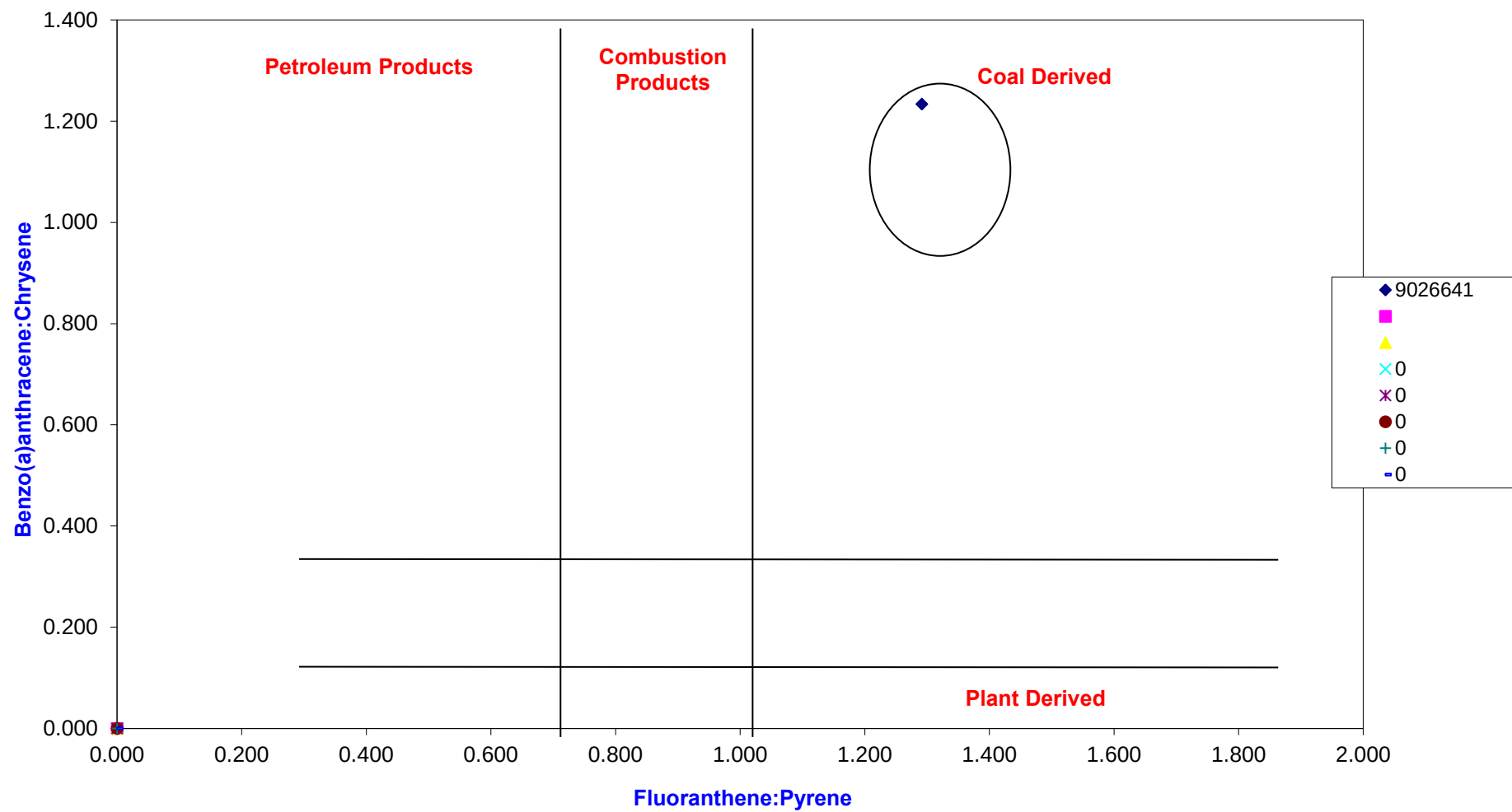
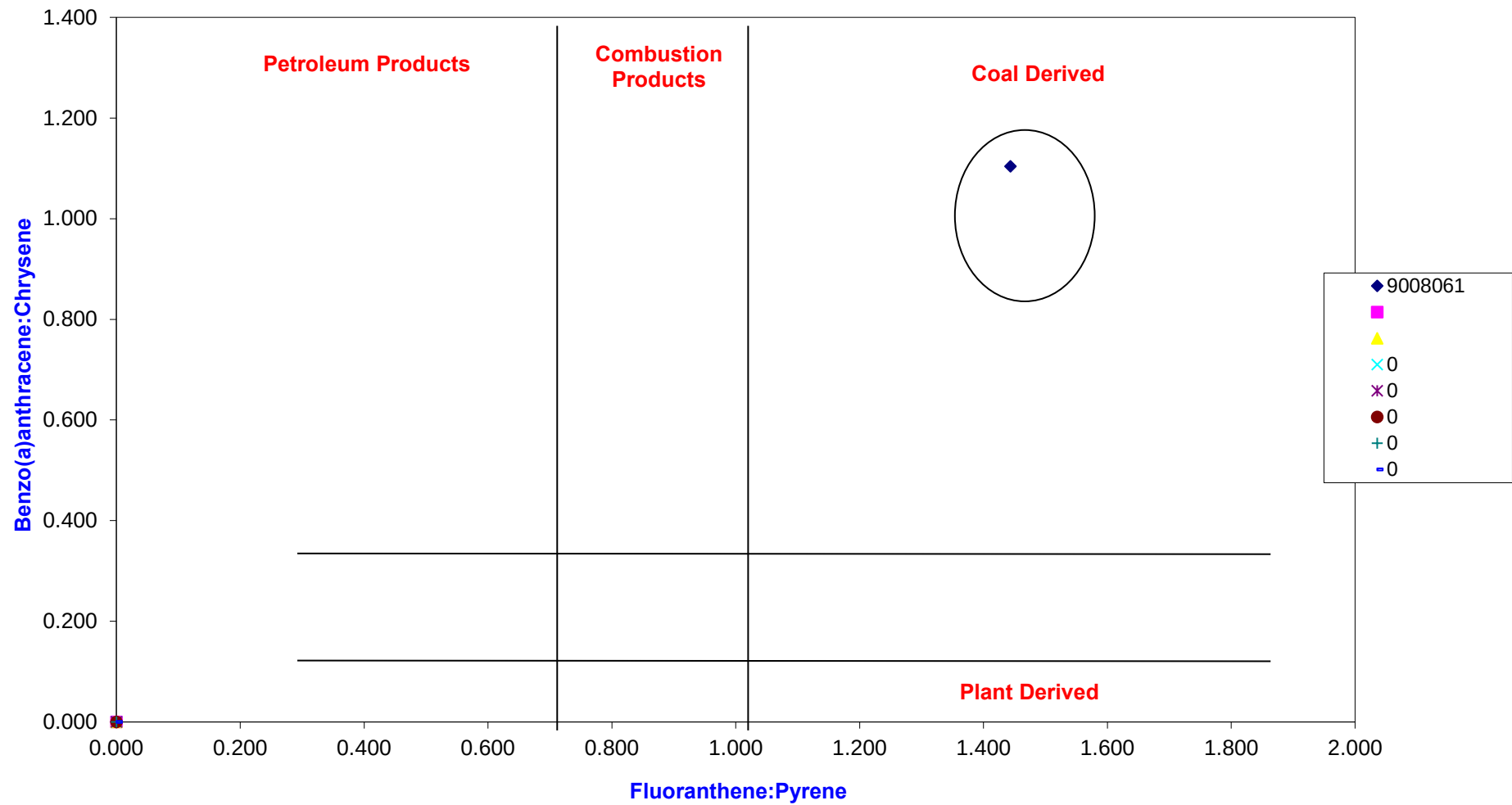


Appendix I

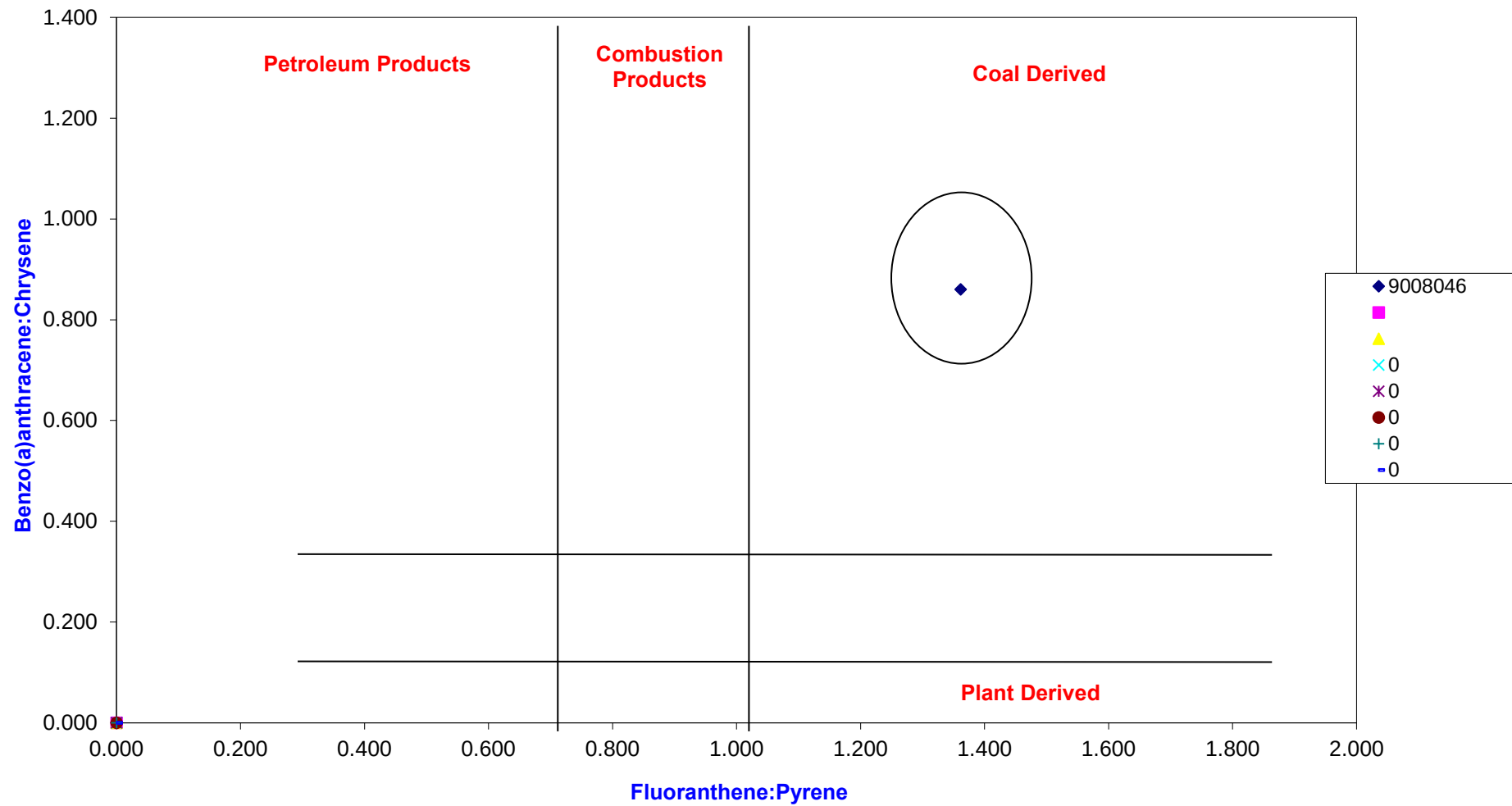
**Product Source Signature Double Plot of Fluoranthene : Pyrene versus Benz(a)anthracene :
Chrysene for 140322-76 Sample 9026641.**



Product Source Signature Double Plot of Fluoranthene : Pyrene versus Benz(a)anthracene : Chrysene for 140320-29 Sample 9008061.



**Product Source Signature Double Plot of Fluoranthene : Pyrene versus Benz(a)anthracene :
Chrysene for 140320-29 Sample 9008046.**



Appendix J

Technical note

Project	Coed Darcy	Reference	5041216-PLOTS-TN-0001316
Subject	SMH Plot- Fill Materials	Revision	
Author	Barney Irlam	Checker	Michelle Lee
Issued to	URS	Reviewer	Mike Poland
Date	14/01/2015	Authoriser	Mike Poland

Introduction

This Technical Note (TN) has been prepared as an addendum to the Monitor phase 31 Validation Report, dated December 2014 (5041216-PLOTS-RPT-1284). This TN summarises all available information for the imported fill material that will be used to upfill the lower, western part of Monitor phase 31.

This Technical Note relates to imported materials in Stockpiles 113, 114 and 115. These stockpiles have been allocated for use on the west half of phase 31 to bring the plot up to the level required for construction (FFL minus 500mm). The material will be placed between 0.5 and 1m below FFL.

Quality assurance of the imported material has been carried out in-line with the agreed methodology and the Section 106 (Part 3, Section 8). Details on these quality assurance procedures are provided within this technical note to justify the use of the imported fill in the proposed area.

Summary of imported materials

In line with the adopted procedure for all imported soils, materials were initially inspected and sampled at source by an Atkins Site Engineer, prior to import. The history of each source site has been reviewed using available information and online historic maps (www.old-maps.co.uk) in order to classify the site as either Green or Brownfield.

The sources of the imported material proposed for fill in the phase 31 area are summarised in Table 1 below:

Table

Source ID	Description of source site	Classification of source site	Description of material	Additional information	Number of samples collected at source	Supporting documentation
Cimla (sp113)	School Playing Fields	Greenfield	Sandy Clay	Chemical Analysis & Site Investigation Report	4	Appendix A
Lougher (sp114)	Undeveloped area of land located between housing developments.	Greenfield	Slightly Sandy Clay	Chemical Analysis & Trial Pit Location Plan	N/A	Appendix B
Kenfig (sp115)	Undeveloped area within Kenfig Industrial Estate	Brownfield	Sandy Clay	N/A	4	Appendix C

The material from Cimla and Kenfig was imported by J McCarthy Ltd and stored as stockpiles 113 and 115 respectively. The material from Lougher was imported by S&G Soils and stored as stockpile 114.

During the course of the import, additional samples were taken by Atkins from material in order to achieve the required stockpile sampling frequencies as outlined in the S106 (refer to Table 2).

Technical note

Visual inspection of the stockpiles, during import and sampling, indicated no evidence of any staining or odours (VO=0/0).

Validation Frequency

Table 2 in the S106 (Schedule 8, Part 3, Paragraph 8) (Appendix C) sets out the requirements for validation testing of imported material.

Table

Testing for the validation Suite at the following frequency	Shallow Soils Residential 0m FFL	Deeper Soils Residential 1m below FFL
Imported Quarried materials	1 per 500m ³ , ex situ composite of 5 regular sub samples	1 per 1000m ³ , ex situ composite of 5 regular sub samples
Imported Soil from a Greenfield Site	1 per 250m ³ , ex situ composite of 5 regular sub samples	1 per 500m ³ , ex situ composite of 5 regular sub samples
Imported Soil from a Characterised Brownfield Site	1 per 25m ³ , ex situ composite of 5 regular sub samples	1 per 50m ³ , ex situ composite of 5 regular sub samples

The volumes of the stockpiles have been estimated and are presented in Table 3 together with the required validation frequency based on the source material as outlined in S106.

Table

Stock pile no Source I	Estimated volume m	Source Classification	Target Frequency as set out in the S	Total number of samples from Stock pile	Frequency Achieved
113 - Cimla	2500	Greenfield	1/250m ³	44	1/56m ³
114 - Lougher	500	Greenfield	1/250m ³	20	1/25m ³
115 - Kenfig	2005	Brownfield	1/25m ³	80	1/25m ³

Table 3 shows that the three stockpiles intended for use on phase 31 have been sampled to the required frequency based on their respective source site classifications.

A summary of the results of all laboratory testing on each of the stockpiles along with the adopted thresholds are attached as Appendix D.

The result of analysis revealed no exceedances of the screening values and indicates that the soils are suitable for use in residential areas between 0.5 and 1m depth.

All samples were screened for asbestos. Chrysotile asbestos was detected in five samples from Cimla and five samples from Kenfig. Quantification of asbestos on these 10 samples revealed concentrations of Chrysotile in all the samples to be below the limit of detection (<0.001%); and therefore below the threshold value of 0.02%. No asbestos was detected in any of the samples from the Lougher material.

Technical note

Appendix A Cimla

**PROPOSED
DEVELOPMENT LAND
OFF GROVES ROAD
NEATH**

PHASE II AREA

**SITE INVESTIGATION
REPORT**

May 2013

***ateb*Consult**

42 Gurnos Road

Ystalyfera

Swansea

SA9 2HY

☎ 01639 849279

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

SITE INVESTIGATION DESK STUDY REPORT

May 2013

13/007

INDEX

- 1.0 Brief**
- 2.0 Basis of Report**
- 3.0 Site Characteristics**
- 4.0 Proposed Phase II Development**
- 5.0 Geology & Mining Aspects**
- 5.0 Existing Buildings**
- 6.0 Mining Study**
- 7.0 Conclusions & Recommendations**

- Appendices**
- A Mining Report**
- B Phase I Site Investigation Data/Records**

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

SITE INVESTIGATION DESK STUDY REPORT

1.0 Brief

The brief for the study, as instructed in April 2013 by the client - Hale Construction, who are intending to develop the Phase II site on behalf of Gwalia HA for housing, was as follows.

- 1.1** To carry out a site investigation desk study on land at Groves Road that forms the Phase II site area.
- 1.2** To report on the geotechnical aspects and the mining history of the site.
- 1.3** To report on the technical constraints, related to past mining activities and associated risk, to be taken into account in the detailed masterplanning and design of a housing development on the site.

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

SITE INVESTIGATION DESK STUDY REPORT

2.0 Basis of Report

2.1 The basis of this report is a desk study investigation carried out on the land off Groves Road, Neath. The scope of the study encompasses the following.

2.1.1 Review of available information on the site, including a review of available historic data and archive data held by Ateb Consult on the area in general and in particular the detailed intrusive site investigations carried out as part of the adjacent Phase I site area.

2.1.2 Liaison with the Coal Authority and the local authority over the mining history and geotechnical aspects of the site.

2.1.3 Geotechnical desk study and liaison with the British Geological Survey.

2.1.4 Initial visual appraisal of the site area.

2.1.6 Liaison with the client and their architects over the site access/site infrastructure.

2.2 Following the desk study work the results were gathered together and conclusions and recommendations drawn up and presented in this report.

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

MINING STUDY - DESK STUDY REPORT

3.0 Site Characteristics

3.1 Location

The site lies off Groves Road, Neath, grid reference: SS 275450E 196325N. The proposed development site comprises of an irregular parcel of land (as shown in Figs 1 & 2). The Phase II area to be developed consists of two separate parcels - Areas A and B - as shown on Fig.3.

3.2 Land Ownership

At the time of the study we understand that the land is currently either in local authority (Area A) and Gwalia Housing (Area B) ownership. Area A would be acquired by GHA as part of the scheme.

3.3 Topography & Present Usage

The overall site is partially developed with an existing GHA housing block situated on the Phase I area. The remainder of the site area is an undeveloped plot of mostly overgrown land which can currently be accessed off the new site area. The site parcel topography is undulated in parts and ascends irregularly from the north boundary towards the south. The difference in levels between the north and south is in the order of approximately 5-7m.

3.4 Access

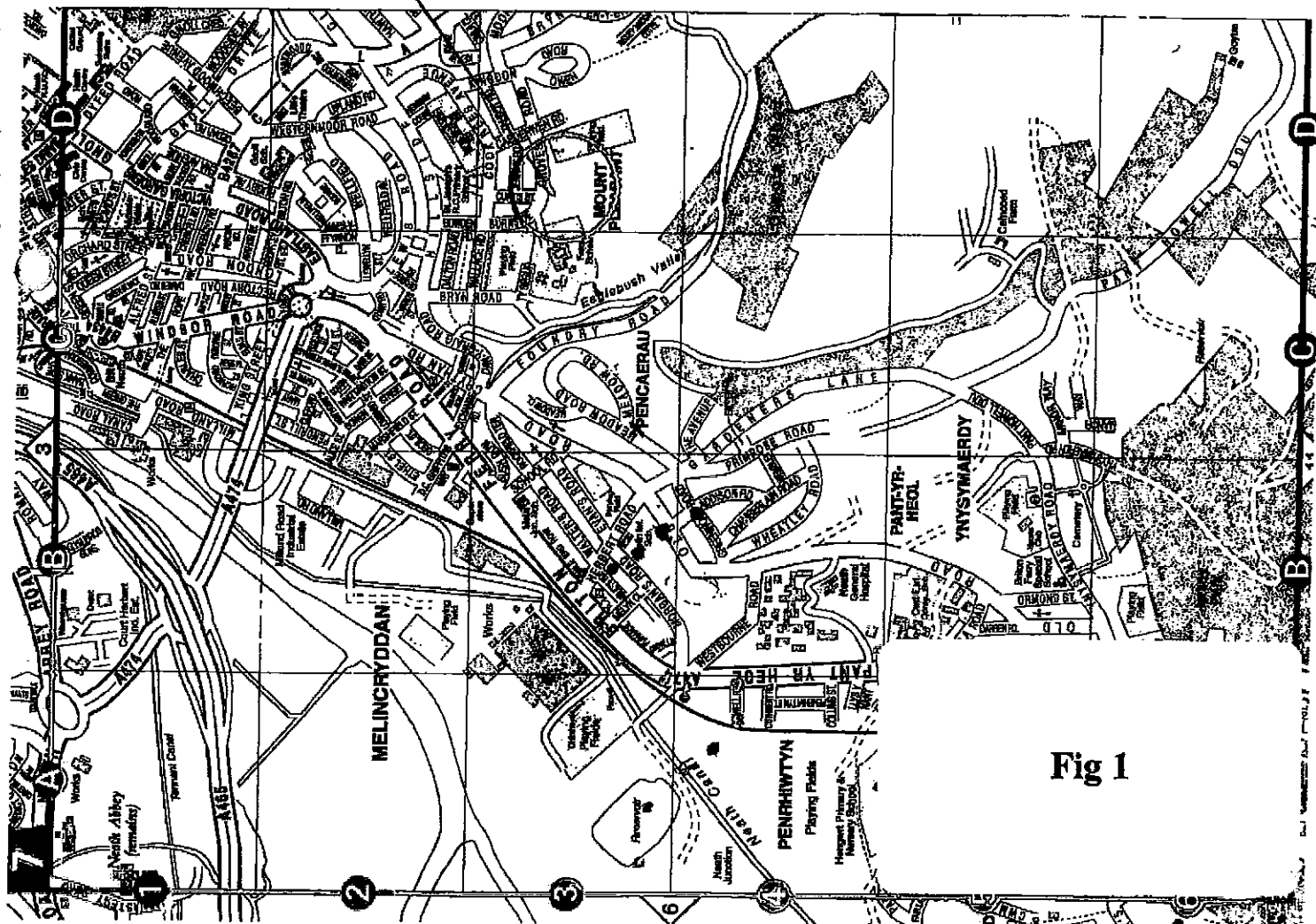
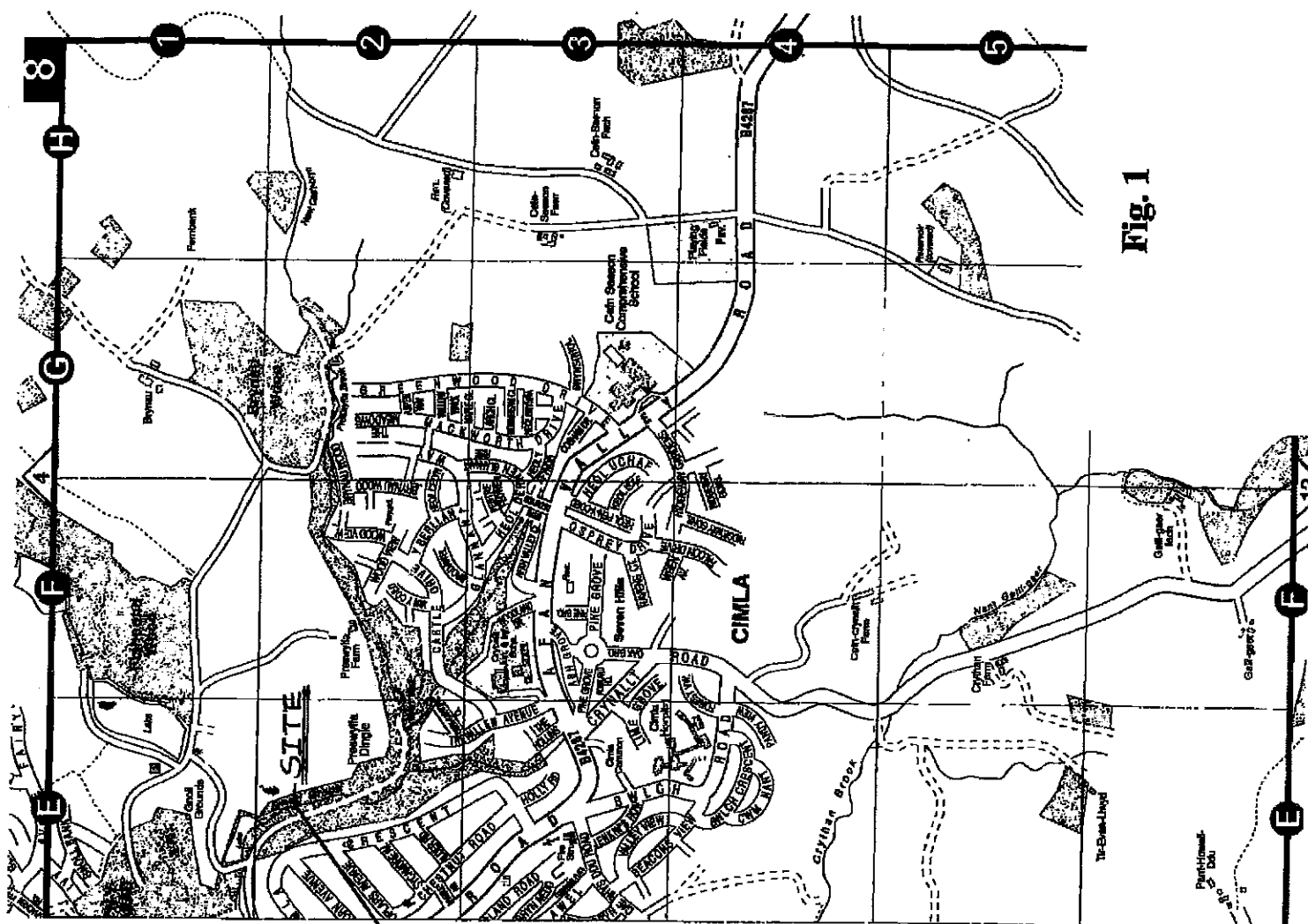
Currently there is access off the new site road serving Phase I to both parcels of the Phase II area.

3.5 Site History

A review of available historic OS and geological plans of the area indicates that the area of land surrounding the site does not appear to have been developed in the past, and has been untouched over time, being rough pasture/overgrowth as at present. Mining activities have been undertaken in the general area.

3.6 Adjacent Land Use

To the north of the site lies Groves Road and developed land, comprising of residential housing. Hillside Secure Unit (Social Services) lies to the west boundary with open land to the east and south.



Scan is 05/099 drawings
as site plan 24.11.05

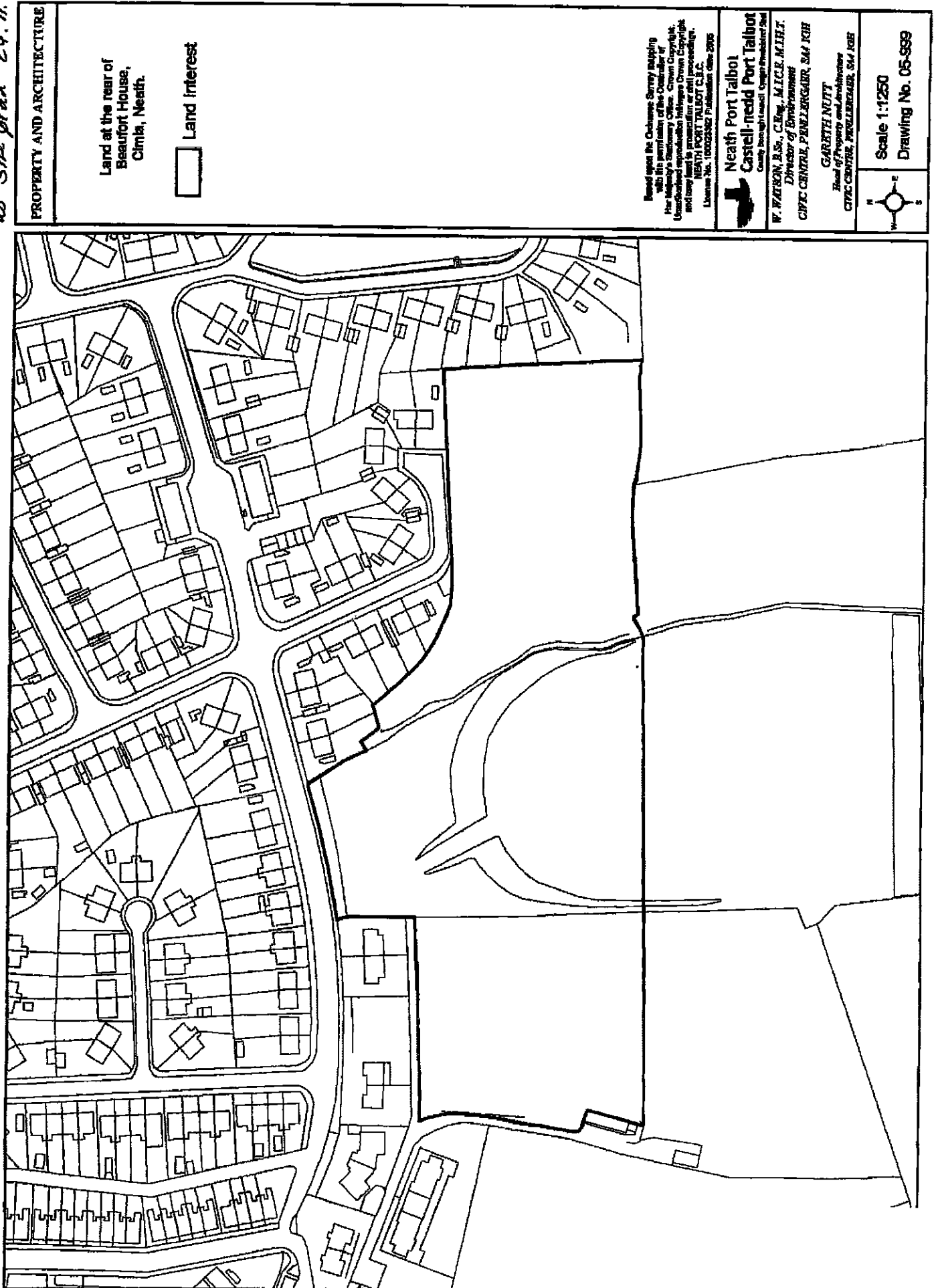
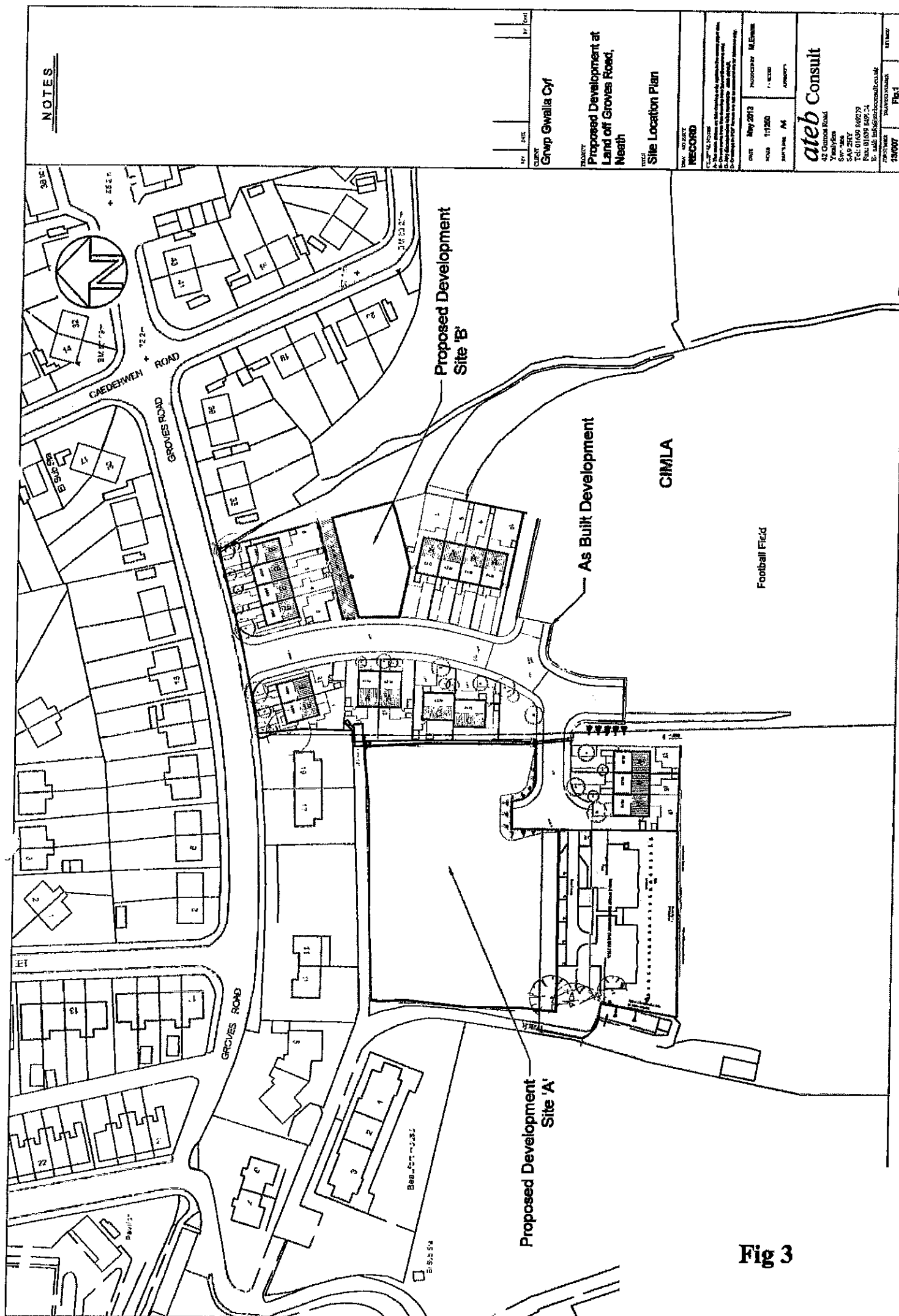


Fig 2



PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

MINING STUDY - DESK STUDY REPORT

4.0 Proposed Phase II Development

4.1 General

The Phase II development of the site comprises of new dwellings on Phase II areas A & B as shown in Fig.4, together with associated access roads, drives and infrastructure.

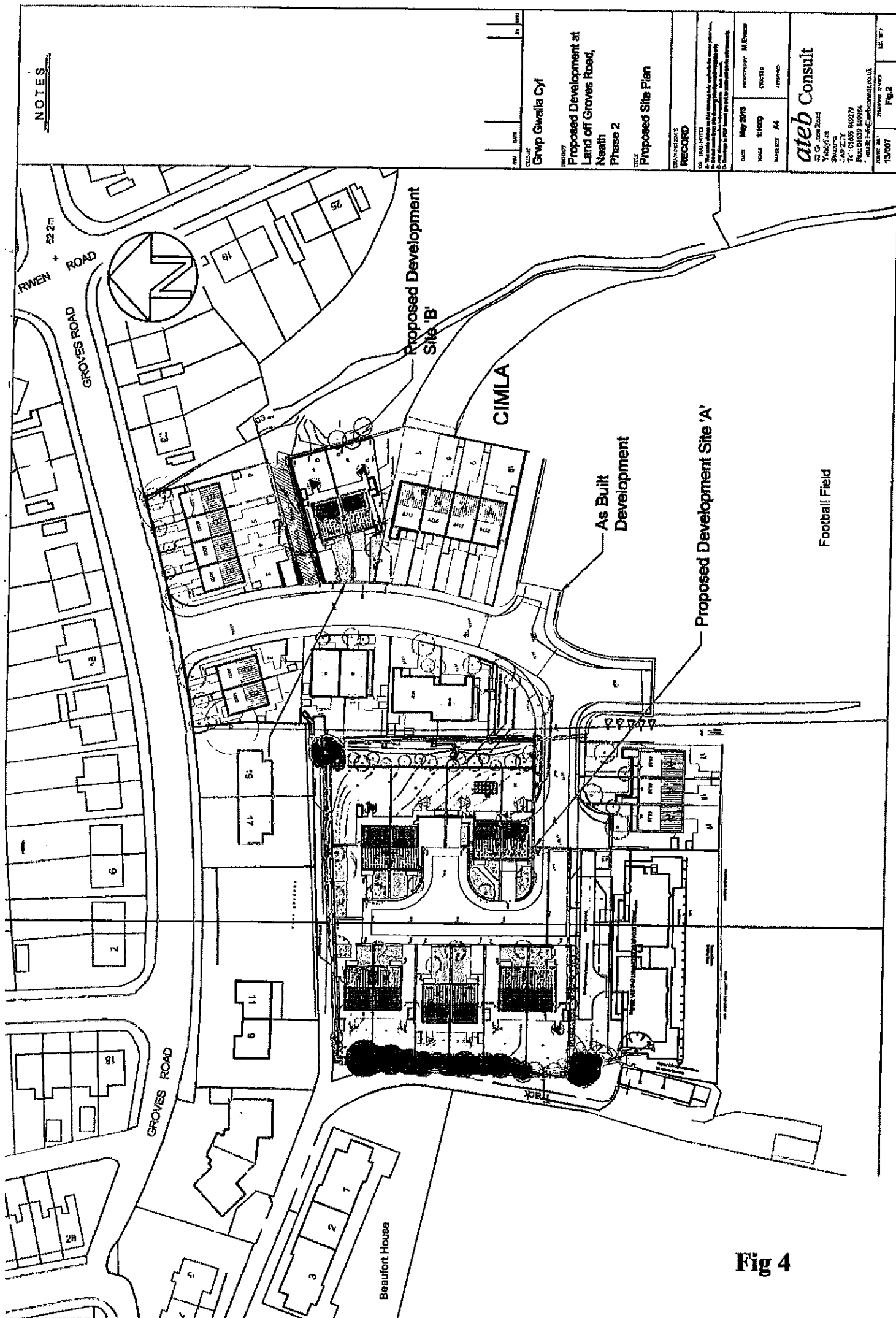


Fig 4

NOTES

Grwp Gwella Cyf

Proposed Development at
Land off Groves Road,
Neath
Phase 2

Proposed Site Plan

RECORD

DATE: May 2015
SCALE: 1:1000
MATERIALS: A4
PROJECT: M. E. Evans
DRAWN: J. A. J. J.

ateb Consult

ateb Consult
10 G. G. Road
Ynysyafn
Swansea
SA9 2.7Y
Tel: 01459 46279
Fax: 01459 46964
Email: info@atebconsult.co.uk

DATE: 13/06/17
FIG. 2

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

MINING STUDY - DESK STUDY REPORT

5.0 Geology & Mining Aspects

5.1 Superficial Geology

From an inspection of the site area and available geological records the natural underlying material is shown to be glacial drift material with available data on the area indicating that this material is generally shallow in depth as confirmed in boreholes sunk as part of the Phase I development.

5.2 Solid Geology

The site is located in an area of South Wales where the geological plans (as shown in Fig.5) show the solid strata under the site as being the Upper Pennant sandstones and coal measures of the South Wales Coalfield. The geological plans also show that the these rocks dip to the north by approximately 5° but there are no coal seams subcropping in the area.

5.3 Mining/Mineral Extraction History

5.3.1 Research including liaison with the Coal Authority indicates that coal mining operations have occurred at a depth below the site into two seams at some 60m and 180m depth but ceased in 1888. All related ground movements related to these seams should now have ceased. The mining records also note there are seams nearer the surface that may have been worked in the past. As a result significant intrusive site investigations were undertaken between 2007-2012 as part of the current phase I GHA development to ascertain depth of any coal seams ricks and also location of any mine shafts in the area as the CA report indicted a mine shaft near current phase IIB area ; .Further coal mining information is given in the Coal Authority report enclosed in Appendix A. and the recent mining study work undertaken is summarized below.

5.4 Hydrogeology

The Environment Agency ground water vulnerability plans of the area indicate that the solid strata under the site is classed as a minor aquifer of intermediate permeability with low permeability drift deposits lying over the solid strata. It is thus considered that the risk to a potential development on the site from groundwater pollution or cross contamination from groundwater flows is low.

50'

W. L

LINE OF
SECTION 2

69 70 71 72 73 74 75 76 77 78

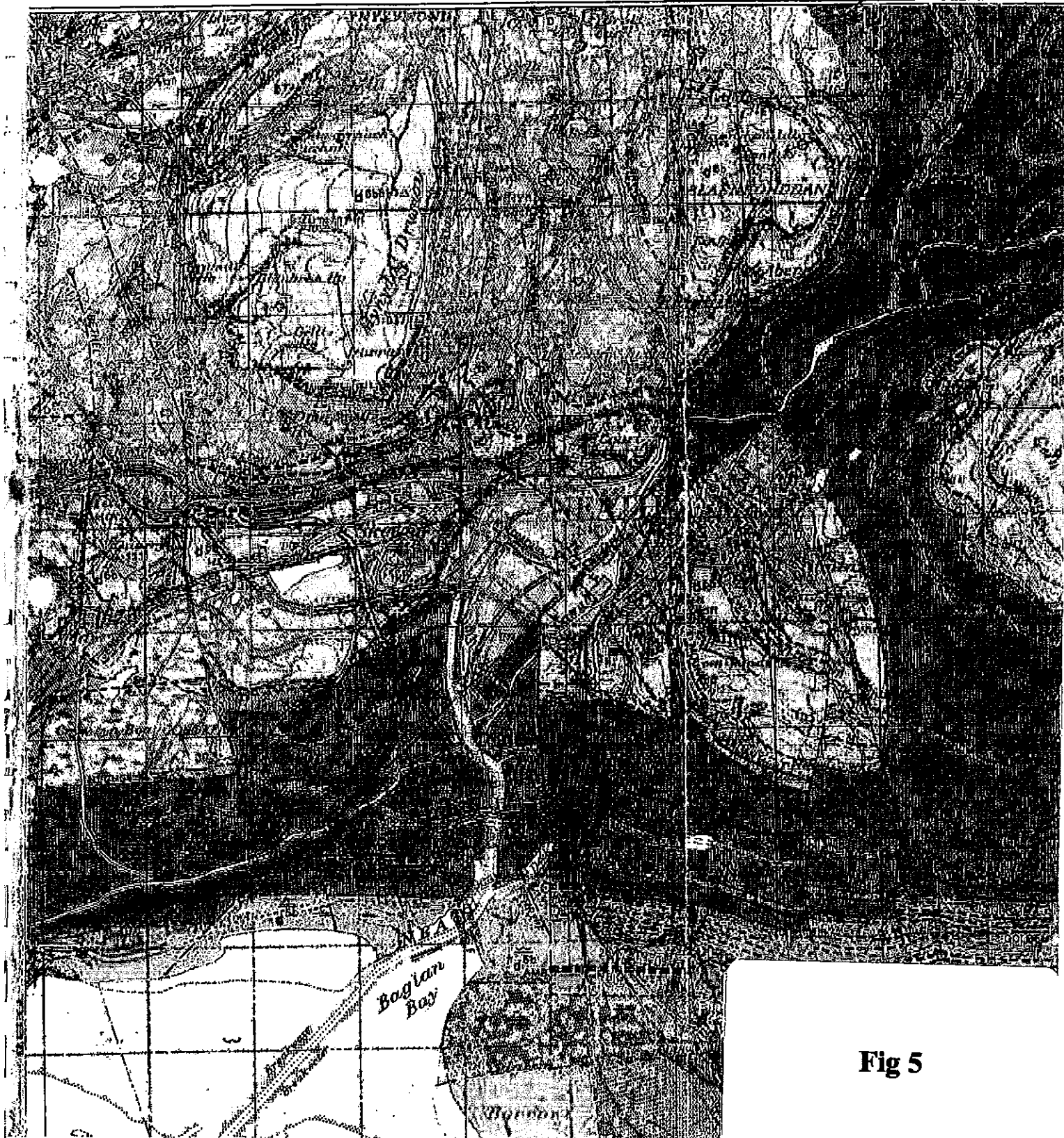


Fig 5

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

MINING STUDY - DESK STUDY REPORT

6.0 Mining Study

6.1 General

A review of the available geological and mining records for the site area and adjoining area has been undertaken, inclusive of a review of the extensive geotechnical site investigations and mine entry investigations undertaken as part of the Phase I development.

6.2 Mining/Geological Conditions

During the site investigations for the Phase I development extensive investigations were undertaken with a series of on site investigations comprising of rotary boreholes, shell and augur bores and trial pits aimed at establishing the geology of the site, the depth to coal seams and the presence/location of any mine entries in the area of the site. As a result of these investigations detailed sections of geotechnical information was derived which are reproduced in Figs 6 and 7 below. With reference to Figs 6 and 7 it can be seen that there are coal seams under the site but they do not affect the Phase II proposals due to depth and location. Further the detailed investigations into a possible mine entry near phase IIB site area failed to find any shaft evidence and the conclusion was drawn as reported to the CA at the time that the shaft lies to the East and off the site. With regard to the individual Phase II areas the following conclusions are drawn.

6.3 Area A

The coal seams under the area are at significant depth so not as to affect surface layers. .

6.4 Area B

There are past worked coal seams under the site under the site but there is is sufficient rock cover above to mitigate against risks . The extensive drilling work in the area confirmed that there is no shaft in this area and the site is suitable for development . Dateless of the the extensive study works undertaken on this area are given in Appendix B

NOTES

KEY:

- Derives Sewerage Location
- Derives Secondary Sewerage and Tidal Pit Traps
- Derives Spill Tank Location
- Derives Storm Sewer Hole

D	Aug '10	2 No. Barrioles removed from plan.	M.E
C	July '10	BH1 position altered.	M.E
B	July '10	Spill Tank and Storm BH locations shown.	M.E
A	April '10	Additional Tidal Pits & Sewerage holes.	M.E
REV	DATE	BY	DATE

CLIENT
Grwp Gwalia Cyl

PROJECT
Proposed Development at
Land off Groves Road,
Neath
Site Investigation Plan

CONTROL NUMBER
A: This plan shows the findings of the site investigation.
B: This plan shows the findings of the site investigation.
C: This plan shows the findings of the site investigation.

DATE	April 2010	REVISION	M.E
SCALE	1:500	CHECKED	
STATUS	A1	APPROVED	

ateb Consult

42 Queen Road
Yelliffen
Swansea
SA9 2BT
Tel: 01792 849779
Fax: 01792 849794
E-mail: info@atebconsult.co.uk

PROJECT NUMBER	10017	PROJECT NAME	102	CLIENT	C
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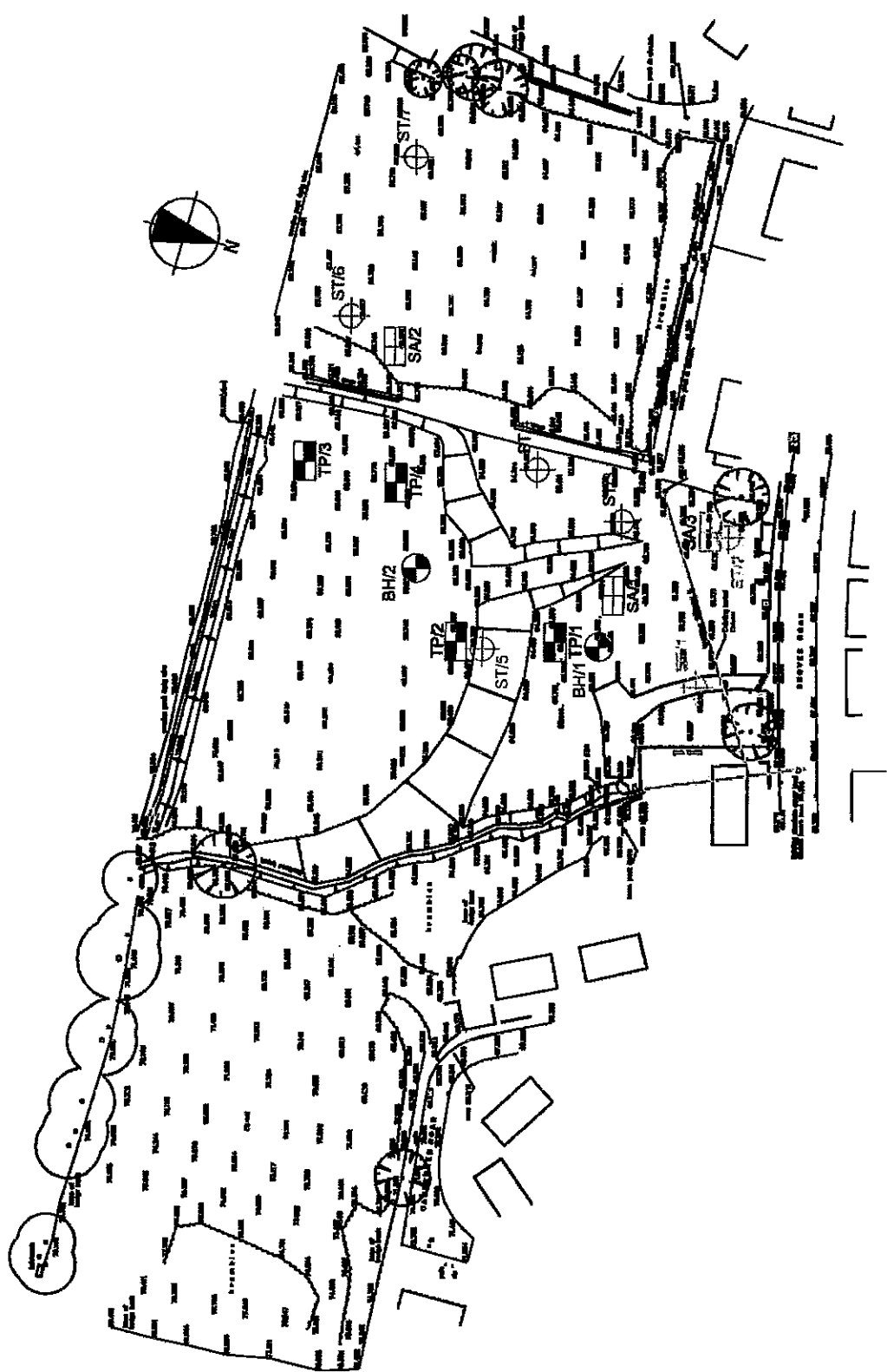


Fig 6

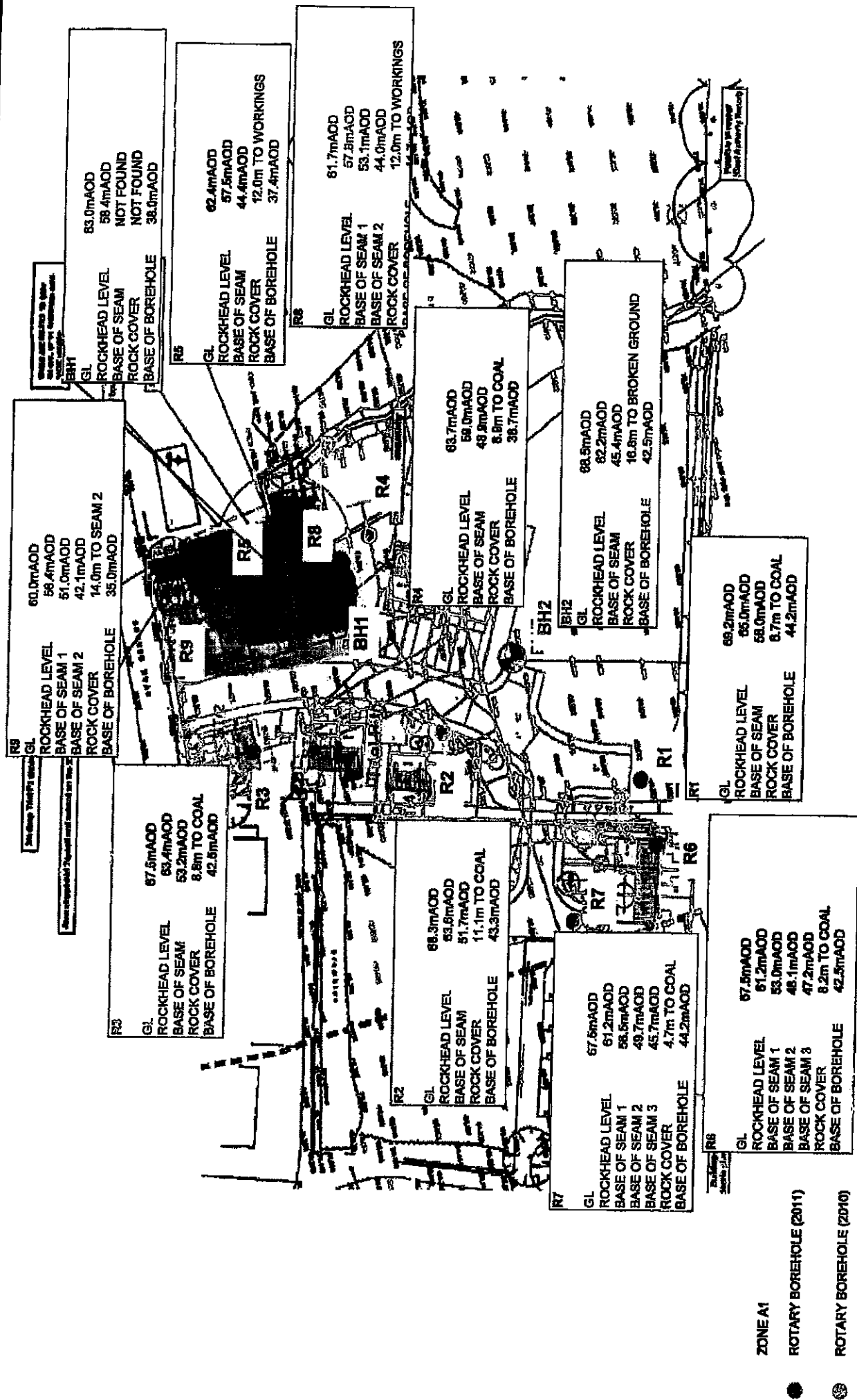


FIGURE 1 - EXPLORATORY HOLE PLAN

GROVE ROAD, NEATH

Rev A 16th June 2011

Integral
Geotechnical

Integral House
7 Seaborn Way
Cardiff Business Park
Cardiff CF9 3AX
Tel: 029 2060 7281
Fax: 029 2068 2176

PROPOSED DEVELOPMENT LAND OFF GROVES ROAD NEATH PHASE II SITE AREA

MINING STUDY - DESK STUDY REPORT

7.0 Conclusions & Recommendations

7.1 General

7.1.1 As a result of the mining study undertaken it is concluded that the risk to the development from past mining is low.

7.1.2 As a result of the study and past on site investigations the risk from past mine entries is remote as no recorded entries have been found in the site areas.

7.2 Foundation Design

Due to the variable nature of the ground with non - engineered fill in areas as well as earlier origin made ground and to also mitigate against any residual mining risk however low risk it is recommended that the following foundation types are used.

7.2.1 Area B - piled foundations or reinforced strip foundations due to variable ground and fill areas resulting from the Phase I development.

7.2.2 Area A - raft or reinforced concrete strip foundations.

APPENDIX A

The Coal Authority,
Mining Reports Office,
200 LICHFIELD LANE,
BERRY HILL,
MANSFIELD,
NOTTINGHAMSHIRE,
NG18 4RU
Telephone: 0845 762 6848
DX 716176 MANSFIELD 5
On-Line Service: www.coalminingreports.co.uk

The COAL AUTHORITY

The Coal Authority	
Cost:	£42.56
Plus V.A.T.	£7.44
Total Received:	£50.00
V.A.T. Reg Number	598 5850 68

ATEB CONSULT,
42 GURNOS ROAD,
YSTALYFERA,
SWANSEA,
WEST GLAMORGAN,
SA9 2HR

This matter is being dealt with by Paul Heap

Our Ref: 10462375-05

Your Ref: 05/099

Electronic Ref:

RRUID: 007.00009562850001

Date: 02 December 2005

Dear Sir,

Coal Mining Report LAND AT, NEATH

I refer to the enquiry dated 28th November 2005, received 01st December 2005, in connection with the above.

This report is based on and limited to the records in the possession of The Coal Authority at the time the search is answered.

Past Underground Mining

The property is within the likely zone of influence on the surface from workings in 2 seams of coal at 60m to 190m depth, the last date of working being 1888.

Ground movement from the above mentioned past coal workings should by now have ceased.

In addition you may wish to know that the property is in an area where coal is believed to exist at or close to the surface that may have been worked at some time in the past.

Present Underground Mining

The property is not within the zone of likely physical influence on the surface from any present underground coal workings.

Future Underground Mining

The property is not within a geographical area for which a licence to extract coal by underground methods is awaiting determination by the Coal Authority.

The property is not within a geographical area for which a licence to extract coal by underground methods has been granted.

The property is not within the zone of likely physical influence at the surface from plans of future workings in our possession.

However reserves of coal exist in the locality which could be worked at some time in the future subject to feasibility, licences, and planning consents.

We have no record of any notice of the risk of the land being affected by subsidence being given under S.46 of the Coal Mining Subsidence Act 1991.

Shafts and Adits

Within or within 20 metres of the property there are 2 mine entries, the approximate positions of which are shown on the attached plan. Your attention is drawn to the statements made on that plan.

We have no record of what steps, if any, have been taken to treat the mine entries.

The records held by the Coal Authority may be incomplete. Consequently, there may exist in this locality mine entries of which we have no knowledge.

Surface Geology

Records in our possession do not disclose any fault or other line of weakness at the surface as having affected the stability of the property.

Past Opencast Mining

The property is not located within the geographical boundary of an opencast site from which coal has been extracted by opencast methods.

Present Opencast Mining

The property does not lie within 200 metres of the geographical boundary of an opencast site within which coal is being extracted by opencast methods.

Future Opencast Mining

The property is not within 800 metres of the geographical boundary of an opencast site for which a licence to extract coal by opencast methods is awaiting determination.

The property is not within 800 metres of the geographical site boundary of an opencast site for which a licence to extract coal by opencast methods has been granted.

Subsidence

The records in our possession do not disclose any damage notice or claim having been given, made or pursued in respect of the property since 1 January 1984.

The records in our possession do not disclose any current "Stop Notice" affecting the property.

The records in our possession do not show any request having been made to execute preventative works under S.33 of the Coal Mining Subsidence Act 1991.

Withdrawal of Support

The property does not lie within a geographical area in respect of which a notice of entitlement to withdraw support has been published.

The property does not lie within a geographical area in respect of which a notice has been given under S.41 of the Coal Industry Act 1994, revoking the entitlement to withdraw support.

Working Facilities Orders

The property is not within a geographical area that is the subject of an Order made under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

Payments to Owners of Former Copyhold Land

The property is not within an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Additional Remarks

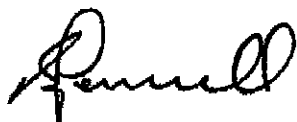
In view of the mining circumstances a prudent developer would seek appropriate technical advice before works are undertaken on site. All proposals should have regard to good engineering practice in mining areas as identified in authoritative publications on mining stability problems. In any event, no activities should be undertaken that intersect, disturb, or interfere with any coal or mines of coal without permission of the Coal Authority.

These replies are prepared in accordance with the 2003 editions of the Coal Authority's Terms and Conditions, User Guide and the Law Society's Guidance Notes.

Copyright in coal mining reports and certificates belongs to the Coal Authority. Information used to compile this report is protected by the Coal Authority's database right. All rights are reserved and unauthorised use is prohibited. Copyright and other intellectual property is not transferred to external parties by possession of a mining report or certificate, however those for whom the report is supplied have the right to use it.

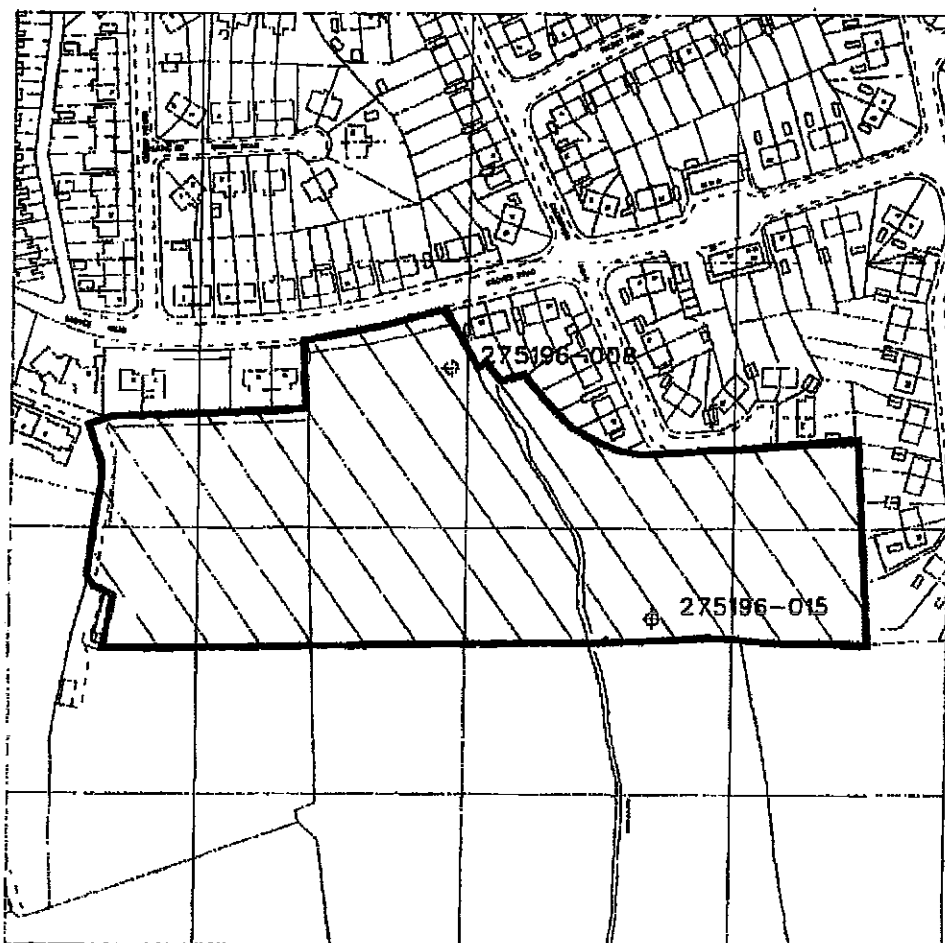
We acknowledge the receipt of your remittance in payment of our fee.

Yours faithfully



Stephen Pennell

Director of Mining Information and Services



Crown Copyright.

PLAN NOT TO SCALE

This map is reproduced from the Ordnance Survey material by The Coal Authority [or division thereof] with the permission of the Controller of Her Majesty's Stationery Office. Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence Number: AL51050A001.

This is a plan of the boundaries of the property in respect of which this report has been prepared. It is the responsibility of the user to ensure that the boundaries shown correspond with those of the property.

APPROXIMATE POSITION OF ENQUIRY BOUNDARY SHOWN



APPROXIMATE POSITION OF DISUSED MINE SHAFTS SHOWN



This plan shows the approximate location of the disused mine entry/entries referred to in the attached mining report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan. Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A DTI leaflet setting out the rights and the obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by telephoning 0845 762 5848. If you wish to discuss the relevance of any of the information contained in the attached report you should seek the advice of a qualified mining engineer or surveyor. If you or your adviser wish to examine the source plans from which the information has been taken these are available at our Mansfield office, free of charge, by prior appointment, telephone 01623 638233. Should you or your adviser wish to carry out any physical investigations that may enter, disturb or interfere with any disused mine entry the prior permission of the owner must be sought. For coal mine entries the owner will normally be the Coal Authority. The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). Our emergency telephone number at all times is 01623 646333.

APPENDIX B

Intégral Géotechnique

Intégral House
7 Beddau Way
Castlegate Business Park
Caerphilly
CF83 2AX
Tel: 029 2080 7991
Fax: 029 2086 2176
mail@integralgeotec.com

10779/MJE

07 June 2012

Ateb Consult
42 Gurnos Rd
Ystalyfera
Swansea SA9 2HY

For the attention of Mr Gareth George

Dear Sirs,

Land at Groves Road, Neath

Further to your recent instructions we have reviewed the mining information and correspondence and undertook the additional drilling you requested on the above site.

Site Conditions

The overall site lies between and to the rear of areas of existing residential development.

The specific area of investigation is a levelled area ready for preparation as a patio and garden to a series of dwellings. The area is bounded by buildings to the west with retaining walls to the north and east.

On the second visit the site area had been stripped back of recently placed granular materials as part of the proposed garden strengthening measures.

Liaison with Coal Authority

In addition to lengthy discussions with the Coal Authority (CA) liaison officer, a meeting was arranged with their representatives in Mansfield. To address their concerns it was agreed that more extensive investigations were required to enable the CA to understand their liabilities and update their files appropriately.

A grid pattern of investigations was agreed centred around the perceived location as permitted by physical boundaries etc. The perceived shaft size was considered to be 2.0m and hence a 1.5m grid pattern was adopted for the drilling pattern.

The adopted pattern of drilling is as shown in Figure 1.

Fieldworks

Rotary drillholes were constructed on a grid basis across the area of the gardens.

The initial holes remote from the anticipated location was used to check the bedrock level. This was generally found to be 2.5 to 3.8m deep.

The drillholes were extended to depth of 5m in each case to ensure that bedrock was present. The drillhole logs are summarised in Appendix A.

Ground Conditions

The borehole records indicate no made ground of any significance.

The glacial superficial soils appear to be Glacial Till with matrix dominant materials predominating. The glacial strata were 2.5 to 3.8m thick which has been recently reduced in preparation for the garden placement.

The rockhead level was found to be consistently at a depth of 2.5 to 3.8m. No 'soft' zones were encountered in any of the drillholes.

The holes were essentially dry.

Observations and Recommendations

No evidence of a mine entry was recorded during previous site clearance and trenching.

The drilling pattern found no evidence of ground disturbance nor any direct shaft features. Therefore it is not considered that the feature lies within that area of the site.

Therefore we are of the opinion that the feature is not present on the site area and, if present, it is beneath the adjacent garden.

However, as a precaution all gardens in this area of the site are to be prepared using a granular reinforced base with a geogrid to provide additional protection against any localised features or weaknesses. The granular fill will then be overlain by subsoil and topsoil make up.

We trust this assists you in bringing this matter to a satisfactory conclusion.

Yours faithfully,



Malcolm Earl
For
Intégral Géotechnique (Wales) Limited

APPENDIX A
SUMMARY OF PROBEHOLE DRILLING

GROVE ROAD, NEATH
SUMMARY OF ADDITIONAL BOREHOLES FOR SHAFT PROBING

	Stratum		Depth to rockhead (m)
	Overburden	Rock	
A1	Location not accessible		
A2	Location not accessible		
A3	Recent Fill / Clay	Mudstone	3.7
A4	Recent Fill / Clay	Mudstone	3.6
A5	Clay	Mudstone	2.6
A6	Clay	Mudstone	2.9
A7	Clay	Mudstone	2.6
A8	Clay	Mudstone	3.0
B1	Location not accessible		
B2	Location not accessible		
B3	Clay	Mudstone	3.4
B4	Recent Fill / Clay	Mudstone	3.3
B5	Recent Fill / Clay	Mudstone	3.0
B6	Clay	Mudstone	2.8
B7	Clay	Mudstone	2.8
B8	Clay	Mudstone	3.0
C1	Location not accessible		
C2	Location not accessible		
C3	Recent Fill / Clay	Mudstone	4.0
C4	Recent Fill / Clay	Mudstone	4.1
C5	Clay	Mudstone	3.3
C6	Clay	Mudstone	3.2
C7	Clay	Mudstone	3.0
C8	Clay	Mudstone	3.0
D1	Location not accessible		
D2	Location not accessible		
D3	Recent Fill / Clay	Mudstone	4.3

D4	Recent Fill / Clay	Mudstone	4.2
D5	Clay	Mudstone	3.3
D6	Clay	Mudstone	3.7
D7	Clay	Mudstone	3.0
D8	Clay	Mudstone	3.1
E1	Location not accessible		
E2	Location not accessible		
E3	Recent Fill / Clay	Mudstone	4.3
E4	Recent Fill / Clay	Mudstone	4.3
E5	Clay	Mudstone	3.3
E6	Clay	Mudstone	3.4
E7	Clay	Mudstone	3.2
E8	Clay	Mudstone	3.1
30/05/12			
11A	Boulder Clay	Mudstone	1.8
11B	Boulder Clay	Mudstone	1.8
11C	Boulder Clay	Mudstone	2.0
11D	Boulder Clay	Mudstone	2.5
11E	Boulder Clay	Mudstone	3.0
10A	Boulder Clay	Mudstone	1.7
10B	Boulder Clay	Mudstone	1.7
10C	Boulder Clay	Mudstone	2.5
10D	Boulder Clay	Mudstone	2.8
10E	Boulder Clay	Mudstone	2.1
9A	Boulder Clay	Mudstone	2.0
9B	Boulder Clay	Mudstone	2.1
9C	Boulder Clay	Mudstone	2.0
9D	Boulder Clay	Mudstone	2.5
9E	Boulder Clay	Mudstone	3.0

FIGURES

GROVE ROAD, NEATH
SUMMARY OF ADDITIONAL BOREHOLES FOR SHAFT PROBING

	Stratum		Depth to rockhead (m)
	Overburden	Rock	
A1	Location not accessible		
A2	Location not accessible		
A3	Recent Fill / Clay	Mudstone	3.7
A4	Recent Fill / Clay	Mudstone	3.6
A5	Clay	Mudstone	2.6
A6	Clay	Mudstone	2.9
A7	Clay	Mudstone	2.6
A8	Clay	Mudstone	3.0
B1	Location not accessible		
B2	Location not accessible		
B3	Clay	Mudstone	3.4
B4	Recent Fill / Clay	Mudstone	3.3
B5	Recent Fill / Clay	Mudstone	3.0
B6	Clay	Mudstone	2.8
B7	Clay	Mudstone	2.8
B8	Clay	Mudstone	3.0
C1	Location not accessible		
C2	Location not accessible		
C3	Recent Fill / Clay	Mudstone	4.0
C4	Recent Fill / Clay	Mudstone	4.1
C5	Clay	Mudstone	3.3
C6	Clay	Mudstone	3.2
C7	Clay	Mudstone	3.0
C8	Clay	Mudstone	3.0
D1	Location not accessible		
D2	Location not accessible		
D3	Recent Fill / Clay	Mudstone	4.3

D4	Recent Fill / Clay	Mudstone	4.2
D5	Clay	Mudstone	3.3
D6	Clay	Mudstone	3.7
D7	Clay	Mudstone	3.0
D8	Clay	Mudstone	3.1
E1	Location not accessible		
E2	Location not accessible		
E3	Recent Fill / Clay	Mudstone	4.3
E4	Recent Fill / Clay	Mudstone	4.3
E5	Clay	Mudstone	3.3
E6	Clay	Mudstone	3.4
E7	Clay	Mudstone	3.2
E8	Clay	Mudstone	3.1

NOTES

Key:

- Trial Pit excavation carried out in February 2009
- Bore hole investigation carried out in September 2010
- Gas spillover leading carried out in September 2010
- Proposed Development
- Coal Surface sub-crop to 655 1:10,000 plan
- Possible Mine-shaft Location (Coal Authority Report)
- Integral Geotechnical Rotary Penetration
- Borehole carried out in January 2011

ateb Consult

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Email: info@ateb.co.uk

RECORD

1/1/2011

1/1/2011

1/1/2011

1/1/2011

1/1/2011

1/1/2011

1/1/2011

1/1/2011

Pit boundary as defined in Mining Report Plan



New Block work wall built recently

Approximate position of disused mine shaft
(Coal Authority Reference - 275198-008)

block wall

3m deep Trial Pit excavation carried out on the 26/12/10

Area stripped of Topsoil and subsoil on the 28/11/10

Area of low conductivity

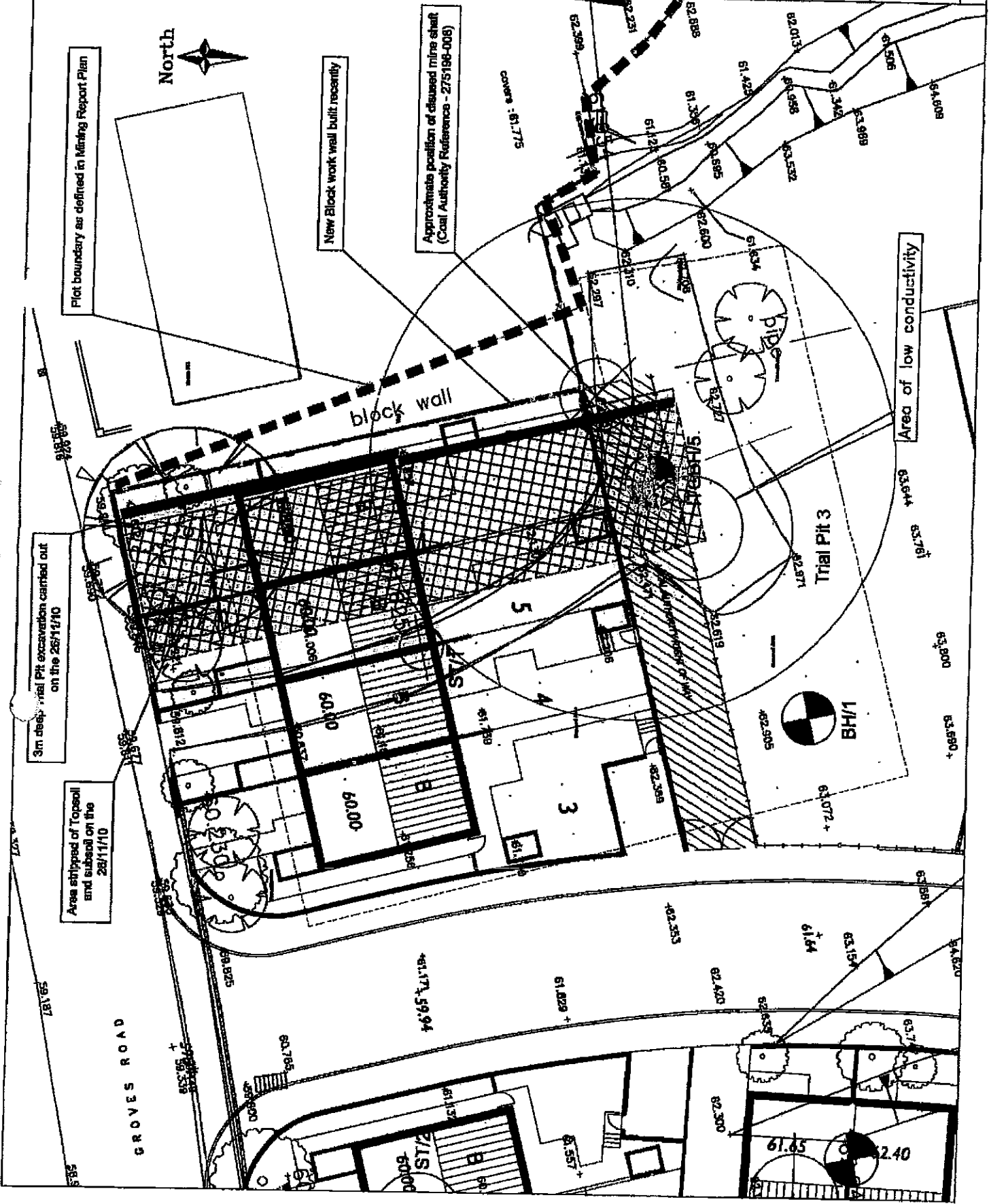
Trial Pit 3

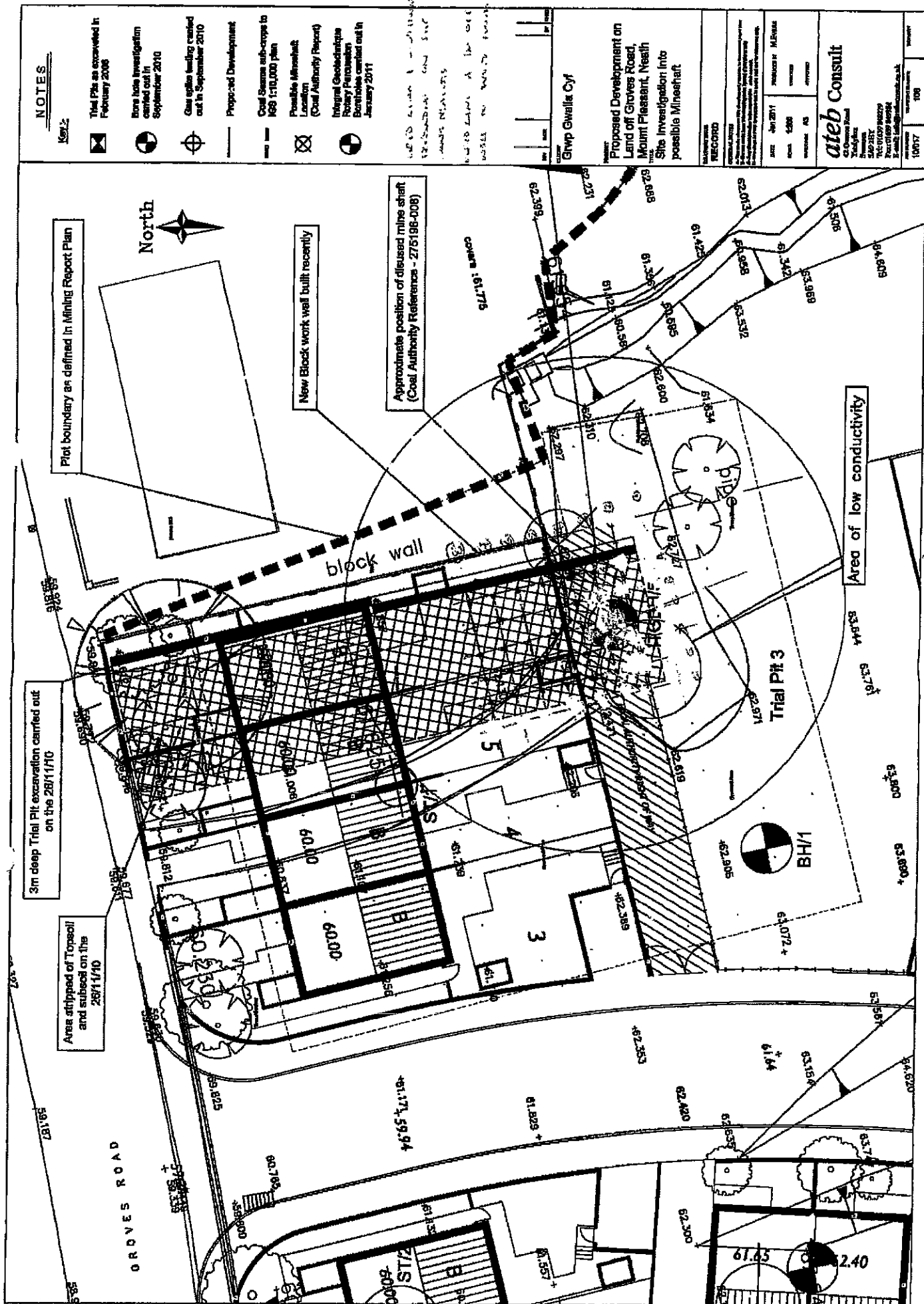
BH/1

GROVES ROAD

Gramp Gwalia Cyl

Proposed Development on Land off Groves Road, Mount Pleasant, Neath
Site investigation into possible Mineshaft





ateb Consult

Planning Officer
Neath Port Talbot CBC
The Quays
Neath

42 Heol Y Gurnos
Ystalyfera
Swansea/Abertawe
SA9 2HY

Tel/Ffôn: (01639) 849279
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E-mail/E-bost: info@atebconsult.co.uk

Directors/Cyfarwyddwyr: GARETH M. GEORGE
SHARON MAINWARING

For the attention of Ms Melissa Hall

24 January 2012

GMG/sm/10/017

Dear Madam

Housing Development at Groves Road Neath
Planning Approval Ref:P2010/0573 & P2008/1298 - Condition 22 (Mining)

With reference to our discussions of November 2011 and with particular reference to your e.mail dated 24 November 2011 we respond as follows on the matters raised.

1. Discharge of Condition 22 (Mining)

On review of the matter it would appear to us that Condition 22 has been currently discharged, in that a phased approach has been undertaken in respect of supplementary SI works on phase areas 1C and 1D and that the position of boreholes on the phase 1D area took into account liaison and the information provided by the Coal Authority. Further, permits to undertake works were obtained. On completion a supplementary letter report was issued to NPTCBC by ourselves and our geotechnical consultants, Integral Geotechnique. On this we note that there are no formal conditions related to the Condition Discharge Notice in relation to any further approvals.

2. Response to Coal Authority E.mail 25 November 2011 on SI Works

Notwithstanding the above we have reviewed the response of the CA to NPT (dated 25 November 2011) and report as follows.

2.1 The CA clearly states that matters related to site area 1C are considered appropriate by the CA and the recommendation for raft foundations is being complied with and development is proceeding.

- 2.2** In relation to site area 1D we have carried out a full review of the study work undertaken to date and also of the comments made in the CA e.mail of the 25 November 2011 in respect of historic plans. As a result of this review we record that comprehensive investigations have been undertaken in order to try to establish if the historic mine entry shown in the CA mining report does exist on site and the results of these investigations conclude that the feature (if ever present) does not lie within the Gwalia Housing site area. Further, the CA response of 25 November 2011 is incorrect as additional boreholes were in fact sunk in area 1D at locations specified by the CA and no evidence of any entries found, either by these supplementary boreholes or during extensive inspections during site clearance and site excavations to depths of 3m.
- 2.3** Notwithstanding the above, following receipt of your e.mail of the 25 November 2011, we have carried out a full review of the investigations undertaken and summarise these as follows.
- 2.3.1** Initial desk study undertaken in 2005.
- 2.3.2** Coal mining report obtained 2005 and 2006.
- 2.3.3** Study of Abandonment Plans of coal mines in the area undertaken in 2006 using data obtained from the CA.
- 2.3.4** Geophysical/radar survey undertaken on the site in 2006 followed by a site strip and design trial excavation boreholes.
- 2.3.5** Rotary bores undertaken on site in 2009 and again in 2010 when initially seven boreholes were sunk.
- 2.3.6** Further supplementary boreholes sunk in 2011 including 2 boreholes in areas where the CA advised the mine entry could be present.
- 2.3.7** Site clearance and extensive walkover surveys undertaken in Autumn of 2011 to inspect foundations and natural ground.
- 2.3.8** During the course of these investigations no evidence of disturbed ground or any evidence of past mining activities in relation to mine entries or near surface mine related features were ever found and the conclusion is drawn that the feature shown on the early OS plans of 1899-1920 was either not a mine entry or lies off the site.

2.4 We have also now again reviewed the historical plans noted in the CA e.mail of 25 November 2011 and note the following.

2.4.1 The early 1881 plans of the area (Fig.1) show no evidence of mine features.

2.4.2 A reference to an old coal pit is made in the 1899 plan (Fig.2) and this is reproduced in sequential edition of the plans to 1920. After this time no mention appears to be made. The feature shown on these early plans is very simple and no associated buildings, paths, spoil areas or other mining feature shown. The feature may thus have been a test hole perhaps.

2.4.3 Following the CA e.mail of 25 November 2011 we have again, with Integral Geotechnique, studied and compared these early 1899 plans with current OS plans in order to try to establish the position of the mine feature which is shown alongside the established route of the Eastfield Brook. Whilst many features have changed with time some remain as shown in Figs 3 and 4 where features common to 1899 and today are highlighted. If Figs 3 and 4 are compared it can be seen that the 'mine entry', if it existed, was located near Eastfield Brook and on the east boundary of the site as defined in the CA mining report.

2.4.4 Further, if one takes into account land encroachment in the area, where the actual site boundary of the NPT/GH site has been moved due to construction of a wall, and the culverting of the Eastfield Brook it can be seen (Fig.5) that the feature if it existed lies off the site area in the land adjoining. (This conclusion was reached in November 2011 by Integral Geotechnique as they reported no 'features' on site in their letter).

We conclude therefore that the results of these further investigations/desk review are consistent with our earlier on site findings and that the feature does not lie on the site.

Notwithstanding the above conclusions we do note, however, that a very conservative and precautionary approach has been taken in the design of foundations with:

- (i) an exclusion no build zone provided where the CA plans indicate the feature may have been;
- (ii) raft foundation used for the terrace of dwelling in this area, designed to span 3m over any weak ground.

In conclusion, therefore, we record that comprehensive investigations have in fact been undertaken and whilst no features were found mitigation has been provided as a precaution.

We trust these further reviews and comments are of assistance and clears this matter.

Yours faithfully


G M George
Director

ENCS

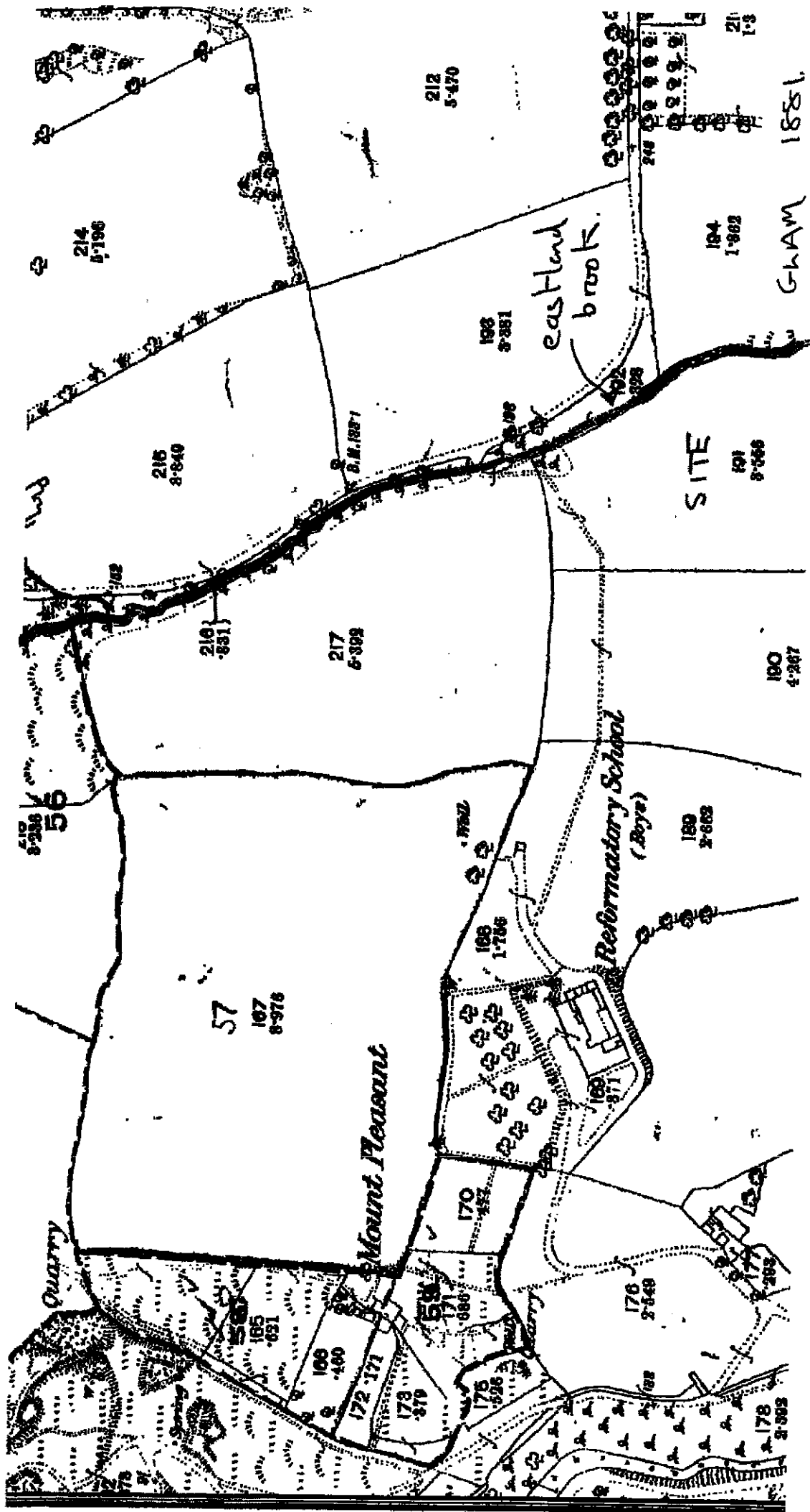


Fig 1

(NTS)

GHAM 1881

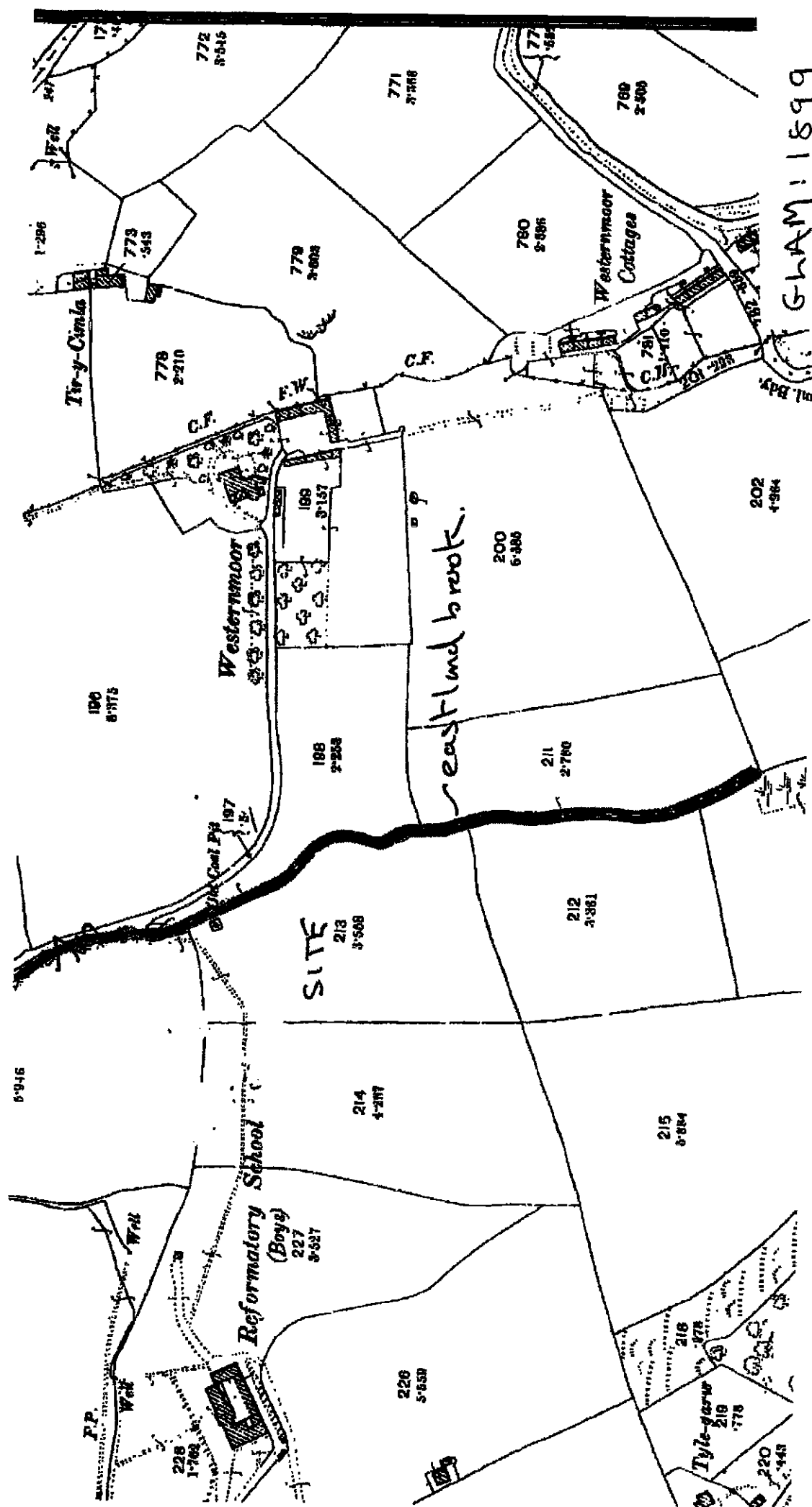
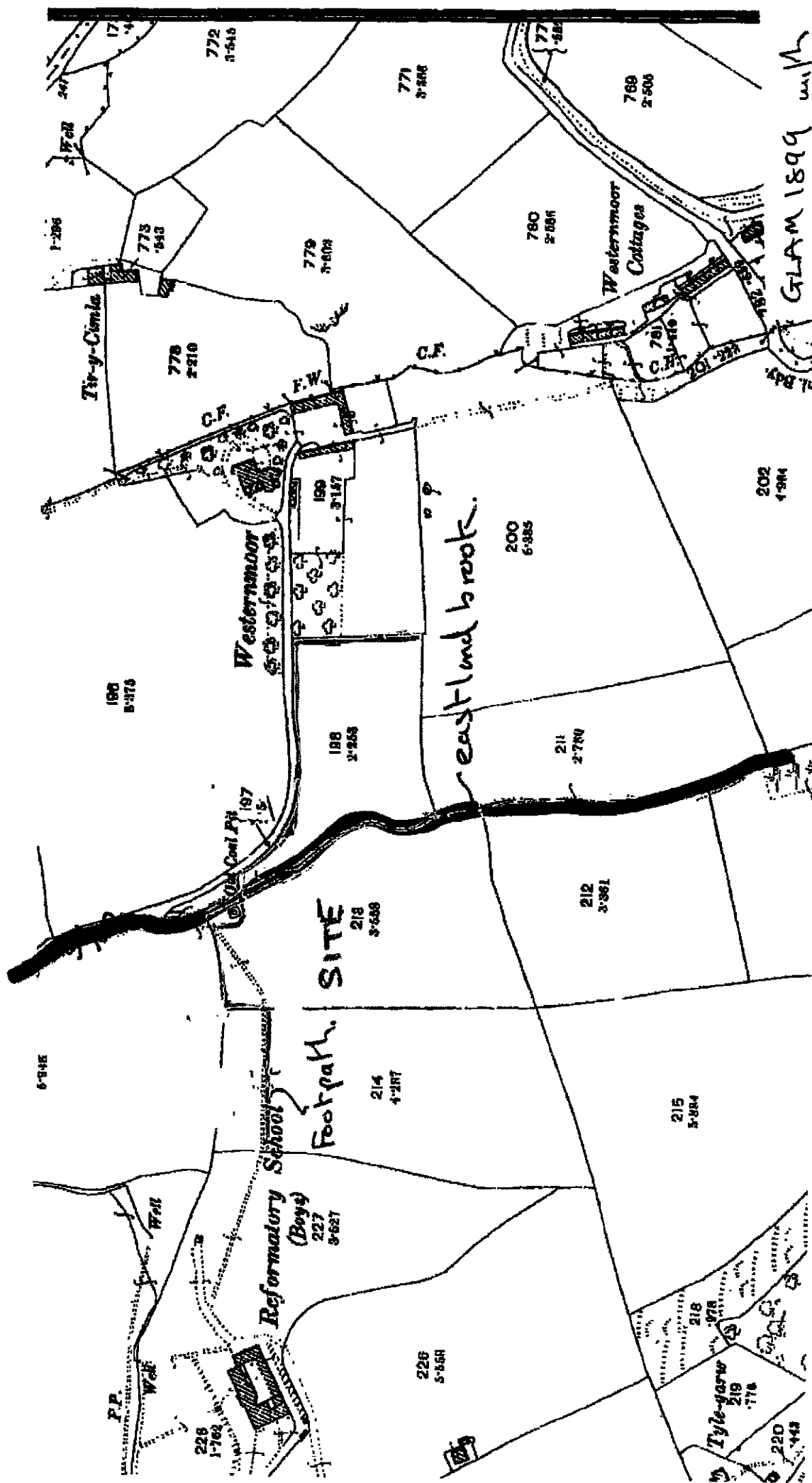


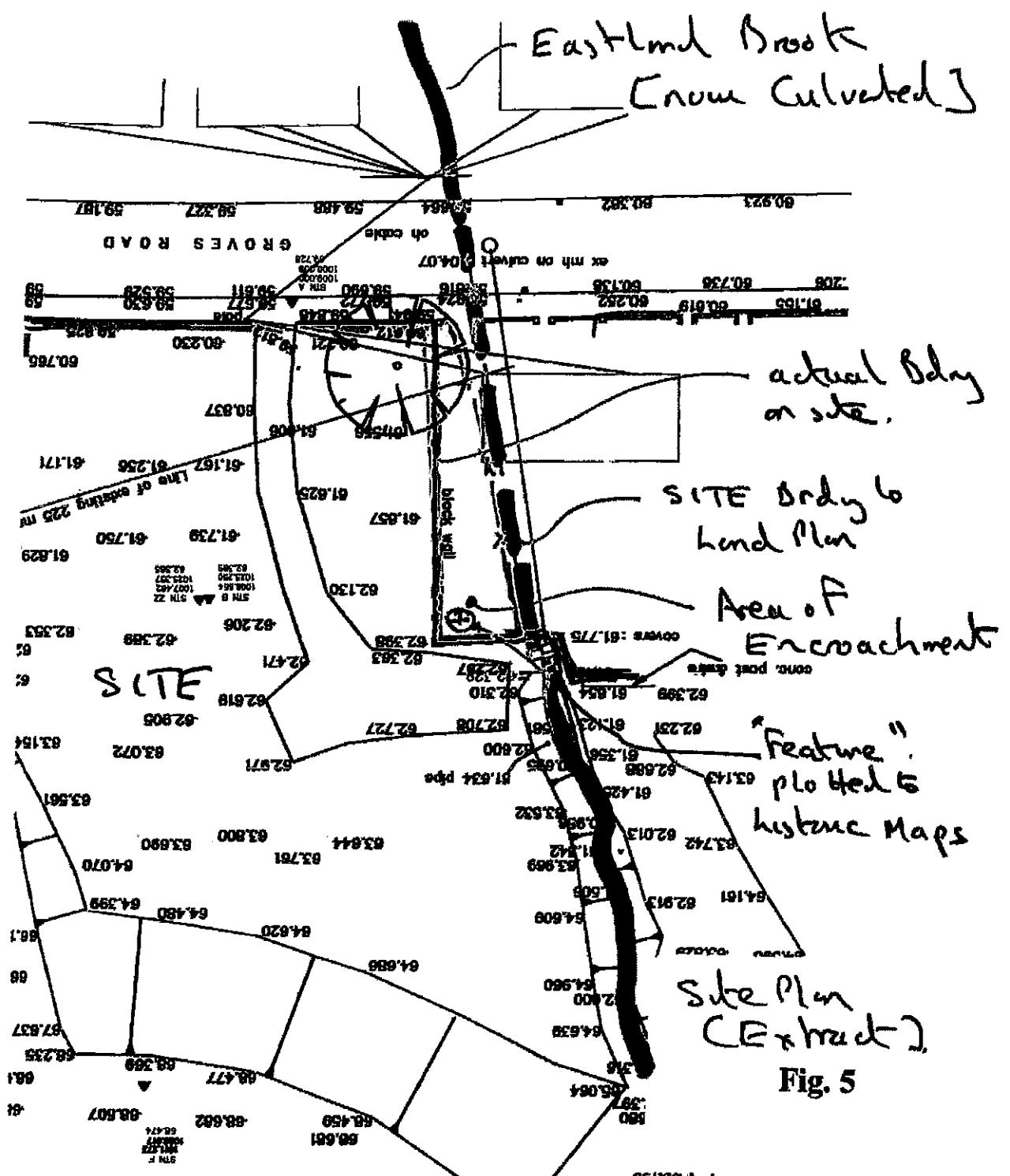
Fig. 2

5



GLAM 1899 with
2011 features noted

Fig 3



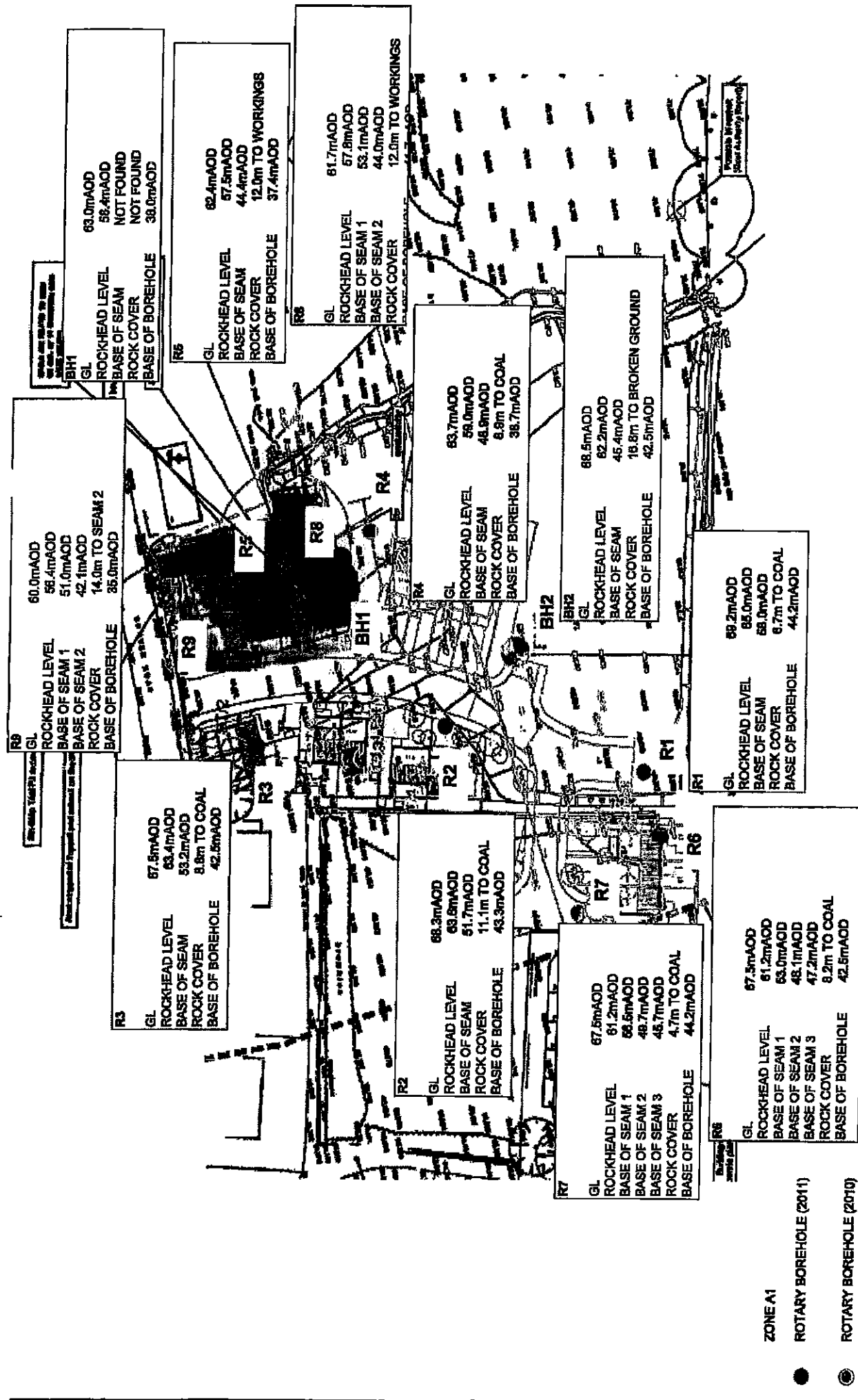


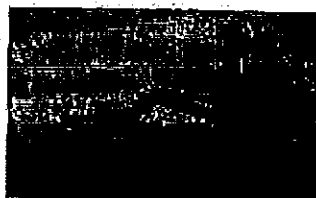
FIGURE 1 - EXPLORATORY HOLE PLAN

GROVE ROAD, NEATH

Rev A 16th June 2011

Intégral
Geotechnique

Intégral House
7 Backhouse Way
Cardiff Business Park
Cardiff
CF23 2AX
Tel: 029 2060 7861
Fax: 029 2060 2178



CLOSURE SUMMARY FORM

PERMISSION TO ENTER OR DISTURB OF COAL AUTHORITY MINING INTERESTS

Applicant: GWRP GWALLA 77 GWALLA 7-13 KINGSWAY, SAANSEA, SA5 5JN	Site Location: GROVES ROAD, NORTH.
---	---------------------------------------

Within 90 days of site operations finishing, this form must be completed and returned to the Coal Authority together with a completion/validation report detailing the work which was carried out to our property.

The attached completion report should include: number of boreholes; grout takes, treatments and stabilisation works carried out in relation to mine workings or mine entries (including engineering drawings); a scaled site layout plan (correlated to O.S National Grid) showing the relevant mine entry positions, voids and broken ground proved by the works, et al.

On what date did operations commence?	30/05/12 till 07/06/12.
On what date did operations finish?	07/06/12.

Risk Factor	Factors	Comments					
Mine Gas Monitoring	What gases were found during the works? (Include maximum readings / flow rates/ barometric pressure)	Carbon Monoxide (CO)	Methane (CH ₄)	Carbon Dioxide (CO ₂)	Oxygen (O ₂)	Other gases (Please specify)	None
		NIL	0.1%	0.2%	19.6%		
	Where were the gases found?	Drill Rig ✓	On-site Buildings	Off-site buildings	Monitoring Points	Other locations (please specify)	

Risk Factor	Factors	Yes	No	Comments
Spontaneous Combustion	Was spontaneous combustion found or created during the works?		✓	If yes, provide the circumstance details together with any relevant treatment information.
Mine Water	Was mine water encountered during the works?		✓	
Collapse of shallow mine workings or mine entries	Did any mine workings or mine entries collapse during the work activities?		✓	

Signed..... <u>M. G. G. G.</u>	Date <u>2/7/12</u>
Print Name <u>MARCO G. G.</u>	Position <u>SUPERVISOR</u>
E-mail <u>marco.g.g. @integralgeotec.com</u>	Tel No <u>029 2080 7991</u>

In order for this file to be closed please send this closure form together with the completion report to:
The Coal Authority, Licensing & Permits Office, 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG
 or e-mail it to permissions@coal.gov.uk

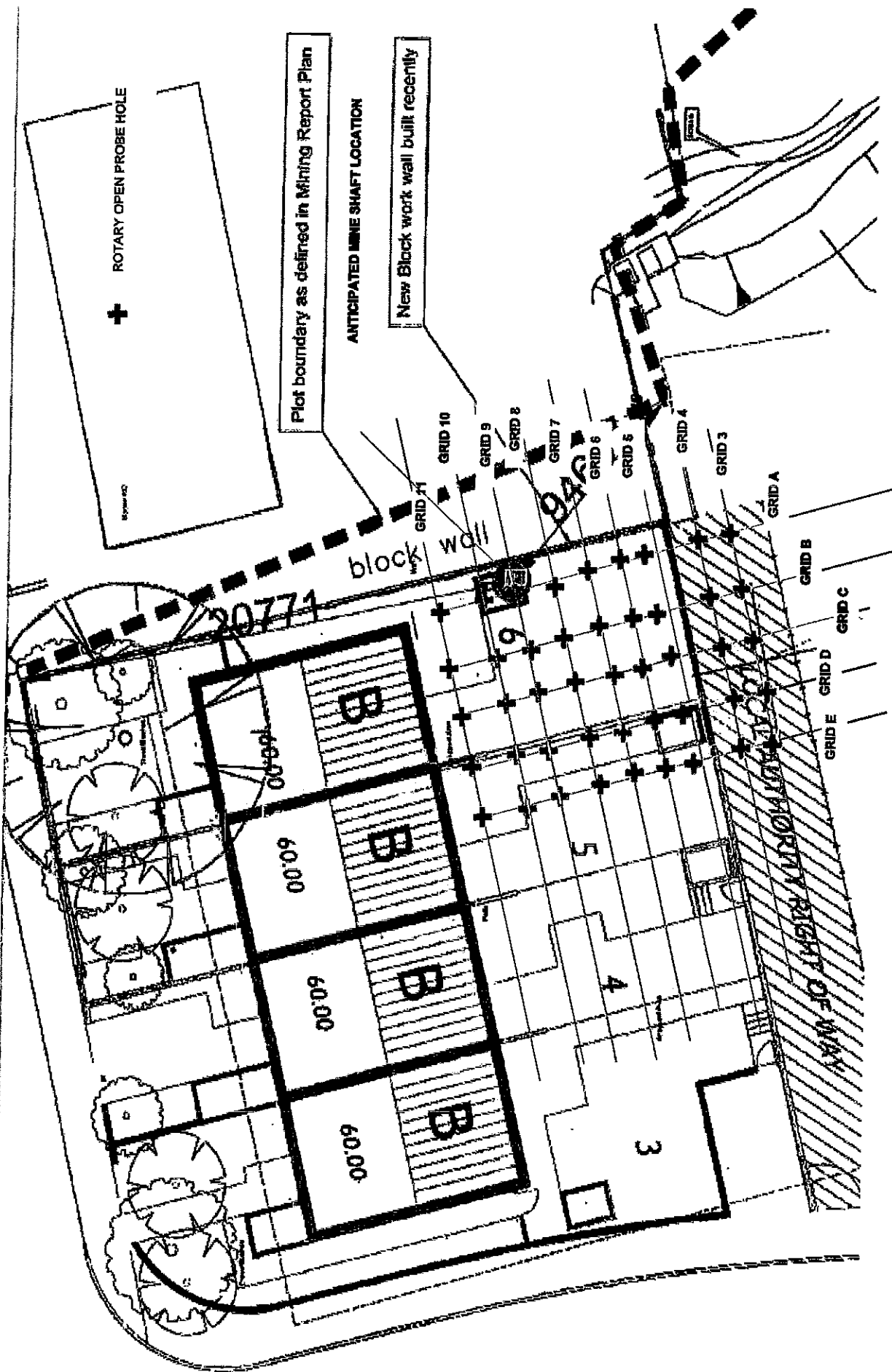


FIGURE 1 - SHAFT INVESTIGATIONS

GROVE ROAD, NEATH

Rev A 6th June 2012

Integral House
7 Beckett Way
Cardiff Business Park
Cardiff
CF9 2AX
Tel: 029 2080 7991
Fax: 029 2080 2176

Integral
Geotechnique



2139



Certificate of Analysis

Certificate Number: 11-55602

Date: 14/11/2011

Client: Earth Science Partnership
33 Cardiff Road
Taffs Well
Cardiff
CF15 7RB

Our Reference: 11-55602

Client Reference: 4557EPH5

Contract Title: Groves Road Stockpile

Description: 25 soil samples

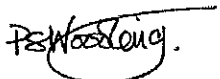
Date Received: 27 October 2011

Date Started: 01 November 2011

Date Completed: 14 November 2011

Test Procedures: Identified by prefix DETSn, details available upon request.

Notes: Observations and interpretations are outside the scope of UKAS accreditation

Approved By: 
Paul Woodbridge, Senior Operations Manager

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Information in Support of the Analytical Results

Analysis

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425um sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample.

Key

- * Denotes test not included in laboratory scope of accreditation
- # Denotes test that holds MCERTS accreditation, however, MCERTS accreditation is only implied if the report carries the MCERTS logo
- \$ Denotes tests completed by an approved subcontractor
- I/S Denotes insufficient sample to carry out test
- U/S Denotes that the sample is not suitable for testing

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month

Liquids - 2 weeks

Asbestos (test portion) - 6 months

Summary of Chemical Analysis Matrix Descriptions

Our Ref: 11-55602
Client Ref: 4557EPH5
Contract Title: Groves Road Stockpile

Sample ID	Other ID	Depth	Sample No	Completed	Matrix Description
S1			366274	14/11/2011	brown gravelly silty sandy CLAY made ground contains brick
S2			366275	14/11/2011	brown gravelly silty sandy CLAY
S4			366276	14/11/2011	brown gravelly silty sandy CLAY made ground contains brick
S5			366277	14/11/2011	brown gravelly sandy CLAY
S7			366278	14/11/2011	brown gravelly sandy CLAY
S8			366279	14/11/2011	brown gravelly silty sandy CLAY
S9			366280	14/11/2011	brown gravelly sandy CLAY
S11			366281	14/11/2011	brown gravelly sandy CLAY made ground contains brick
S12			366282	14/11/2011	brown grey gravelly sandy CLAY
S14			366283	14/11/2011	brown gravelly sandy CLAY
S15			366284	14/11/2011	brown gravelly sandy CLAY
S17			366285	14/11/2011	brown gravelly sandy CLAY
S18			366286	14/11/2011	brown gravelly sandy CLAY
S20			366287	14/11/2011	brown gravelly sandy CLAY
S21			366288	14/11/2011	brown gravelly sandy CLAY
S23			366289	14/11/2011	brown gravelly sandy CLAY
S24			366290	14/11/2011	brown grey gravelly sandy CLAY
S26			366291	14/11/2011	brown gravelly sandy CLAY made ground contains brick
S28			366292	14/11/2011	brown gravelly sandy CLAY
S29			366293	14/11/2011	brown gravelly sandy CLAY made ground contains brick
S10			366294	14/11/2011	brown gravelly sandy CLAY
S31			366295	14/11/2011	brown gravelly sandy CLAY
S32			366296	14/11/2011	brown gravelly clayey SAND
S33			366297	14/11/2011	brown gravelly sandy CLAY
S22			366298	14/11/2011	brown gravelly sandy CLAY

Summary of Chemical Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

				Lab No.	366274	366275	366276	366277	366278
				Sample ID	S1	S2	S4	S5	S7
				Depth					
				Sample Ref					
				Sample Type					
				Sampling Date	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
				Sampling Time	1030	1032	1037	1045	1100
Test	Units	DETSxx	LOD						
Arsenic	mg/kg	DETS 042#	0.2		11	10	7.4	13	13
Cadmium	mg/kg	DETS 042#	0.1		0.7	1.0	0.6	0.9	0.8
Chromium III	mg/kg	*	0.15		15	13	31	17	27
Chromium	mg/kg	DETS 042#	0.15		15	13	31	17	27
Hexavalent Chromium	mg/kg	DETS C2204*	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	mg/kg	DETS 042#	0.2		25	21	20	29	32
Lead	mg/kg	DETS 042#	0.3		20	19	15	21	24
Mercury	mg/kg	DETS 081#	0.05		< 0.05	< 0.05	< 0.05	< 0.05	0.06
Nickel	mg/kg	DETS 042#	1		17	21	19	23	21
Selenium	mg/kg	DETS 042#	0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.6
Zinc	mg/kg	DETS 042#	1		67	74	72	70	74
Cyanide total	mg/kg	DETS 067#	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	%	DETS 002#	0.1		2.0	1.8	1.7	2.3	1.9
Total Sulphate as SO4	%	DETS 075#	0.01		0.06	0.02	0.04	0.03	0.03
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	10		200	42	95	80	63
Total Sulphur as S	%	DETS 064	0.01		0.04	0.01	0.02	0.01	0.02
pH		DETS 008#			10.0	8.9	10.2	8.1	9.0
Acenaphthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.2	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.3	0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.4	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.2	< 0.1	< 0.1
Chrysene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.3	< 0.1	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.4	0.1	0.1
Fluorene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.2	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.2	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.3	0.1	0.2
PAH	mg/kg	DETS 050	1.6		< 1.6	< 1.6	2.9	< 1.6	< 1.6
EPH (C30-C40)	mg/kg	DETS 051	10		< 10	14	69	32	16
EPH (C10-C20)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	< 10
EPH (C20-C30)	mg/kg	DETS 051	10		17	23	47	19	< 10
Phenol - Monohydric	mg/kg	DETS 067#	0.3		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

				Lab No.	366279	366280	366281	366282	366283
				Sample ID	S8	S9	S11	S12	S14
				Depth					
				Sample Ref					
				Sample Type					
				Sampling Date	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
				Sampling Time	1103	1107	1117	1130	1140
Test	Units	DETSxx	LOD						
Arsenic	mg/kg	DETS 042#	0.2		11	9.1	36	6.4	13
Cadmium	mg/kg	DETS 042#	0.1		0.7	1.1	0.9	0.7	1.1
Chromium III	mg/kg	*	0.15		16	21	14	18	15
Chromium	mg/kg	DETS 042#	0.15		16	21	14	18	15
Hexavalent Chromium	mg/kg	DETSC2204*	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	mg/kg	DETS 042#	0.2		27	20	250	21	24
Lead	mg/kg	DETS 042#	0.3		19	17	43	18	19
Mercury	mg/kg	DETS 081#	0.05		0.06	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	mg/kg	DETS 042#	1		19	22	16	18	26
Selenium	mg/kg	DETS 042#	0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	mg/kg	DETS 042#	1		61	74	470	53	73
Cyanide total	mg/kg	DETS 067#	0.1		0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	%	DETS 002#	0.1		1.6	1.7	1.9	1.5	1.9
Total Sulphate as SO4	%	DETS 075#	0.01		0.05	0.10	0.04	< 0.01	0.04
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	10		150	260	110	13	76
Total Sulphur as S	%	DETS 064	0.01		0.02	0.04	0.04	< 0.01	0.09
pH		DETS 008#			9.5	10.1	9.8	8.5	8.2
Acenaphthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	0.4	< 0.1
Acenaphthylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	0.1	< 0.1
Anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.2	1.4	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	0.1		< 0.1	0.2	1.0	1.3	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	0.1		< 0.1	0.2	0.8	0.3	< 0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	0.2	0.8	1.1	< 0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.4	0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.5	0.2	< 0.1
Chrysene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	1.2	0.8	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.1		< 0.1	0.3	1.8	2.3	< 0.1
Fluorene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	0.3	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.1		< 0.1	0.1	0.5	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	0.3	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	0.1		< 0.1	0.2	1.4	1.0	< 0.1
PAH	mg/kg	DETS 050	1.6		< 1.6	< 1.6	9.0	9.4	< 1.6
EPH (C30-C40)	mg/kg	DETS 051	10		< 10	15	140	11	11
EPH (C10-C20)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	< 10
EPH (C20-C30)	mg/kg	DETS 051	10		< 10	16	110	12	< 10
Phenol - Monohydric	mg/kg	DETS 067#	0.3		< 0.3	0.4	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

				Lab No.	366284	366285	366286	366287	366288
				Sample ID	S15	S17	S18	S20	S21
				Depth					
				Sample Ref					
				Sample Type					
				Sampling Date	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
				Sampling Time	1145	1155	1200	1210	1215
Test	Units	DETSxx	LOD						
Arsenic	mg/kg	DETS 042#	0.2		13	13	9.1	13	12
Cadmium	mg/kg	DETS 042#	0.1		1.1	0.9	0.8	0.8	0.9
Chromium III	mg/kg	*	0.15		18	18	17	17	18
Chromium	mg/kg	DETS 042#	0.15		18	18	17	17	18
Hexavalent Chromium	mg/kg	DETSC2204*	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	mg/kg	DETS 042#	0.2		26	29	19	28	27
Lead	mg/kg	DETS 042#	0.3		22	22	16	22	26
Mercury	mg/kg	DETS 081#	0.05		0.05	< 0.05	< 0.05	0.05	< 0.05
Nickel	mg/kg	DETS 042#	1		21	22	17	18	22
Selenium	mg/kg	DETS 042#	0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	mg/kg	DETS 042#	1		80	64	47	65	73
Cyanide total	mg/kg	DETS 067#	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	%	DETS 002#	0.1		1.7	1.8	1.4	1.9	1.7
Total Sulphate as SO4	%	DETS 075#	0.01		0.03	0.02	0.02	0.03	0.04
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	10		100	25	28	59	93
Total Sulphur as S	%	DETS 064	0.01		0.02	0.01	0.01	0.01	0.02
pH		DETS 008#			8.8	7.6	7.5	8.2	8.5
Acenaphthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	0.1		0.2	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	0.1		0.2	< 0.1	< 0.1	< 0.1	0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	0.1		0.3	< 0.1	< 0.1	< 0.1	0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	0.1		0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.1		0.3	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	DETS 050	0.1		0.2	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.1		0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.1		0.3	0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.1		0.2	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	0.1		0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	0.1		0.2	< 0.1	< 0.1	< 0.1	< 0.1
PAH	mg/kg	DETS 050	1.6		2.4	< 1.6	< 1.6	< 1.6	< 1.6
EPH (C30-C40)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	22
EPH (C10-C20)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	< 10
EPH (C20-C30)	mg/kg	DETS 051	10		15	< 10	< 10	10	< 10
Phenol - Monohydric	mg/kg	DETS 067#	0.3		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

				Lab No.	366289	366290	366291	366292	366293
				Sample ID	S23	S24	S26	S28	S29
				Depth					
				Sample Ref					
				Sample Type					
				Sampling Date	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
				Sampling Time	1230	1235	1245	1250	1255
Test	Units	DETSxx	LOD						
Arsenic	mg/kg	DETS 042#	0.2		11	7.9	8.9	8.3	14
Cadmium	mg/kg	DETS 042#	0.1		0.8	0.6	0.7	0.6	0.6
Chromium III	mg/kg	*	0.15		18	17	15	13	17
Chromium	mg/kg	DETS 042#	0.15		18	17	15	13	17
Hexavalent Chromium	mg/kg	DETSC2204*	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	mg/kg	DETS 042#	0.2		22	20	19	16	23
Lead	mg/kg	DETS 042#	0.3		19	14	16	14	30
Mercury	mg/kg	DETS 081#	0.05		< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	mg/kg	DETS 042#	1		23	19	18	19	16
Selenium	mg/kg	DETS 042#	0.5		< 0.5	< 0.5	< 0.5	< 0.5	0.8
Zinc	mg/kg	DETS 042#	1		66	50	63	64	100
Cyanide total	mg/kg	DETS 067#	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	%	DETS 002#	0.1		1.8	1.8	1.7	1.4	2.1
Total Sulphate as SO4	%	DETS 075#	0.01		0.02	0.02	0.05	0.07	0.09
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	10		43	43	130	98	420
Total Sulphur as S	%	DETS 064	0.01		0.01	< 0.01	0.02	0.03	0.07
pH		DETS 008#			8.2	8.0	9.5	9.5	10.1
Acenaphthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH	mg/kg	DETS 050	1.6		< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
EPH (C30-C40)	mg/kg	DETS 051	10		< 10	< 10	58	97	160
EPH (C10-C20)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	< 10
EPH (C20-C30)	mg/kg	DETS 051	10		< 10	< 10	14	20	31
Phenol - Monohydric	mg/kg	DETS 067#	0.3		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Chemical Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

				Lab No.	366294	366295	366296	366297	366298
				Sample ID	S10	S31	S32	S33	S22
				Depth					
				Sample Ref					
				Sample Type					
				Sampling Date	25/10/2011	25/10/2011	25/10/2011	25/10/2011	25/10/2011
				Sampling Time	1115	1300	1315	1320	1220
Test	Units	DETSxx	LOD						
Arsenic	mg/kg	DETS 042#	0.2		12	8.7	12	9.3	12
Cadmium	mg/kg	DETS 042#	0.1		0.8	0.7	0.4	0.9	0.8
Chromium III	mg/kg	*	0.15		16	16	8.7	20	59
Chromium	mg/kg	DETS 042#	0.15		16	16	8.7	20	59
Hexavalent Chromium	mg/kg	DETSC2204*	1		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	mg/kg	DETS 042#	0.2		22	20	30	21	30
Lead	mg/kg	DETS 042#	0.3		14	16	18	17	27
Mercury	mg/kg	DETS 081#	0.05		< 0.05	0.18	0.06	< 0.05	< 0.05
Nickel	mg/kg	DETS 042#	1		32	22	5.8	24	22
Selenium	mg/kg	DETS 042#	0.5		< 0.5	0.6	< 0.5	< 0.5	0.5
Zinc	mg/kg	DETS 042#	1		73	70	77	71	81
Cyanide total	mg/kg	DETS 067#	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	%	DETS 002#	0.1		1.7	1.3	0.6	1.7	2.2
Total Sulphate as SO4	%	DETS 075#	0.01		0.01	0.02	0.06	0.03	0.04
Sulphate Aqueous Extract as SO4	mg/l	DETS 076#	10		37	89	110	44	89
Total Sulphur as S	%	DETS 064	0.01		< 0.01	0.01	0.03	0.01	0.02
pH		DETS 008#			8.0	9.3	10.9	9.0	10.0
Acenaphthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	0.1
Chrysene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	DETS 050	0.1		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH	mg/kg	DETS 050	1.6		< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
EPH (C30-C40)	mg/kg	DETS 051	10		< 10	29	< 10	< 10	65
EPH (C10-C20)	mg/kg	DETS 051	10		< 10	< 10	< 10	< 10	< 10
EPH (C20-C30)	mg/kg	DETS 051	10		< 10	12	< 10	< 10	36
Phenol - Monohydric	mg/kg	DETS 067#	0.3		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Summary of Asbestos Analysis

Soil Samples

Our Ref: 11-55602

Client Ref: 4557EPH5

Contract Title: Groves Road Stockpile

Lab No	Sample Ref	Depth	Other Ref	Material	Result
366274	S1			SOIL	NAD
366275	S2			SOIL	NAD
366276	S4			SOIL	NAD
366277	S5			SOIL	NAD
366278	S7			SOIL	NAD
366279	S8			SOIL	NAD
366280	S9			SOIL	NAD
366281	S11			SOIL	NAD
366282	S12			SOIL	NAD
366283	S14			SOIL	NAD
366284	S15			SOIL	NAD
366285	S17			SOIL	NAD
366286	S18			SOIL	NAD
366287	S20			SOIL	NAD
366288	S21			SOIL	NAD
366289	S23			SOIL	NAD
366290	S24			SOIL	NAD
366291	S26			SOIL	NAD
366292	S28			SOIL	NAD
366293	S29			SOIL	NAD
366294	S10			SOIL	NAD
366295	S31			SOIL	NAD
366296	S32			SOIL	NAD
366297	S33			SOIL	NAD
366298	S22			SOIL	NAD

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos

NAD = No Asbestos Detected. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos

Samples are analysed by DETS 082 using polarised light microscopy in accordance with HSG248 and documented in-house methods. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'

Appendix A - Details of Analysis

Method details are shown only for those determinants listed in Annex A of the MCERTS standard. Anything not included on this list falls outside the scope of MCERTS. No Recovery Factors are used in the determination of results. Results reported assume 100% recovery. Full method statements are available on request.

<u>Method</u>	<u>Name of Parameter</u>	<u>Units</u>	<u>Limit of Detection</u>	<u>Sample Preparation</u>	<u>Sub-Contracted</u>	<u>UKAS</u>	<u>MCERTS</u>
DETS 002	Organic Matter	%	0.01	Air Dried	No	Yes	Yes
DETS 003	Loss on Ignition	%	0.01	Air Dried	No	Yes	Yes
DETS 004	Total Sulphate	%	0.01	Air Dried	No	Yes	Yes
DETS 075	Total Sulphate	%	0.01	Air Dried	No	Yes	Yes
DETS 004	Water Soluble Sulphate	mg/l	10.00	Air Dried	No	Yes	Yes
DETS 076	Water Soluble Sulphate	mg/l	10.00	Air Dried	No	Yes	Yes
DETS 006	Chloride	mg/kg	0.01	Air Dried	No	Yes	Yes
DETS 008	pH	pH Units	0.10	Air Dried	No	Yes	Yes
DETS 042	Selenium	mg/kg	0.50	Air Dried	No	Yes	Yes
DETS 019	Ammonia	mg/kg	0.02	Air Dried	No	Yes	Yes
DETS 020	Boron (Water Soluble)	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 024	Sulphide	mg/kg	10.00	Air Dried	No	Yes	Yes
DETS 042	Antimony	mg/kg	1.00	Air Dried	No	No	No
DETS 042	Arsenic	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Barium	mg/kg	1.50	Air Dried	No	Yes	Yes
DET S 042	Beryllium	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Cadmium	mg/kg	0.10	Air Dried	No	Yes	Yes
DETS 042	Cobalt	mg/kg	0.70	Air Dried	No	Yes	Yes
DETS 042	Copper	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Chromium	mg/kg	0.15	Air Dried	No	Yes	Yes

DETS 042	Iron	mg/kg	1.00	Air Dried	No	Yes	No
DETS 042	Lead	mg/kg	0.30	Air Dried	No	Yes	Yes
DETS 042	Manganese	mg/kg	20.00	Air Dried	No	Yes	Yes
DETS 081	Mercury	mg/kg	0.05	Air Dried	No	Yes	Yes
DETS 042	Molybdenum	mg/kg	0.40	Air Dried	No	Yes	Yes
DETS 042	Nickel	mg/kg	0.20	Air Dried	No	Yes	Yes
DETS 042	Thallium	mg/kg	1.00	Air Dried	No	No	No
DETS 042	Vanadium	mg/kg	0.80	Air Dried	No	Yes	Yes
DETS 042	Zinc	mg/kg	1.00	Air Dried	No	Yes	Yes
DETS 049	Sulphur (Free)	mg/kg	0.50	As Received	No	Yes	Yes
DETS 050	PAH	mg/kg	0.10	As Received	No	Yes	No
DETS 051	TPH (C10 - C40)	mg/kg	20.00	As Received	No	Yes	Yes
DETS 052	PCB	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Benzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Toluene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Ethylbenzene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 062	Xylene	mg/kg	0.01	As Received	No	Yes	Yes
DETS 067	Phenol - Monohydric	mg/kg	0.3	Air Dried	No	Yes	Yes
DETS 067	Easily Liberatable Cyanide	mg/kg	0.1	Air Dried	No	Yes	Yes
DETS 067	Complex Cyanide	mg/kg	0.30	Air Dried	No	Yes	No
DETS 067	Total Cyanide	mg/kg	0.40	Air Dried	No	Yes	Yes
DETS 067	Thiocyanate	mg/kg	0.6	Air Dried	No	Yes	Yes
DETS 068	VOC	mg/kg	0.01	As Received	No	No	No



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Barney Irlam

CERTIFICATE OF ANALYSIS

Date: 04 December 2014
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 141104-23
Your Reference: SP113 Cimlcr
Location: Coed Darcy
Report No: 294534

This report has been revised and directly supersedes 294394 in its entirety.

We received 40 samples on Tuesday November 04, 2014 and 40 of these samples were scheduled for analysis which was completed on Wednesday December 03, 2014. 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





SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10312915	SP3_1		0.00 - 0.00	30/10/2014
10312966	SP3_2		0.00 - 0.00	30/10/2014
10313017	SP3_3		0.00 - 0.00	30/10/2014
10313070	SP3_4		0.00 - 0.00	30/10/2014
10313078	SP3_5		0.00 - 0.00	30/10/2014
10313082	SP3_6		0.00 - 0.00	30/10/2014
10313086	SP3_7		0.00 - 0.00	30/10/2014
10313090	SP3_8		0.00 - 0.00	30/10/2014
10313095	SP3_9		0.00 - 0.00	30/10/2014
10312919	SP3_10		0.00 - 0.00	30/10/2014
10312923	SP3_11		0.00 - 0.00	30/10/2014
10312927	SP3_12		0.00 - 0.00	30/10/2014
10312931	SP3_13		0.00 - 0.00	30/10/2014
10312936	SP3_14		0.00 - 0.00	30/10/2014
10312941	SP3_15		0.00 - 0.00	30/10/2014
10312947	SP3_16		0.00 - 0.00	30/10/2014
10312952	SP3_17		0.00 - 0.00	30/10/2014
10312957	SP3_18		0.00 - 0.00	30/10/2014
10312962	SP3_19		0.00 - 0.00	30/10/2014
10312970	SP3_20		0.00 - 0.00	30/10/2014
10312975	SP3_21		0.00 - 0.00	30/10/2014
10312979	SP3_22		0.00 - 0.00	30/10/2014
10312986	SP3_23		0.00 - 0.00	30/10/2014
10312991	SP3_24		0.00 - 0.00	30/10/2014
10312995	SP3_25		0.00 - 0.00	30/10/2014
10313000	SP3_26		0.00 - 0.00	30/10/2014
10313005	SP3_27		0.00 - 0.00	30/10/2014
10313009	SP3_28		0.00 - 0.00	30/10/2014
10313013	SP3_29		0.00 - 0.00	30/10/2014
10313022	SP3_30		0.00 - 0.00	30/10/2014
10313026	SP3_31		0.00 - 0.00	30/10/2014
10313033	SP3_32		0.00 - 0.00	30/10/2014
10313038	SP3_33		0.00 - 0.00	30/10/2014
10313042	SP3_34		0.00 - 0.00	30/10/2014
10313047	SP3_35		0.00 - 0.00	30/10/2014
10313051	SP3_36		0.00 - 0.00	30/10/2014
10313058	SP3_37		0.00 - 0.00	30/10/2014
10313062	SP3_38		0.00 - 0.00	30/10/2014
10313066	SP3_39		0.00 - 0.00	30/10/2014
10313074	SP3_40		0.00 - 0.00	30/10/2014

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



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

SOLID Results Legend  Test  No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10312936	SP3_14					0.00 - 0.00		250g Amber Jar	
	10312931	SP3_13					0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214)	
	10312927	SP3_12					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10312923	SP3_11					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10312919	SP3_10					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313095	SP3_9					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313090	SP3_8					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313086	SP3_7					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313082	SP3_6					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313078	SP3_5					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313070	SP3_4					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10313017	SP3_3					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10312966	SP3_2					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
	10312915	SP3_1					0.00 - 0.00		250g Amber Jar 60g VOC (ALE215) 400g Tub (ALE214)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 40								
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5								
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 40								
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 40								
GRO by GC-FID (S)	All	NDPs: 0 Tests: 40								
Metals in solid samples by OES	All	NDPs: 0 Tests: 40								
PAH by GCMS	All	NDPs: 0 Tests: 40								
pH	All	NDPs: 0 Tests: 40								
Sample description	All	NDPs: 0 Tests: 40								
Total Organic Carbon	All	NDPs: 0 Tests: 6								
TPH CWG GC (S)	All	NDPs: 0 Tests: 40								



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

SOLID Results Legend  Test  No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10313005	SP3_27					0.00 - 0.00		400g Tub (ALE214)	
	10313000	SP3_26					0.00 - 0.00		60g VOC (ALE215)	
	10312995	SP3_25					0.00 - 0.00		400g Tub (ALE214)	
	10312991	SP3_24					0.00 - 0.00		60g VOC (ALE215)	
Asbestos fibres in Soil*	10312986	SP3_23					0.00 - 0.00		250g Amber Jar	
	10312979	SP3_22					0.00 - 0.00		400g Tub (ALE214)	
	10312975	SP3_21					0.00 - 0.00		60g VOC (ALE215)	
	10312970	SP3_20					0.00 - 0.00		400g Tub (ALE214)	
	10312962	SP3_19					0.00 - 0.00		250g Amber Jar	
	10312957	SP3_18					0.00 - 0.00		60g VOC (ALE215)	
	10312952	SP3_17					0.00 - 0.00		400g Tub (ALE214)	
	10312947	SP3_16					0.00 - 0.00		250g Amber Jar	
	10312941	SP3_15					0.00 - 0.00		60g VOC (ALE215)	
	10312936	SP3_14					0.00 - 0.00		400g Tub (ALE214)	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5								
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 40								
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 40								
GRO by GC-FID (S)	All	NDPs: 0 Tests: 40								
Metals in solid samples by OES	All	NDPs: 0 Tests: 40								
PAH by GCMS	All	NDPs: 0 Tests: 40								
pH	All	NDPs: 0 Tests: 40								
Sample description	All	NDPs: 0 Tests: 40								
Total Organic Carbon	All	NDPs: 0 Tests: 6								
TPH CWG GC (S)	All	NDPs: 0 Tests: 40								



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

SOLID Results Legend  Test  No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10313005		SP3_27				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313009		SP3_28				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313013		SP3_29				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313022		SP3_30				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
Asbestos fibres in Soil*	10313026		SP3_31				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313033		SP3_32				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313038		SP3_33				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313042		SP3_34				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313047		SP3_35				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
Asbestos Quantification - Full	10313051		SP3_36				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313058		SP3_37				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313062		SP3_38				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313066		SP3_39				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
	10313074		SP3_40				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar	
Asbestos Quantification - Full										
EPH CWG (Aliphatic) GC (S)										
EPH CWG (Aromatic) GC (S)										
GRO by GC-FID (S)										
Metals in solid samples by OES										
PAH by GCMS										
pH										
Sample description										
Total Organic Carbon										
TPH CWG GC (S)										



SDG: 141104-23
Job: H_ATKINS_LDC-276
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Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
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Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
10312915	SP3_1	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10312966	SP3_2	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10313017	SP3_3	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10313070	SP3_4	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10313078	SP3_5	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10313082	SP3_6	0.00 - 0.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Stones	Vegetation
10313086	SP3_7	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10313090	SP3_8	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10313095	SP3_9	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10312919	SP3_10	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10312923	SP3_11	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312927	SP3_12	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10312931	SP3_13	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10312936	SP3_14	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312941	SP3_15	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312947	SP3_16	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10312952	SP3_17	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10312957	SP3_18	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312962	SP3_19	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312970	SP3_20	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Concrete/Aggregate	Stones
10312975	SP3_21	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10312979	SP3_22	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10312986	SP3_23	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10312991	SP3_24	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10312995	SP3_25	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10313000	SP3_26	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10313005	SP3_27	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	Vegetation
10313009	SP3_28	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Crushed Brick
10313013	SP3_29	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Crushed Brick	Stones
10313022	SP3_30	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10313026	SP3_31	0.00 - 0.00	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10313033	SP3_32	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10313038	SP3_33	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10313042	SP3_34	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10313047	SP3_35	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Vegetation	Stones
10313051	SP3_36	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Vegetation	Stones
10313058	SP3_37	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10313062	SP3_38	0.00 - 0.00	Dark Brown	Clay Loam	0.063 - 0.1 mm	Stones	None



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
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			Colour	Description	Grain size	Inclusions	Inclusions 2
10313066	SP3_39	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.1 - 2 mm	Stones	None
10313074	SP3_40	0.00 - 0.00	Dark Brown	Sandy Silt Loam	0.063 - 0.1 mm	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS 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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

SDG: 141104-23
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Location: Coed Darcy
Customer: Atkins Global Ltd
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Order Number: cd0930
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[illegible]

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Order Number: cd0930
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SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
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PAH by GCMS

[illegible]

SDG: 141104-23
Job: H_ATKINS_LDC-276
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PAH by GCMS

[illegible]

SDG: 141104-23
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PAH by GCMS

[illegible]

SDG: 141104-23
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PAH by GCMS

[illegible]

Order Number: cd0930
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SDG: 141104-23
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PAH by GCMS

[illegible]

SDG: 141104-23
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PAH by GCMS

[illegible]



SDG: 141104-23
Job: H_ATKINS_LDC-276
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Location: Coed Darcy
Customer: Atkins Global Ltd
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TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_1	SP3_2	SP3_3	SP3_4	SP3_5	SP3_6
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.		04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
tot.unfilt	Total / unfiltered sample.		141104-23	141104-23	141104-23	141104-23	141104-23	141104-23
*	Subcontracted test.		10312915	10312966	10313017	10313070	10313078	10313082
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	105 @	81 @	91 @	85 @	78 @	87 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089	<8 @ M	10.6 @ M	<8 @ M	10.3 @ M	10.6 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173	1420	354	857	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	4360	2560	7140	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	39200	22700	51600	1450	10600	4100
Aliphatics >C35-C44	<100 µg/kg	TM173	16000	6560	16600	<100	6980	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	60900	32200	76300	1450	17500	4100
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	356	221	157	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	2220	1970	3200	120	691	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	24000	14500	34300	4890	12600	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173	20700	8790	20700	3990	11800	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	9310	4020	8270	1680	5410	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	47300	25400	58300	9000	25100	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	108000	57600	135000	10500	42700	4100



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_7	SP3_8	SP3_9	SP3_10	SP3_11	SP3_12
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.		04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
tot.unfilt	Total / unfiltered sample.		141104-23	141104-23	141104-23	141104-23	141104-23	141104-23
*	Subcontracted test.		10313086	10313090	10313095	10312919	10312923	10312927
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	83	98	79	86	120	101
			@	@	@	@	@	@
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			@ M	@ M	@ M	@ M	@ M	@ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			@ M	@ M	@ M	@ M	@ M	@ M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@ M	@ M	@ M	@ M	@ M	@ M
Toluene	<2 µg/kg	TM089	9.76	<8	<8	<8	<8	<8
			@ M	@ M	@ M	@ M	@ M	@ M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@ M	@ M	@ M	@ M	@ M	@ M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
			@	@	@	@	@	@
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@	@	@	@	@	@
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	860	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	6120	<100	3640	2260	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	6120	46000	2870	39700	25500	3400
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	12000	1400	23000	14900	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	6120	64100	4270	67300	42800	3400
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	306	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1230	1950	232	1730	4740	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	8670	22300	4780	31400	32500	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173	2530	12800	3370	31000	22300	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	5560	1710	13600	9750	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	12400	37100	8380	64400	59600	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	18600	101000	12700	132000	102000	3400



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_13	SP3_14	SP3_15	SP3_16	SP3_17	SP3_18
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.		04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
tot.unfilt	Total / unfiltered sample.		141104-23	141104-23	141104-23	141104-23	141104-23	141104-23
*	Subcontracted test.		10312931	10312936	10312941	10312947	10312952	10312957
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	121	120	116	122	121	130
			@	@	@	@	@	@
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	243	<176	<176	<176
			@ M	@ M	@ M	@ M	@ M	@ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			@ M	@ M	@ M	@ M	@ M	@ M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@ M	@ M	@ M	@ M	@ M	@ M
Toluene	<2 µg/kg	TM089	20.6	<8	<8	<8	<8	<8
			@ M	@ M	@ M	@ M	@ M	@ M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@ M	@ M	@ M	@ M	@ M	@ M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
			@	@	@	@	@	@
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@	@	@	@	@	@
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	59.7	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	48	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	50.3	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	594	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	2000	3440	<100	<100	<100	1250
Aliphatics >C21-C35	<100 µg/kg	TM173	14000	67600	176	<100	1500	10400
Aliphatics >C35-C44	<100 µg/kg	TM173	6450	35800	<100	<100	<100	4830
Total Aliphatics >C12-C44	<100 µg/kg	TM173	22500	107000	176	594	1500	16500
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1600	3580	<100	<100	<100	701
Aromatics >EC21-EC35	<100 µg/kg	TM173	20600	71900	1250	1390	2250	6920
Aromatics >EC35-EC44	<100 µg/kg	TM173	12300	46700	<100	1280	377	3720
Aromatics >EC40-EC44	<100 µg/kg	TM173	5210	19700	<100	643	<100	1140
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	34600	122000	1250	2670	2620	11300
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	57200	229000	1670	3270	4130	27800



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref. Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	SP3_19	SP3_20	SP3_21	SP3_22	SP3_23	SP3_24
#	ISO17025 accredited.		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\${@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	119	125	116	113	122	134
			@	@	@	@	@	@
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			@ M	@ M	@ M	@ M	@ M	@ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			@ M	@ M	@ M	@ M	@ M	@ M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@ M	@ M	@ M	@ M	@ M	@ M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
			@ M	@ M	@ M	@ M	@ M	@ M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@ M	@ M	@ M	@ M	@ M	@ M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
			@	@	@	@	@	@
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@	@	@	@	@	@
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C12-C16	<100 µg/kg	TM173	910	<100	<100	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	1350	<100	<100	1420	1590	1310
Aliphatics >C21-C35	<100 µg/kg	TM173	19000	3440	3930	20200	11500	7960
Aliphatics >C35-C44	<100 µg/kg	TM173	10200	<100	1170	13400	6190	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	31500	3440	5100	35000	19300	9280
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	471	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	876	300	1590	1800	582	507
Aromatics >EC21-EC35	<100 µg/kg	TM173	16100	9390	11200	29500	10400	9580
Aromatics >EC35-EC44	<100 µg/kg	TM173	12900	6300	7950	24900	7960	7020
Aromatics >EC40-EC44	<100 µg/kg	TM173	4910	2530	4030	11400	3180	3090
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	29800	16000	21200	56200	19000	17100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	61300	19400	26300	91200	38300	26400



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_25	SP3_26	SP3_27	SP3_28	SP3_29	SP3_30
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.		04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
tot.unfilt	Total / unfiltered sample.		141104-23	141104-23	141104-23	141104-23	141104-23	141104-23
*	Subcontracted test.		10312995	10313000	10313005	10313009	10313013	10313022
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	120	114	105	123	107	92
			@	@	@	@	@	@
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			@ M	@ M	@ M	@ M	@ M	@ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			@ M	@ M	@ M	@ M	@ M	@ M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@ M	@ M	@ M	@ M	@ M	@ M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
			@ M	@ M	@ M	@ M	@ M	@ M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@ M	@ M	@ M	@ M	@ M	@ M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			@ M	@ M	@ M	@ M	@ M	@ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
			@	@	@	@	@	@
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			@	@	@	@	@	@
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aliphatics >C12-C16	<100 µg/kg	TM173	198	<100	<100	<100	<100	278
Aliphatics >C16-C21	<100 µg/kg	TM173	943	<100	1360	<100	611	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	14000	4590	10200	12600	13300	7660
Aliphatics >C35-C44	<100 µg/kg	TM173	9750	3590	6930	6530	9450	3940
Total Aliphatics >C12-C44	<100 µg/kg	TM173	24900	8180	18500	19100	23300	11900
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			@	@	@	@	@	@
Aromatics >EC12-EC16	<100 µg/kg	TM173	498	<100	<100	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1320	2190	<100	486	1340	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	10800	15000	3580	19600	19300	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173	8140	8570	3670	15400	16600	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	3930	3870	1350	6440	7310	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	20700	25800	7250	35500	37200	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	45600	34000	25700	54600	60600	11900



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_31	SP3_32	SP3_33	SP3_34	SP3_35	SP3_36
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014	30/10/2014
diss.filt	Dissolved / filtered sample.		04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014
tot.unfilt	Total / unfiltered sample.		141104-23	141104-23	141104-23	141104-23	141104-23	141104-23
*	Subcontracted test.		10313026	10313033	10313038	10313042	10313047	10313051
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	109 @	116 @	95 @	113 @	118 @	121 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 @ M	<44 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<5 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089	<40 @ M	<10 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089	<8 @ M	<2 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<3 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<6 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089	<12 @ M	<3 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	215	<100	614	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100	1160	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	2830	5650	6750	2480	13400	2610
Aliphatics >C35-C44	<100 µg/kg	TM173	302	1470	1310	508	8140	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	3140	7330	8070	3600	22700	2610
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 @	<10 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	4660	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	<100	<100	14000	247	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	8550	8060	3970	29000	16100	4730
Aromatics >EC35-EC44	<100 µg/kg	TM173	7880	2070	963	3180	12800	4030
Aromatics >EC40-EC44	<100 µg/kg	TM173	3640	<100	<100	<100	5700	2000
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	16400	10100	4930	50800	29200	8760
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	19600	17500	13000	54400	51900	11400



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

TPH CWG (S)

Results Legend		Customer Sample Ref.	SP3_37	SP3_38	SP3_39	SP3_40		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	114	114	118	121		
			@	@	@	@		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176		
			@ M	@ M	@ M	@ M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20		
			@ M	@ M	@ M	@ M		
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40		
			@ M	@ M	@ M	@ M		
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8		
			@ M	@ M	@ M	@ M		
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12		
			@ M	@ M	@ M	@ M		
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24		
			@ M	@ M	@ M	@ M		
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12		
			@ M	@ M	@ M	@ M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9		
			@	@	@	@		
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24		
			@	@	@	@		
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100		
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100		
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	7360	5530	8810		
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	5400		
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100	7360	5530	14200		
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40		
			@	@	@	@		
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100		
Aromatics >EC16-EC21	<100 µg/kg	TM173	669	779	653	786		
Aromatics >EC21-EC35	<100 µg/kg	TM173	2960	7920	6610	7200		
Aromatics >EC35-EC44	<100 µg/kg	TM173	1410	5640	5400	4380		
Aromatics >EC40-EC44	<100 µg/kg	TM173	254	2650	2640	2020		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	5040	14300	12700	12400		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	5040	21700	18200	26600		



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP3_11 0.00 - 0.00 SOLID 30/10/2014 00:00:00 28/11/2014 08:29:46 141104-23 10312923 TM 304	- (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP3_19 0.00 - 0.00 SOLID 30/10/2014 00:00:00 27/11/2014 09:10:57 141104-23 10312962 TM 304	- (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP3_26 0.00 - 0.00 SOLID 30/10/2014 00:00:00 28/11/2014 09:15:20 141104-23 10313000 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP3_27 0.00 - 0.00 SOLID 30/10/2014 00:00:00 01/12/2014 07:58:23 141104-23 10313005 TM 304	- (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP3_31 0.00 - 0.00 SOLID 30/10/2014 00:00:00 27/11/2014 15:21:49 141104-23 10313026 TM 304	- (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)



SDG:	141104-23	Location:	Coed Darcy	Order Number:	cd0930
Job:	H_ATKINS_LDC-276	Customer:	Atkins Global Ltd	Report Number:	294534
Client Reference:	SP113 Cimlir	Attention:	Barney Irlam	Superseded Report:	294394

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
SUB (ASB)				
TM 304				
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM132	In - house Method	ELTRA CS800 Operators Guide		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

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



SDG: 141104-23
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Test Completion Dates

Lab Sample No(s) Customer Sample Ref. AGS Ref. Depth Type	10312915	10312966	10313017	10313070	10313078	10313082	10313086	10313090	10313095	10312919
	SP3_1	SP3_2	SP3_3	SP3_4	SP3_5	SP3_6	SP3_7	SP3_8	SP3_9	SP3_10
	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
EPH CWG (Aliphatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
EPH CWG (Aromatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
GRO by GC-FID (S)	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
Metals in solid samples by OES	13-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	13-Nov-2014	18-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	12-Nov-2014
PAH by GCMS	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014
pH	18-Nov-2014	17-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014
Sample description	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	13-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Total Organic Carbon	13-Nov-2014								13-Nov-2014	
TPH CWG GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014

Lab Sample No(s) Customer Sample Ref. AGS Ref. Depth Type	10312923	10312927	10312931	10312936	10312941	10312947	10312952	10312957	10312962	10312970
	SP3_11	SP3_12	SP3_13	SP3_14	SP3_15	SP3_16	SP3_17	SP3_18	SP3_19	SP3_20
	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
Asbestos Quantification - Full	03-Dec-2014								03-Dec-2014	
EPH CWG (Aliphatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
EPH CWG (Aromatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
GRO by GC-FID (S)	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014
Metals in solid samples by OES	14-Nov-2014	12-Nov-2014	12-Nov-2014	14-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014
PAH by GCMS	18-Nov-2014	18-Nov-2014	19-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	19-Nov-2014
pH	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014
Sample description	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Total Organic Carbon							13-Nov-2014			
TPH CWG GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014

Lab Sample No(s) Customer Sample Ref. AGS Ref. Depth Type	10312975	10312979	10312986	10312991	10312995	10313000	10313005	10313009	10313013	10313022
	SP3_21	SP3_22	SP3_23	SP3_24	SP3_25	SP3_26	SP3_27	SP3_28	SP3_29	SP3_30
	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
Asbestos Quantification - Full						03-Dec-2014	03-Dec-2014			
EPH CWG (Aliphatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014
EPH CWG (Aromatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014
GRO by GC-FID (S)	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014
Metals in solid samples by OES	13-Nov-2014	12-Nov-2014	13-Nov-2014	12-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	12-Nov-2014	13-Nov-2014
PAH by GCMS	19-Nov-2014	19-Nov-2014	18-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	18-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
pH	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014
Sample description	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Total Organic Carbon										
TPH CWG GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014

Lab Sample No(s) Customer Sample Ref. AGS Ref. Depth Type	10313026	10313033	10313038	10313042	10313047	10313051	10313058	10313062	10313066	10313074
	SP3_31	SP3_32	SP3_33	SP3_34	SP3_35	SP3_36	SP3_37	SP3_38	SP3_39	SP3_40
	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014	14-Nov-2014
Asbestos Quantification - Full	03-Dec-2014									
EPH CWG (Aliphatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
EPH CWG (Aromatic) GC (S)	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014
GRO by GC-FID (S)	18-Nov-2014	20-Nov-2014	21-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014	18-Nov-2014
Metals in solid samples by OES	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	13-Nov-2014	12-Nov-2014	13-Nov-2014	12-Nov-2014
PAH by GCMS	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014	19-Nov-2014
pH	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	17-Nov-2014	18-Nov-2014	18-Nov-2014
Sample description	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Total Organic Carbon			19-Nov-2014						19-Nov-2014	
TPH CWG GC (S)	20-Nov-2014	20-Nov-2014	21-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014	20-Nov-2014



Certificate of Analysis

Certificate Number 14-20099

13-Nov-14

Client Alcontrol Laboratories
Units 7 & 8
Hawarden Business Park
Manor Road
Hawarden
Deeside
CH5 3US

Our Reference 14-20099

Client Reference 141104-23

Contract Title 141104-23

Description 40 Soil samples.

Date Received 06-Nov-14

Date Started 07-Nov-14

Date Completed 13-Nov-14

Test Procedures Asbestos Analysis DETSC 1101.

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown
Business Manager



Summary of Asbestos Analysis

Soil Samples

Our Ref 14-20099
 Client Ref 141104-23
 Contract Title 141104-23

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
726691	10316854 SP3_1	SOIL	NAD	none	Jeff Cruddas
726692	10316852 SP3_10	SOIL	NAD	none	Jeff Cruddas
726693	10316868 SP3_11	SOIL	Chrysotile	Chrysotile present as fibre bundle	Jeff Cruddas
726694	10316778 SP3_12	SOIL	NAD	none	Jeff Cruddas
726695	10316774 SP3_13	SOIL	NAD	none	Jeff Cruddas
726696	10316788 SP3_14	SOIL	NAD	none	Jeff Cruddas
726697	10316878 SP3_15	SOIL	NAD	none	Jeff Cruddas
726698	10316786 SP3_16	SOIL	NAD	none	Jeff Cruddas
726699	10316794 SP3_17	SOIL	NAD	none	Jeff Cruddas
726700	10316882 SP3_18	SOIL	NAD	none	Jeff Cruddas
726701	10316780 SP3_19	SOIL	Chrysotile	Chrysotile present as fibre bundle	Jeff Cruddas
726702	10316740 SP3_2	SOIL	NAD	none	Jeff Cruddas
726703	10316871 SP3_20	SOIL	NAD	none	Jeff Cruddas
726704	10316833 SP3_21	SOIL	NAD	none	Jeff Cruddas
726705	10316826 SP3_22	SOIL	NAD	none	Jeff Cruddas
726706	10316807 SP3_23	SOIL	NAD	none	Jeff Cruddas
726707	10316796 SP3_24	SOIL	NAD	none	Jeff Cruddas
726708	10316837 SP3_25	SOIL	NAD	none	Jeff Cruddas
726709	10316733 SP3_26	SOIL	Chrysotile	Chrysotile present as fibre bundle	Jeff Cruddas
726710	10316812 SP3_27	SOIL	Chrysotile	Chrysotile present as fibre bundles	Jeff Cruddas
726711	10316831 SP3_28	SOIL	NAD	none	Jeff Cruddas
726712	10316799 SP3_29	SOIL	NAD	none	Jeff Cruddas
726713	10316745 SP3_3	SOIL	NAD	none	Jeff Cruddas
726714	10316797 SP3_30	SOIL	NAD	none	Jeff Cruddas
726715	10316750 SP3_31	SOIL	Chrysotile	Chrysotile present as fibre bundles	Jeff Cruddas
726716	10316756 SP3_32	SOIL	NAD	none	Jeff Cruddas
726717	10316734 SP3_33	SOIL	NAD	none	Jeff Cruddas
726718	10316754 SP3_34	SOIL	NAD	none	Jeff Cruddas
726719	10316752 SP3_35	SOIL	NAD	none	Jeff Cruddas
726720	10316737 SP3_36	SOIL	NAD	none	Jeff Cruddas
726721	10316751 SP3_37	SOIL	NAD	none	Andrew Little
726722	10316735 SP3_38	SOIL	NAD	none	Andrew Little
726723	10316755 SP3_39	SOIL	NAD	none	Andrew Little
726724	10316858 SP3_4	SOIL	NAD	none	Andrew Little
726725	10316760 SP3_40	SOIL	NAD	none	Andrew Little
726726	10316851 SP3_5	SOIL	NAD	none	Andrew Little
726727	10316881 SP3_6	SOIL	NAD	none	Andrew Little
726728	10316863 SP3_7	SOIL	NAD	none	Andrew Little
726729	10316869 SP3_8	SOIL	NAD	none	Andrew Little
726730	10316874 SP3_9	SOIL	NAD	none	Andrew Little

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 14-20099
Client Ref 141104-23
Contract 141104-23

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
726691	10316854 SOIL	30/10/14	PT 500ml		
726692	10316852 SOIL	30/10/14	PT 500ml		
726693	10316868 SOIL	30/10/14	PT 500ml		
726694	10316778 SOIL	30/10/14	PT 500ml		
726695	10316774 SOIL	30/10/14	PT 500ml		
726696	10316788 SOIL	30/10/14	PT 500ml		
726697	10316878 SOIL	30/10/14	PT 500ml		
726698	10316786 SOIL	30/10/14	PT 500ml		
726699	10316794 SOIL	30/10/14	PT 500ml		
726700	10316882 SOIL	30/10/14	PT 500ml		
726701	10316780 SOIL	30/10/14	PT 500ml		
726702	10316740 SOIL	30/10/14	PT 500ml		
726703	10316871 SOIL	30/10/14	PT 500ml		
726704	10316833 SOIL	30/10/14	PT 500ml		
726705	10316826 SOIL	30/10/14	PT 500ml		
726706	10316807 SOIL	30/10/14	PT 500ml		
726707	10316796 SOIL	30/10/14	PT 500ml		
726708	10316837 SOIL	30/10/14	PT 500ml		
726709	10316733 SOIL	30/10/14	PT 500ml		
726710	10316812 SOIL	30/10/14	PT 500ml		
726711	10316831 SOIL	30/10/14	PT 500ml		
726712	10316799 SOIL	30/10/14	PT 500ml		
726713	10316745 SOIL	30/10/14	PT 500ml		
726714	10316797 SOIL	30/10/14	PT 500ml		
726715	10316750 SOIL	30/10/14	PT 500ml		
726716	10316756 SOIL	30/10/14	PT 500ml		
726717	10316734 SOIL	30/10/14	PT 500ml		
726718	10316754 SOIL	30/10/14	PT 500ml		
726719	10316752 SOIL	30/10/14	PT 500ml		
726720	10316737 SOIL	30/10/14	PT 500ml		
726721	10316751 SOIL	30/10/14	PT 500ml		
726722	10316735 SOIL	30/10/14	PT 500ml		
726723	10316755 SOIL	30/10/14	PT 500ml		
726724	10316858 SOIL	30/10/14	PT 500ml		
726725	10316760 SOIL	30/10/14	PT 500ml		
726726	10316851 SOIL	30/10/14	PT 500ml		
726727	10316881 SOIL	30/10/14	PT 500ml		
726728	10316863 SOIL	30/10/14	PT 500ml		
726729	10316869 SOIL	30/10/14	PT 500ml		
726730	10316874 SOIL	30/10/14	PT 500ml		

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 14-20099
Client Ref 141104-23
Contract 141104-23

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



SDG: 141104-23
Job: H_ATKINS_LDC-276
Client Reference: SP113 Cimlar

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: cd0930
Report Number: 294534
Superseded Report: 294394

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 TICS and SVOC TICS.

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/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS 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** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 MCERTS 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 GCFID 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 GCMS 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
\$	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	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	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
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.



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date: 27 May 2014
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 140520-43
Your Reference: Groves Road
Location: Coed Darcy
Report No: 271208

We received 4 samples on Tuesday May 20, 2014 and 4 of these samples were scheduled for analysis which was completed on Tuesday May 27, 2014. 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





SDG:	140520-43	Location:	Coed Darcy	Order Number:	CD0676
Job:	H_ATKINS_LDC-226	Customer:	Atkins Global Ltd	Report Number:	271208
Client Reference:	Groves Road	Attention:	Jack Lowrie	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
9310714	Groves Road - 1		0.00 - 0.00	08/05/2014
9310721	Groves Road - 2		0.00 - 0.00	08/05/2014
9310726	Groves Road - 3		0.00 - 0.00	08/05/2014
9310730	Groves Road - 4		0.00 - 0.00	08/05/2014

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



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

SOLID Results Legend  Test  No Determination Possible	Lab Sample No(s)		9310714	9310721	9310726	9310730
	Customer Sample Reference		Groves Road - 1	Groves Road - 2	Groves Road - 3	Groves Road - 4
	AGS Reference					
	Depth (m)		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
	Container		250g Amber Jar 400g Tub (ALE214) 60g VOC (ALE215)	250g Amber Jar 60g VOC (ALE215)	250g Amber Jar 400g Tub (ALE214) 60g VOC (ALE215)	60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 4				
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 4				
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 4				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 4				
Metals in solid samples by OES	All	NDPs: 0 Tests: 4				
PAH by GCMS	All	NDPs: 0 Tests: 4				
pH	All	NDPs: 0 Tests: 4				
Sample description	All	NDPs: 0 Tests: 4				
Total Organic Carbon	All	NDPs: 0 Tests: 4				
TPH CWG GC (S)	All	NDPs: 0 Tests: 4				



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
9310714	Groves Road - 1	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	None
9310721	Groves Road - 2	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	None
9310726	Groves Road - 3	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
9310730	Groves Road - 4	0.00 - 0.00	Beige	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS 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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Order Number: CD0676
Report Number: 271208
Superseded Report:

Page 5 of 11

SDG:	140520-43
Job:	H_ATKINS_LDC-226
Client Reference:	Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

PAH by GCMS

[illegible]



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample Ref.	Groves Road - 1	Groves Road - 2	Groves Road - 3	Groves Road - 4		
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference						
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	73	76	84	77		
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	300	<44	89.7	<44		
			M	M	M	M		
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<5	<5	<5	<5		
			M	M	M	M		
Benzene	<10 µg/kg	TM089	<10	<10	<10	<10		
			M	M	M	M		
Toluene	<2 µg/kg	TM089	7.98	<2	<2	<2		
			M	M	M	M		
Ethylbenzene	<3 µg/kg	TM089	<3	<3	<3	<3		
			M	M	M	M		
m,p-Xylene	<6 µg/kg	TM089	<6	<6	<6	<6		
			M	M	M	M		
o-Xylene	<3 µg/kg	TM089	<3	<3	<3	<3		
			M	M	M	M		
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9		
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24		
Aliphatics >C5-C6	<10 µg/kg	TM089	19.4	<10	<10	<10		
Aliphatics >C6-C8	<10 µg/kg	TM089	12.5	<10	10.4	<10		
Aliphatics >C8-C10	<10 µg/kg	TM089	51.3	<10	17.3	<10		
Aliphatics >C10-C12	<10 µg/kg	TM089	104	<10	23	<10		
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	199		
Aliphatics >C16-C21	<100 µg/kg	TM173	152	<100	351	1770		
Aliphatics >C21-C35	<100 µg/kg	TM173	4620	<100	789	4010		
Aliphatics >C35-C44	<100 µg/kg	TM173	4380	808	1550	1250		
Total Aliphatics >C12-C44	<100 µg/kg	TM173	9150	808	2690	7230		
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10	<10	<10	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10	<10	<10	<10		
Aromatics >EC8-EC10	<10 µg/kg	TM089	35.3	<10	13.8	<10		
Aromatics >EC10-EC12	<10 µg/kg	TM089	69.5	<10	16.1	<10		
Aromatics >EC12-EC16	<100 µg/kg	TM173	1440	948	<100	1680		
Aromatics >EC16-EC21	<100 µg/kg	TM173	4460	1580	14700	3770		
Aromatics >EC21-EC35	<100 µg/kg	TM173	26300	10900	<100	12800		
Aromatics >EC35-EC44	<100 µg/kg	TM173	21600	10800	1110	14000		
Aromatics >EC40-EC44	<100 µg/kg	TM173	8760	4960	593	6960		
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	53800	24200	15800	32200		
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	63300	25100	18500	39500		



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

Asbestos Identification - Solid Samples

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Groves Road - 1 0.00 - 0.00 SOLID 08/05/2014 00:00:00 140520-43 9310714 TM048	22/05/14	Paul Fenney	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Groves Road - 2 0.00 - 0.00 SOLID 08/05/2014 00:00:00 140520-43 9310721 TM048	21/05/14	Chris Swindells	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Groves Road - 3 0.00 - 0.00 SOLID 08/05/2014 00:00:00 140520-43 9310726 TM048	21/05/14	Chris Swindells	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Groves Road - 4 0.00 - 0.00 SOLID 08/05/2014 00:00:00 140520-43 9310730 TM048	21/05/14	Chris Swindells	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM132	In - house Method	ELTRA CS800 Operators Guide		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

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



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
Superseded Report:

Test Completion Dates

Lab Sample No(s)	9310714	9310721	9310726	9310730
Customer Sample Ref.	Groves Road - 1	Groves Road - 2	Groves Road - 3	Groves Road - 4
AGS Ref.				
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	22-May-2014	22-May-2014	22-May-2014	22-May-2014
EPH CWG (Aliphatic) GC (S)	23-May-2014	23-May-2014	23-May-2014	23-May-2014
EPH CWG (Aromatic) GC (S)	23-May-2014	23-May-2014	23-May-2014	23-May-2014
GRO by GC-FID (S)	23-May-2014	23-May-2014	23-May-2014	23-May-2014
Metals in solid samples by OES	27-May-2014	27-May-2014	27-May-2014	27-May-2014
PAH by GCMS	23-May-2014	23-May-2014	23-May-2014	23-May-2014
pH	21-May-2014	21-May-2014	21-May-2014	21-May-2014
Sample description	20-May-2014	20-May-2014	20-May-2014	20-May-2014
Total Organic Carbon	27-May-2014	22-May-2014	22-May-2014	27-May-2014
TPH CWG GC (S)	23-May-2014	23-May-2014	23-May-2014	23-May-2014



SDG: 140520-43
Job: H_ATKINS_LDC-226
Client Reference: Groves Road

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0676
Report Number: 271208
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 TICS and SVOC TICS.

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/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS 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** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 MCERTS 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 GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTX). 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 GCMS 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
§	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	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	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
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.

Appendix B Lougher

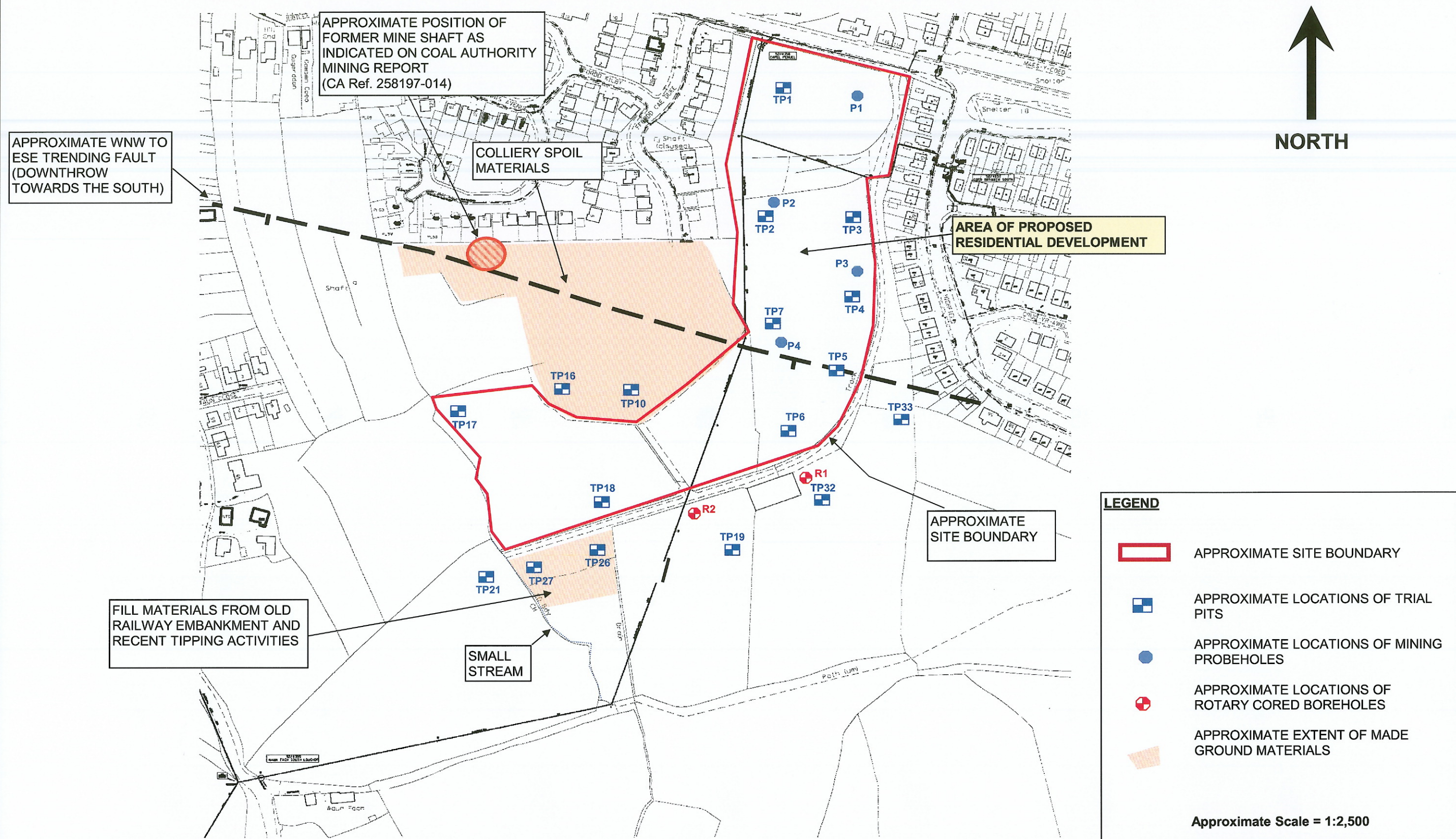


FIGURE 2 LOCATION OF EXPLORATORY HOLES

LAND OFF LOUGHOR ROAD, GORSEINON



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date: 17 December 2014
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 141125-3
Your Reference: SP114
Location: Coed Darcy
Report No: 296233

We received 20 samples on Tuesday November 25, 2014 and 20 of these samples were scheduled for analysis which was completed on Wednesday December 17, 2014. 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





SDG:	141125-3	Location:	Coed Darcy	Order Number:	CD1002
Job:	H_ATKINS_LDC-290	Customer:	Atkins Global Ltd	Report Number:	296233
Client Reference:	SP114	Attention:	Jack Lowrie	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10438613	SP114_1		0.00 - 0.00	21/11/2014
10438699	SP114_2		0.00 - 0.00	21/11/2014
10438708	SP114_3		0.00 - 0.00	21/11/2014
10438715	SP114_4		0.00 - 0.00	21/11/2014
10438719	SP114_5		0.00 - 0.00	21/11/2014
10438723	SP114_6		0.00 - 0.00	21/11/2014
10438727	SP114_7		0.00 - 0.00	21/11/2014
10438731	SP114_8		0.00 - 0.00	21/11/2014
10438735	SP114_9		0.00 - 0.00	21/11/2014
10438625	SP114_10		0.00 - 0.00	21/11/2014
10438637	SP114_11		0.00 - 0.00	21/11/2014
10438645	SP114_12		0.00 - 0.00	21/11/2014
10438653	SP114_13		0.00 - 0.00	21/11/2014
10438664	SP114_14		0.00 - 0.00	21/11/2014
10438670	SP114_15		0.00 - 0.00	21/11/2014
10438676	SP114_16		0.00 - 0.00	21/11/2014
10438686	SP114_17		0.00 - 0.00	21/11/2014
10438691	SP114_18		0.00 - 0.00	21/11/2014
10438695	SP114_19		0.00 - 0.00	21/11/2014
10438703	SP114_20		0.00 - 0.00	21/11/2014

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



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10438664	SP114_14					0.00 - 0.00		250g Amber Jar (AL)	
	10438653	SP114_13					0.00 - 0.00		60g VOC (ALE215)	
									400g Tub (ALE214)	
	10438645	SP114_12					0.00 - 0.00		250g Amber Jar (AL)	
	10438637	SP114_11					0.00 - 0.00		60g VOC (ALE215)	
									400g Tub (ALE214)	
	10438625	SP114_10					0.00 - 0.00		250g Amber Jar (AL)	
									60g VOC (ALE215)	
	10438735	SP114_9					0.00 - 0.00		400g Tub (ALE214)	
									250g Amber Jar (AL)	
	10438731	SP114_8					0.00 - 0.00		60g VOC (ALE215)	
									400g Tub (ALE214)	
	10438727	SP114_7					0.00 - 0.00		250g Amber Jar (AL)	
									60g VOC (ALE215)	
	10438723	SP114_6					0.00 - 0.00		400g Tub (ALE214)	
									250g Amber Jar (AL)	
	10438719	SP114_5					0.00 - 0.00		60g VOC (ALE215)	
									400g Tub (ALE214)	
	10438715	SP114_4					0.00 - 0.00		250g Amber Jar (AL)	
									60g VOC (ALE215)	
	10438708	SP114_3					0.00 - 0.00		400g Tub (ALE214)	
									250g Amber Jar (AL)	
	10438699	SP114_2					0.00 - 0.00		60g VOC (ALE215)	
									400g Tub (ALE214)	
	10438613	SP114_1					0.00 - 0.00		250g Amber Jar (AL)	
									60g VOC (ALE215)	
									400g Tub (ALE214)	
									250g Amber Jar (AL)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 20								
			X		X					
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 20								
				X	X	X	X	X	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
pH	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
Sample description	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 4								
			X							
TPH CWG GC (S)	All	NDPs: 0 Tests: 20								
			X	X	X	X	X	X	X	X



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10438703		SP114_20				0.00 - 0.00		60g VOC (ALE215)	
	10438695		SP114_19				0.00 - 0.00		400g Tub (ALE214)	
	10438691		SP114_18				0.00 - 0.00		250g Amber Jar (AL)	
	10438686		SP114_17				0.00 - 0.00		60g VOC (ALE215)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 20							400g Tub (ALE214)	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 20							250g Amber Jar (AL)	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 20							60g VOC (ALE215)	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 20							400g Tub (ALE214)	
Metals in solid samples by OES	All	NDPs: 0 Tests: 20							250g Amber Jar (AL)	
PAH by GCMS	All	NDPs: 0 Tests: 20							60g VOC (ALE215)	
pH	All	NDPs: 0 Tests: 20							400g Tub (ALE214)	
Sample description	All	NDPs: 0 Tests: 20							250g Amber Jar (AL)	
Total Organic Carbon	All	NDPs: 0 Tests: 4							60g VOC (ALE215)	
TPH CWG GC (S)	All	NDPs: 0 Tests: 20							400g Tub (ALE214)	



SDG:	141125-3	Location:	Coed Darcy	Order Number:	CD1002
Job:	H_ATKINS_LDC-290	Customer:	Atkins Global Ltd	Report Number:	296233
Client Reference:	SP114	Attention:	Jack Lowrie	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
Lab Sample No(s)			Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
10438613			SP114_1	0.00 - 0.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones	Vegetation
10438699			SP114_2	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Coal fragments	Stones
10438708			SP114_3	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Coal fragments
10438715			SP114_4	0.00 - 0.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation	Stones
10438719			SP114_5	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438723			SP114_6	0.00 - 0.00	Light Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10438727			SP114_7	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438731			SP114_8	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438735			SP114_9	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438625			SP114_10	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438637			SP114_11	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438645			SP114_12	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438653			SP114_13	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10438664			SP114_14	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438670			SP114_15	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	Vegetation
10438676			SP114_16	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438686			SP114_17	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438691			SP114_18	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10438695			SP114_19	0.00 - 0.00	Dark Brown	Clay	0.063 - 0.1 mm	Stones	None
10438703			SP114_20	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Coal fragments

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS 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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Order Number: CD1002
Report Number: 296233
Superseded Report:

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Order Number: CD1002
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Order Number: CD1002
Report Number: 296233
Superseded Report:

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SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

PAH by GCMS

[illegible]



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R	SP114_1	SP114_2	SP114_3	SP114_4	SP114_5	SP114_6	
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.			21/11/2014	21/11/2014	21/11/2014	21/11/2014	21/11/2014	21/11/2014
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	81 @	74 @	82 @	89 @	79 @	81 @	
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M	
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	
Toluene	<2 µg/kg	TM089	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	
o-Xylene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<9 @	<9 @	<9 @	
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<24 @	<24 @	<24 @	
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100	
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	2960	<100	<100	<100	<100	
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	27700	<100	<100	<100	<100	
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	15300	<100	<100	<100	<100	
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100	46000	<100	<100	<100	<100	
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @	
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100	
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	1330	296	227	<100	<100	
Aromatics >EC21-EC35	<100 µg/kg	TM173	342	21700	1360	453	<100	<100	
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	19000	1650	<100	287	<100	
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	8570	943	<100	116	<100	
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	342	42000	3300	680	287	<100	
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	344	88000	3320	682	289	<100	



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP114_7	SP114_8	SP114_9	SP114_10	SP114_11	SP114_12
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 21/11/2014	0.00 - 0.00 Soil/Solid 21/11/2014	0.00 - 0.00 Soil/Solid 21/11/2014	0.00 - 0.00 Soil/Solid 21/11/2014	0.00 - 0.00 Soil/Solid 21/11/2014	0.00 - 0.00 Soil/Solid 21/11/2014
aq	Aqueous / settled sample.		25/11/2014 141125-3 10438727	25/11/2014 141125-3 10438731	25/11/2014 141125-3 10438735	25/11/2014 141125-3 10438625	25/11/2014 141125-3 10438637	25/11/2014 141125-3 10438645
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	73 @	60 @	108 @	111 @	91 @	108 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	60400	<100	<100	<100	15900	4320
Aliphatics >C35-C44	<100 µg/kg	TM173	12500	<100	<100	<100	3050	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	72900	<100	<100	<100	19000	4320
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100	111	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	631	<100	<100	<100	781	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	26500	<100	<100	<100	5800	132
Aromatics >EC35-EC44	<100 µg/kg	TM173	24800	<100	<100	833	4020	1010
Aromatics >EC40-EC44	<100 µg/kg	TM173	11900	<100	<100	669	1770	543
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	51900	<100	<100	833	10700	1140
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	125000	<100	<100	837	29700	5460



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.							
M	mCERTS accredited.	Depth (m)						
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Sample Type						
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.	Date Sampled						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed	Date Received						
1-5&*\$@	Sample deviation (see appendix)							
		SDG Ref						
		Lab Sample No.(s)						
		AGS Reference						
Component	LOD/Units	Method	SP114_13	SP114_14	SP114_15	SP114_16	SP114_17	SP114_18
GRO Surrogate % recovery**	%	TM089	61 @	66 @	61 @	80 @	77 @	72 @
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M	<176 @ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M	<20 @ M
Benzene	<10 µg/kg	TM089	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M	<40 @ M
Toluene	<2 µg/kg	TM089	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M	<8 @ M
Ethylbenzene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
m,p-Xylene	<6 µg/kg	TM089	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M	<24 @ M
o-Xylene	<3 µg/kg	TM089	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M	<12 @ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 @	<9 @	<9 @	<9 @	<9 @	<9 @
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 @	<24 @	<24 @	<24 @	<24 @	<24 @
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	1010	1810	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	8620	18300	16700	83400	<100	<100
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	1930	3260	11900	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	8620	20200	20900	97100	<100	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 @	<40 @	<40 @	<40 @	<40 @	<40 @
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	260	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	916	<100	1080	<100	<100	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173	5170	3040	9070	11300	<100	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173	4380	<100	5160	2210	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	2290	<100	2090	486	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	10500	3040	15600	13500	<100	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	19100	23300	36600	111000	<100	<100



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R	SP114_19	SP114_20				
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	94	76				
			@	@				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176				
			@ M	@ M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20				
			@ M	@ M				
Benzene	<10 µg/kg	TM089	<40	<40				
			@ M	@ M				
Toluene	<2 µg/kg	TM089	<8	<8				
			@ M	@ M				
Ethylbenzene	<3 µg/kg	TM089	<12	<12				
			@ M	@ M				
m,p-Xylene	<6 µg/kg	TM089	<24	<24				
			@ M	@ M				
o-Xylene	<3 µg/kg	TM089	<12	<12				
			@ M	@ M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9				
			@	@				
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24				
			@	@				
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40				
			@	@				
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40				
			@	@				
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40				
			@	@				
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40				
			@	@				
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100				
Aliphatics >C16-C21	<100 µg/kg	TM173	331	<100				
Aliphatics >C21-C35	<100 µg/kg	TM173	4790	11900				
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100				
Total Aliphatics >C12-C44	<100 µg/kg	TM173	5120	11900				
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40				
			@	@				
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40				
			@	@				
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40				
			@	@				
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40				
			@	@				
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	171				
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	1180				
Aromatics >EC21-EC35	<100 µg/kg	TM173	758	8090				
Aromatics >EC35-EC44	<100 µg/kg	TM173	661	5330				
Aromatics >EC40-EC44	<100 µg/kg	TM173	305	2310				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	1420	14800				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	6550	26700				



SDG:	141125-3	Location:	Coed Darcy	Order Number:	CD1002
Job:	H_ATKINS_LDC-290	Customer:	Atkins Global Ltd	Report Number:	296233
Client Reference:	SP114	Attention:	Jack Lowrie	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
SUB (ASB)				
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM132	In - house Method	ELTRA CS800 Operators Guide		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

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



CERTIFICATE OF ANALYSIS

SDG: 141125-3
Job: H_ATKINS_LDC-290
Client Reference: SP114

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD1002
Report Number: 296233
Superseded Report:

Test Completion Dates

Lab Sample No(s)	10438613	10438699	10438708	10438715	10438719	10438723	10438727	10438731	10438735	10438625
Customer Sample Ref.	SP114_1	SP114_2	SP114_3	SP114_4	SP114_5	SP114_6	SP114_7	SP114_8	SP114_9	SP114_10
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014
EPH CWG (Aliphatic) GC (S)	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014
EPH CWG (Aromatic) GC (S)	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014
GRO by GC-FID (S)	17-Dec-2014	16-Dec-2014	16-Dec-2014	17-Dec-2014	15-Dec-2014	17-Dec-2014	16-Dec-2014	17-Dec-2014	17-Dec-2014	17-Dec-2014
Metals in solid samples by OES	11-Dec-2014	15-Dec-2014	10-Dec-2014	11-Dec-2014	15-Dec-2014	09-Dec-2014	05-Dec-2014	05-Dec-2014	15-Dec-2014	15-Dec-2014
PAH by GCMS	14-Dec-2014	13-Dec-2014	13-Dec-2014	14-Dec-2014	14-Dec-2014	13-Dec-2014	13-Dec-2014	13-Dec-2014	14-Dec-2014	14-Dec-2014
pH	12-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	11-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	12-Dec-2014
Sample description	06-Dec-2014	04-Dec-2014	05-Dec-2014	06-Dec-2014	04-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	04-Dec-2014	04-Dec-2014
Total Organic Carbon	11-Dec-2014							11-Dec-2014		
TPH CWG GC (S)	17-Dec-2014	16-Dec-2014	16-Dec-2014	17-Dec-2014	15-Dec-2014	17-Dec-2014	16-Dec-2014	17-Dec-2014	17-Dec-2014	17-Dec-2014

Lab Sample No(s)	10438637	10438645	10438653	10438664	10438670	10438676	10438686	10438691	10438695	10438703
Customer Sample Ref.	SP114_11	SP114_12	SP114_13	SP114_14	SP114_15	SP114_16	SP114_17	SP114_18	SP114_19	SP114_20
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014
EPH CWG (Aliphatic) GC (S)	15-Dec-2014	15-Dec-2014	16-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014
EPH CWG (Aromatic) GC (S)	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014
GRO by GC-FID (S)	17-Dec-2014	17-Dec-2014	16-Dec-2014	16-Dec-2014	16-Dec-2014	16-Dec-2014	17-Dec-2014	16-Dec-2014	17-Dec-2014	17-Dec-2014
Metals in solid samples by OES	15-Dec-2014	15-Dec-2014	10-Dec-2014	15-Dec-2014	15-Dec-2014	05-Dec-2014	05-Dec-2014	09-Dec-2014	15-Dec-2014	15-Dec-2014
PAH by GCMS	14-Dec-2014	14-Dec-2014	14-Dec-2014	13-Dec-2014	14-Dec-2014	13-Dec-2014	13-Dec-2014	13-Dec-2014	14-Dec-2014	14-Dec-2014
pH	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	15-Dec-2014	11-Dec-2014	15-Dec-2014	12-Dec-2014	15-Dec-2014
Sample description	04-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	04-Dec-2014	02-Dec-2014	02-Dec-2014	02-Dec-2014	04-Dec-2014	04-Dec-2014
Total Organic Carbon					11-Dec-2014					11-Dec-2014
TPH CWG GC (S)	17-Dec-2014	17-Dec-2014	16-Dec-2014	16-Dec-2014	16-Dec-2014	16-Dec-2014	17-Dec-2014	16-Dec-2014	17-Dec-2014	17-Dec-2014



Certificate of Analysis

Certificate Number 14-21815

05-Dec-14

Client Alcontrol Laboratories
Units 7 & 8
Hawarden Business Park
Manor Road
Hawarden
Deeside
CH5 3US

Our Reference 14-21815

Client Reference 141125-3

Contract Title 141125-3

Description 20 Soil samples.

Date Received 27-Nov-14

Date Started 27-Nov-14

Date Completed 05-Dec-14

Test Procedures Asbestos Analysis DETSC 1101.

Notes Opinions and interpretations are outside the scope of UKAS accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown
Business Manager



Summary of Asbestos Analysis

Soil Samples

Our Ref 14-21815
 Client Ref 141125-3
 Contract Title 141125-3

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
738377	10442821 SP114_1	SOIL	NAD	none	Andrew Little
738378	10442371 SP114_10	SOIL	NAD	none	Andrew Little
738379	10442445 SP114_11	SOIL	NAD	none	Andrew Little
738380	10442451 SP114_12	SOIL	NAD	none	Andrew Little
738381	10442892 SP114_13	SOIL	NAD	none	Andrew Little
738382	10442866 SP114_14	SOIL	NAD	none	Andrew Little
738383	10442855 SP114_15	SOIL	NAD	none	Andrew Little
738384	10442887 SP114_16	SOIL	NAD	none	Andrew Little
738385	10442818 SP114_17	SOIL	NAD	none	Andrew Little
738386	10442841 SP114_18	SOIL	NAD	none	Andrew Little
738387	10442377 SP114_19	SOIL	NAD	none	Andrew Little
738388	10442816 SP114_2	SOIL	NAD	none	Andrew Little
738389	10442433 SP114_20	SOIL	NAD	none	Andrew Little
738390	10442827 SP114_3	SOIL	NAD	none	Andrew Little
738391	10442879 SP114_4	SOIL	NAD	none	Andrew Little
738392	10442811 SP114_5	SOIL	NAD	none	Andrew Little
738393	10442803 SP114_6	SOIL	NAD	none	Andrew Little
738394	10442883 SP114_7	SOIL	NAD	none	Andrew Little
738395	10442863 SP114_8	SOIL	NAD	none	Andrew Little
738396	10442439 SP114_9	SOIL	NAD	none	Andrew Little

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 14-21815
 Client Ref 141125-3
 Contract 141125-3

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
738377	10442821 SOIL	21/11/14	PT 500ml		
738378	10442371 SOIL	21/11/14	PT 500ml		
738379	10442445 SOIL	21/11/14	PT 500ml		
738380	10442451 SOIL	21/11/14	PT 500ml		
738381	10442892 SOIL	21/11/14	PT 500ml		
738382	10442866 SOIL	21/11/14	PT 500ml		
738383	10442855 SOIL	21/11/14	PT 500ml		
738384	10442887 SOIL	21/11/14	PT 500ml		
738385	10442818 SOIL	21/11/14	PT 500ml		
738386	10442841 SOIL	21/11/14	PT 500ml		
738387	10442377 SOIL	21/11/14	PT 500ml		
738388	10442816 SOIL	21/11/14	PT 500ml		
738389	10442433 SOIL	21/11/14	PT 500ml		
738390	10442827 SOIL	21/11/14	PT 500ml		
738391	10442879 SOIL	21/11/14	PT 500ml		
738392	10442811 SOIL	21/11/14	PT 500ml		
738393	10442803 SOIL	21/11/14	PT 500ml		
738394	10442883 SOIL	21/11/14	PT 500ml		
738395	10442863 SOIL	21/11/14	PT 500ml		
738396	10442439 SOIL	21/11/14	PT 500ml		

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



SDG:	141125-3	Location:	Coed Darcy	Order Number:	CD1002
Job:	H_ATKINS_LDC-290	Customer:	Atkins Global Ltd	Report Number:	296233
Client Reference:	SP114	Attention:	Jack Lowrie	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 TICS and SVOC TICS.
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/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS 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** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.
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 MCERTS 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 GCFID 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 GCMS 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
\$	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	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	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
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.

Technical note

Appendix C

enfig



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Jack Lowrie

CERTIFICATE OF ANALYSIS

Date: 01 August 2014
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 140724-53
Your Reference: Kenfig
Location: Coed Darcy
Report No: 279017

We received 4 samples on Thursday July 24, 2014 and 4 of these samples were scheduled for analysis which was completed on Friday August 01, 2014. 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





SDG:	140724-53	Location:	Coed Darcy	Order Number:	CD0756
Job:	H_ATKINS_LDC-237	Customer:	Atkins Global Ltd	Report Number:	279017
Client Reference:	Kenfig	Attention:	Jack Lowrie	Superseded Report:	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
9679729	K - 1		0.00 - 0.00	17/07/2014
9679733	K - 2		0.00 - 0.00	17/07/2014
9679738	K - 3		0.00 - 0.00	17/07/2014
9679743	K - 4		0.00 - 0.00	17/07/2014

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



SDG: 140724-53
Job: H_ATKINS_LDC-237
Client Reference: Kenfig

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0756
Report Number: 279017
Superseded Report:

SOLID**Results Legend**

Test



No Determination Possible

Lab Sample No(s)**Customer Sample Reference****AGS Reference****Depth (m)****Container**

9679729

9679733

9679738

9679743

K - 1

K - 2

K - 3

K - 4

0.00 - 0.00

0.00 - 0.00

0.00 - 0.00

0.00 - 0.00

60g VOC (ALE215)
 400g Tub (ALE214)
 250g Amber Jar (AL
 60g VOC (ALE215)
 400g Tub (ALE214)
 250g Amber Jar (AL
 60g VOC (ALE215)
 400g Tub (ALE214)
 250g Amber Jar (AL
 60g VOC (ALE215)
 400g Tub (ALE214)
 250g Amber Jar (AL

Asbestos ID in Solid Samples

All

NDPs: 0
Tests: 4

X

X

X

X

EPH CWG (Aliphatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

EPH CWG (Aromatic) GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X

GRO by GC-FID (S)

All

NDPs: 0
Tests: 4

X

X

X

X

Metals in solid samples by OES

All

NDPs: 0
Tests: 4

X

X

X

X

PAH by GCMS

All

NDPs: 0
Tests: 4

X

X

X

X

pH

All

NDPs: 0
Tests: 4

X

X

X

X

Sample description

All

NDPs: 0
Tests: 4

X

X

X

X

Total Organic Carbon

All

NDPs: 0
Tests: 4

X

X

X

X

TPH CWG GC (S)

All

NDPs: 0
Tests: 4

X

X

X

X



SDG:	140724-53	Location:	Coed Darcy	Order Number:	CD0756
Job:	H_ATKINS_LDC-237	Customer:	Atkins Global Ltd	Report Number:	279017
Client Reference:	Kenfig	Attention:	Jack Lowrie	Superseded Report:	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
9679729	K - 1	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
9679733	K - 2	0.00 - 0.00	Red	Sandy Clay Loam	0.1 - 2 mm	Stones	None
9679738	K - 3	0.00 - 0.00	Red	Sandy Loam	0.063 - 0.1 mm	Stones	None
9679743	K - 4	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS 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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

SDG: 140724-53
Job: H_ATKINS_LDC-237
Client Reference: Kenfig

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0756
Report Number: 279017
Superseded Report:

Results Legend		Customer Sample R	K - 1	K - 2	K - 3	K - 4		
#	ISO17025 accredited.							
M	mCERTS accredited.							
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&+\$\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
Moisture Content Ratio (% of as received sample)	%	PM024	11	8.1	9.2	11		
Soil Organic Matter (SOM)	<0.35 %	TM132	2.4 #	2.52 #	1.86 #	1.67 #		
pH	1 pH Units	TM133	8.06 M	8.26 M	8.23 M	8.17 M		
Arsenic	<0.6 mg/kg	TM181	15.2 M	12 M	14.2 M	11.8 M		
Cadmium	<0.02 mg/kg	TM181	<0.02 M	<0.02 M	<0.02 M	<0.02 M		
Chromium	<0.9 mg/kg	TM181	16.1 M	14.9 M	17.6 M	16.9 M		
Copper	<1.4 mg/kg	TM181	13.2 M	14.6 M	14.4 M	11.3 M		
Lead	<0.7 mg/kg	TM181	20.3 M	17.8 M	19.7 M	16.4 M		
Mercury	<0.14 mg/kg	TM181	<0.14 M	<0.14 M	<0.14 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181	19.5 M	27.8 M	23.6 M	16.8 M		
Selenium	<1 mg/kg	TM181	<1 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181	27.8 #	23.2 #	28.9 #	24.6 #		
Zinc	<1.9 mg/kg	TM181	78.1 M	90.1 M	88.9 M	56.4 M		

CERTIFICATE OF ANALYSIS

SDG: 140724-53
Job: H_ATKINS_LDC-237
Client Reference: Kenfig

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0756
Report Number: 279017
Superseded Report:

PAH by GCMS

[illegible]



CERTIFICATE OF ANALYSIS

SDG: 140724-53
Job: H_ATKINS_LDC-237
Client Reference: Kenfig

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0756
Report Number: 279017
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R	K - 1		K - 2		K - 3		K - 4			
#	ISO17025 accredited.		0.00 - 0.00		0.00 - 0.00		0.00 - 0.00		0.00 - 0.00			
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Soil/Solid		Soil/Solid		Soil/Solid		Soil/Solid			
aq	Aqueous / settled sample.		17/07/2014		17/07/2014		17/07/2014		17/07/2014			
diss.filt	Dissolved / filtered sample.											
tot.unfilt	Total / unfiltered sample.											
*	Subcontracted test.											
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		24/07/2014		24/07/2014		24/07/2014		24/07/2014			
(F)	Trigger breach confirmed		140724-53		140724-53		140724-53		140724-53			
1-5&*\$@	Sample deviation (see appendix)		9679729		9679733		9679738		9679743			
Component	LOD/Units	Method										
GRO Surrogate % recovery**	%	TM089	97		88		91		97			
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176		<176		<176		<176			
			M		M		M		M			
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20		<20		<20		<20			
			M		M		M		M			
Benzene	<10 µg/kg	TM089	<40		<40		<40		<40			
			M		M		M		M			
Toluene	<2 µg/kg	TM089	<8		<8		<8		<8			
			M		M		M		M			
Ethylbenzene	<3 µg/kg	TM089	<12		<12		<12		<12			
			M		M		M		M			
m,p-Xylene	<6 µg/kg	TM089	<24		<24		<24		<24			
			M		M		M		M			
o-Xylene	<3 µg/kg	TM089	<12		<12		<12		<12			
			M		M		M		M			
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9		<9		<9		<9			
sum of detected BTEX by GC	<24 µg/kg	TM089	<24		<24		<24		<24			
Aliphatics >C5-C6	<10 µg/kg	TM089	<40		<40		<40		<40			
Aliphatics >C6-C8	<10 µg/kg	TM089	<40		<40		<40		<40			
Aliphatics >C8-C10	<10 µg/kg	TM089	<40		<40		<40		<40			
Aliphatics >C10-C12	<10 µg/kg	TM089	<40		<40		<40		<40			
Aliphatics >C12-C16	<100 µg/kg	TM173	<100		<100		<100		<100			
Aliphatics >C16-C21	<100 µg/kg	TM173	<100		<100		<100		<100			
Aliphatics >C21-C35	<100 µg/kg	TM173	<100		1280		<100		144			
Aliphatics >C35-C44	<100 µg/kg	TM173	<100		<100		<100		<100			
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100		1280		<100		144			
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40		<40		<40		<40			
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40		<40		<40		<40			
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40		<40		<40		<40			
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40		<40		<40		<40			
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100		127		361		<100			
Aromatics >EC16-EC21	<100 µg/kg	TM173	556		232		618		570			
Aromatics >EC21-EC35	<100 µg/kg	TM173	3560		1980		4480		2250			
Aromatics >EC35-EC44	<100 µg/kg	TM173	156		<100		3290		349			
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100		<100		1680		<100			
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	4280		2340		8750		3170			
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	4280		3620		8750		3320			
Aromatics >EC16-EC35	<100 µg/kg	TM173	4120		2210		5100		2820			



SDG:	140724-53	Location:	Coed Darcy	Order Number:	CD0756
Job:	H_ATKINS_LDC-237	Customer:	Atkins Global Ltd	Report Number:	279017
Client Reference:	Kenfig	Attention:	Jack Lowrie	Superseded Report:	

Asbestos Identification - Solid Samples

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	K - 1 0.00 - 0.00 SOLID 17/07/2014 00:00:00 140724-53 9679729 TM048	30/7/14	Kevin Bowron	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	K - 2 0.00 - 0.00 SOLID 17/07/2014 00:00:00 140724-53 9679733 TM048	30/7/14	Kevin Bowron	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	K - 3 0.00 - 0.00 SOLID 17/07/2014 00:00:00 140724-53 9679738 TM048	30/7/14	Kevin Bowron	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	K - 4 0.00 - 0.00 SOLID 17/07/2014 00:00:00 140724-53 9679743 TM048	31/7/14	Lauren Sargeant	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



SDG:	140724-53	Location:	Coed Darcy	Order Number:	CD0756
Job:	H_ATKINS_LDC-237	Customer:	Atkins Global Ltd	Report Number:	279017
Client Reference:	Kenfig	Attention:	Jack Lowrie	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material		
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM132	In - house Method	ELTRA CS800 Operators Guide		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

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



SDG:	140724-53	Location:	Coed Darcy	Order Number:	CD0756
Job:	H_ATKINS_LDC-237	Customer:	Atkins Global Ltd	Report Number:	279017
Client Reference:	Kenfig	Attention:	Jack Lowrie	Superseded Report:	

Test Completion Dates

Lab Sample No(s)	9679729	9679733	9679738	9679743
Customer Sample Ref.	K - 1	K - 2	K - 3	K - 4
AGS Ref.				
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID
Asbestos ID in Solid Samples	31-Jul-2014	31-Jul-2014	31-Jul-2014	31-Jul-2014
EPH CWG (Aliphatic) GC (S)	01-Aug-2014	01-Aug-2014	01-Aug-2014	01-Aug-2014
EPH CWG (Aromatic) GC (S)	01-Aug-2014	01-Aug-2014	01-Aug-2014	01-Aug-2014
GRO by GC-FID (S)	31-Jul-2014	31-Jul-2014	31-Jul-2014	31-Jul-2014
Metals in solid samples by OES	29-Jul-2014	29-Jul-2014	29-Jul-2014	29-Jul-2014
PAH by GCMS	31-Jul-2014	31-Jul-2014	31-Jul-2014	31-Jul-2014
pH	30-Jul-2014	30-Jul-2014	29-Jul-2014	29-Jul-2014
Sample description	25-Jul-2014	25-Jul-2014	28-Jul-2014	25-Jul-2014
Total Organic Carbon	30-Jul-2014	30-Jul-2014	30-Jul-2014	30-Jul-2014
TPH CWG GC (S)	01-Aug-2014	01-Aug-2014	01-Aug-2014	01-Aug-2014



SDG: 140724-53
Job: H_ATKINS_LDC-237
Client Reference: Kenfig

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Jack Lowrie

Order Number: CD0756
Report Number: 279017
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 TICS and SVOC TICS.

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/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS 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** -Most of our organic methods include surrogates, the recovery of which is monitored and reported. For EPH, MO, PAH, GRO and VOCs on soils the result is not surrogate corrected, but a percentage recovery is quoted. Acceptable limits for most organic methods are 70 -130 %.

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 MCERTS 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 GCFID 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 GCMS 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
\$	Sampled on date not provided
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to sampled on date
&	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	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
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.



Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: Barney Irlam

CERTIFICATE OF ANALYSIS

Date: 08 January 2015
Customer: H_ATKINS_LDC
Sample Delivery Group (SDG): 141025-71
Your Reference: stockpile 115
Location: Coed Darcy
Report No: 298178

We received 80 samples on Saturday October 25, 2014 and 80 of these samples were scheduled for analysis which was completed on Thursday January 08, 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





SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
10259437	SP5_1		0.00 - 0.00	24/10/2014
10259492	SP5_2		0.00 - 0.00	24/10/2014
10259540	SP5_3		0.00 - 0.00	24/10/2014
10259585	SP5_4		0.00 - 0.00	24/10/2014
10259639	SP5_5		0.00 - 0.00	24/10/2014
10259691	SP5_6		0.00 - 0.00	24/10/2014
10259743	SP5_7		0.00 - 0.00	24/10/2014
10259795	SP5_8		0.00 - 0.00	24/10/2014
10259804	SP5_9		0.00 - 0.00	24/10/2014
10259446	SP5_10		0.00 - 0.00	24/10/2014
10259450	SP5_11		0.00 - 0.00	24/10/2014
10259455	SP5_12		0.00 - 0.00	24/10/2014
10259460	SP5_13		0.00 - 0.00	24/10/2014
10259468	SP5_14		0.00 - 0.00	24/10/2014
10259472	SP5_15		0.00 - 0.00	24/10/2014
10259476	SP5_16		0.00 - 0.00	24/10/2014
10259480	SP5_17		0.00 - 0.00	24/10/2014
10259484	SP5_18		0.00 - 0.00	24/10/2014
10259488	SP5_19		0.00 - 0.00	24/10/2014
10259497	SP5_20		0.00 - 0.00	24/10/2014
10259501	SP5_21		0.00 - 0.00	24/10/2014
10259505	SP5_22		0.00 - 0.00	24/10/2014
10259509	SP5_23		0.00 - 0.00	24/10/2014
10259513	SP5_24		0.00 - 0.00	24/10/2014
10259517	SP5_25		0.00 - 0.00	24/10/2014
10259521	SP5_26		0.00 - 0.00	24/10/2014
10259528	SP5_27		0.00 - 0.00	24/10/2014
10259532	SP5_28		0.00 - 0.00	24/10/2014
10259536	SP5_29		0.00 - 0.00	24/10/2014
10259544	SP5_30		0.00 - 0.00	24/10/2014
10259548	SP5_31		0.00 - 0.00	24/10/2014
10259552	SP5_32		0.00 - 0.00	24/10/2014
10259556	SP5_33		0.00 - 0.00	24/10/2014
10259560	SP5_34		0.00 - 0.00	24/10/2014
10259564	SP5_35		0.00 - 0.00	24/10/2014
10259569	SP5_36		0.00 - 0.00	24/10/2014
10259573	SP5_37		0.00 - 0.00	24/10/2014
10259577	SP5_38		0.00 - 0.00	24/10/2014
10259581	SP5_39		0.00 - 0.00	24/10/2014
10259589	SP5_40		0.00 - 0.00	24/10/2014
10259599	SP5_41		0.00 - 0.00	24/10/2014
10259604	SP5_42		0.00 - 0.00	24/10/2014
10259609	SP5_43		0.00 - 0.00	24/10/2014
10259613	SP5_44		0.00 - 0.00	24/10/2014
10259618	SP5_45		0.00 - 0.00	24/10/2014
10259622	SP5_46		0.00 - 0.00	24/10/2014
10259626	SP5_47		0.00 - 0.00	24/10/2014
10259630	SP5_48		0.00 - 0.00	24/10/2014
10259634	SP5_49		0.00 - 0.00	24/10/2014
10259644	SP5_50		0.00 - 0.00	24/10/2014
10259649	SP5_51		0.00 - 0.00	24/10/2014
10259654	SP5_52		0.00 - 0.00	24/10/2014
10259658	SP5_53		0.00 - 0.00	24/10/2014
10259662	SP5_54		0.00 - 0.00	24/10/2014
10259666	SP5_55		0.00 - 0.00	24/10/2014
10259670	SP5_56		0.00 - 0.00	24/10/2014



CERTIFICATE OF ANALYSIS

SDG:	141025-71	Location:	Coed Darcy	Order Number:	CD0912
Job:	H_ATKINS_LDC-271	Customer:	Atkins Global Ltd	Report Number:	298178
Client Reference:	stockpile 115	Attention:	Barney Irlam	Superseded Report:	
10259679	SP5_57			0.00 - 0.00	24/10/2014
10259683	SP5_58			0.00 - 0.00	24/10/2014
10259687	SP5_59			0.00 - 0.00	24/10/2014
10259695	SP5_60			0.00 - 0.00	24/10/2014
10259699	SP5_61			0.00 - 0.00	24/10/2014
10259704	SP5_62			0.00 - 0.00	24/10/2014
10259709	SP5_63			0.00 - 0.00	24/10/2014
10259713	SP5_64			0.00 - 0.00	24/10/2014
10259717	SP5_65			0.00 - 0.00	24/10/2014
10259724	SP5_66			0.00 - 0.00	24/10/2014
10259730	SP5_67			0.00 - 0.00	24/10/2014
10259734	SP5_68			0.00 - 0.00	24/10/2014
10259739	SP5_69			0.00 - 0.00	24/10/2014
10259748	SP5_70			0.00 - 0.00	24/10/2014
10259753	SP5_71			0.00 - 0.00	24/10/2014
10259757	SP5_72			0.00 - 0.00	24/10/2014
10259761	SP5_73			0.00 - 0.00	24/10/2014
10259765	SP5_74			0.00 - 0.00	24/10/2014
10259769	SP5_75			0.00 - 0.00	24/10/2014
10259778	SP5_76			0.00 - 0.00	24/10/2014
10259782	SP5_77			0.00 - 0.00	24/10/2014
10259786	SP5_78			0.00 - 0.00	24/10/2014
10259791	SP5_79			0.00 - 0.00	24/10/2014
10259799	SP5_80			0.00 - 0.00	24/10/2014

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

Validated

Order Number: CD0912
Report Number: 298178
Superseded Report:



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10259528	SP5_27					0.00 - 0.00		400g Tub (ALE214)	
	10259521	SP5_26					0.00 - 0.00		60g VOC (ALE215)	
	10259517	SP5_25					0.00 - 0.00		400g Tub (ALE214)	
	10259513	SP5_24					0.00 - 0.00		250g Amber Jar (AL)	
Asbestos fibres in Soil*	10259472	SP5_15					0.00 - 0.00		60g VOC (ALE215)	
	10259476	SP5_16					0.00 - 0.00		400g Tub (ALE214)	
	10259480	SP5_17					0.00 - 0.00		250g Amber Jar (AL)	
	10259484	SP5_18					0.00 - 0.00		60g VOC (ALE215)	
	10259488	SP5_19					0.00 - 0.00		400g Tub (ALE214)	
	10259497	SP5_20					0.00 - 0.00		250g Amber Jar (AL)	
	10259501	SP5_21					0.00 - 0.00		60g VOC (ALE215)	
	10259505	SP5_22					0.00 - 0.00		400g Tub (ALE214)	
	10259509	SP5_23					0.00 - 0.00		250g Amber Jar (AL)	
	10259513	SP5_24					0.00 - 0.00		60g VOC (ALE215)	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5								
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 80								
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 80								
GRO by GC-FID (S)	All	NDPs: 0 Tests: 80								
Metals in solid samples by OES	All	NDPs: 0 Tests: 80								
PAH by GCMS	All	NDPs: 0 Tests: 80								
pH	All	NDPs: 0 Tests: 80								
Sample description	All	NDPs: 0 Tests: 80								
Total Organic Carbon	All	NDPs: 0 Tests: 8								
TPH CWG GC (S)	All	NDPs: 0 Tests: 80								



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

SOLID**Results Legend**

Test



No Determination Possible

SOLID Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10259589		SP5_40				0.00 - 0.00		60g VOC (ALE215)	
	10259581		SP5_39				0.00 - 0.00		400g Tub (ALE214)	
	10259577		SP5_38				0.00 - 0.00		250g Amber Jar (AL)	
	10259573		SP5_37				0.00 - 0.00		60g VOC (ALE215)	
Asbestos fibres in Soil*	10259569		SP5_36				0.00 - 0.00		250g Amber Jar (AL)	
	10259564		SP5_35				0.00 - 0.00		60g VOC (ALE215)	
	10259560		SP5_34				0.00 - 0.00		400g Tub (ALE214)	
	10259556		SP5_33				0.00 - 0.00		250g Amber Jar (AL)	
	10259552		SP5_32				0.00 - 0.00		60g VOC (ALE215)	
	10259548		SP5_31				0.00 - 0.00		400g Tub (ALE214)	
	10259544		SP5_30				0.00 - 0.00		250g Amber Jar (AL)	
	10259536		SP5_29				0.00 - 0.00		60g VOC (ALE215)	
	10259532		SP5_28				0.00 - 0.00		400g Tub (ALE214)	
	10259528		SP5_27				0.00 - 0.00		250g Amber Jar (AL)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 80							250g Amber Jar (AL)	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
Metals in solid samples by OES	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	
PAH by GCMS	All	NDPs: 0 Tests: 80							250g Amber Jar (AL)	
pH	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
Sample description	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	
Total Organic Carbon	All	NDPs: 0 Tests: 8							250g Amber Jar (AL)	
TPH CWG GC (S)	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

SOLID**Results Legend**

Test

No Determination
Possible**Lab Sample No(s)****Customer
Sample Reference****AGS Reference****Depth (m)****Container**

			10259659	10259604	10259609	10259613	10259618	10259622	10259626	10259630	10259634	10259644	10259649	10259654	10259658	10259662
			SP5_41	SP5_42	SP5_43	SP5_44	SP5_45	SP5_46	SP5_47	SP5_48	SP5_49	SP5_50	SP5_51	SP5_52	SP5_53	SP5_54
			0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			250g Amber Jar (AL 60g VOC (ALE214) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214) 250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)	250g Amber Jar (AL 60g VOC (ALE215) 400g Tub (ALE214)
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 80		X	X	X	X	X	X	X	X	X	X	X	X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X
pH	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	
Sample description	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 8					X					X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 80	X	X	X	X	X	X	X	X	X	X	X	X	X	X



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

SOLID Results Legend X Test N No Determination Possible	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10259730		SP5_67				0.00 - 0.00		400g Tub (ALE214)	
	10259724		SP5_66				0.00 - 0.00		60g VOC (ALE215)	
	10259717		SP5_65				0.00 - 0.00		400g Tub (ALE214)	
	10259713		SP5_64				0.00 - 0.00		250g Amber Jar (AL)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5							400g Tub (ALE214)	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 80							250g Amber Jar (AL)	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	
Metals in solid samples by OES	All	NDPs: 0 Tests: 80							250g Amber Jar (AL)	
PAH by GCMS	All	NDPs: 0 Tests: 80							60g VOC (ALE215)	
pH	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	
Sample description	All	NDPs: 0 Tests: 80							250g Amber Jar (AL)	
Total Organic Carbon	All	NDPs: 0 Tests: 8							60g VOC (ALE215)	
TPH CWG GC (S)	All	NDPs: 0 Tests: 80							400g Tub (ALE214)	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

SOLID Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container	
	10259730		SP5_67				0.00 - 0.00		60g VOC (ALE215) 400g Tub (ALE214)	
	10259734		SP5_68				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259739		SP5_69				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259748		SP5_70				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259753		SP5_71				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259757		SP5_72				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259761		SP5_73				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259765		SP5_74				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259769		SP5_75				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259778		SP5_76				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259782		SP5_77				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259786		SP5_78				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259791		SP5_79				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
	10259799		SP5_80				0.00 - 0.00		250g Amber Jar (AL) 60g VOC (ALE215) 400g Tub (ALE214)	
Asbestos fibres in Soil*	All	NDPs: 0 Tests: 80								
Asbestos Quantification - Full	All	NDPs: 0 Tests: 5								
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 80								
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 80								
GRO by GC-FID (S)	All	NDPs: 0 Tests: 80								
Metals in solid samples by OES	All	NDPs: 0 Tests: 80								
PAH by GCMS	All	NDPs: 0 Tests: 80								
pH	All	NDPs: 0 Tests: 80								
Sample description	All	NDPs: 0 Tests: 80								
Total Organic Carbon	All	NDPs: 0 Tests: 8								
TPH CWG GC (S)	All	NDPs: 0 Tests: 80								



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SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
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Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Grain size	Inclusions	Inclusions 2
10259437	SP5_1	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10259492	SP5_2	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259540	SP5_3	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259585	SP5_4	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259639	SP5_5	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259691	SP5_6	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259743	SP5_7	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10259795	SP5_8	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10259804	SP5_9	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259446	SP5_10	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259450	SP5_11	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259455	SP5_12	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259460	SP5_13	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259468	SP5_14	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259472	SP5_15	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259476	SP5_16	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259480	SP5_17	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259484	SP5_18	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259488	SP5_19	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10259497	SP5_20	0.00 - 0.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones	Vegetation
10259501	SP5_21	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259505	SP5_22	0.00 - 0.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones	Vegetation
10259509	SP5_23	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259513	SP5_24	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10259517	SP5_25	0.00 - 0.00	Light Brown	Clay Loam	0.063 - 0.1 mm	Stones	None
10259521	SP5_26	0.00 - 0.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones	None
10259528	SP5_27	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259532	SP5_28	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259536	SP5_29	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259544	SP5_30	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259548	SP5_31	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259552	SP5_32	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259556	SP5_33	0.00 - 0.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones	Vegetation
10259560	SP5_34	0.00 - 0.00	Dark Brown	Loamy Sand	0.1 - 2 mm	Vegetation	Stones
10259564	SP5_35	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259569	SP5_36	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259573	SP5_37	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259577	SP5_38	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

			Colour	Description	Grain size	Inclusions	Inclusions 2
10259581	SP5_39	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10259589	SP5_40	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10259599	SP5_41	0.00 - 0.00	Dark Brown	Sandy Clay	0.063 - 0.1 mm	Stones	Vegetation
10259604	SP5_42	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10259609	SP5_43	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10259613	SP5_44	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10259618	SP5_45	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	None
10259622	SP5_46	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259626	SP5_47	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259630	SP5_48	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259634	SP5_49	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259644	SP5_50	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259649	SP5_51	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259654	SP5_52	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259658	SP5_53	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259662	SP5_54	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259666	SP5_55	0.00 - 0.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Stones	None
10259670	SP5_56	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259679	SP5_57	0.00 - 0.00	Dark Brown	Sandy Clay	0.1 - 2 mm	Vegetation	Stones
10259683	SP5_58	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259687	SP5_59	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	Vegetation
10259695	SP5_60	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259699	SP5_61	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Vegetation	Stones
10259704	SP5_62	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10259709	SP5_63	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259713	SP5_64	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259717	SP5_65	0.00 - 0.00	Dark Brown	Silt Loam	0.063 - 0.1 mm	Stones	None
10259724	SP5_66	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259730	SP5_67	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	Vegetation
10259734	SP5_68	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259739	SP5_69	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259748	SP5_70	0.00 - 0.00	Dark Brown	Sandy Clay Loam	0.1 - 2 mm	Stones	None
10259753	SP5_71	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259757	SP5_72	0.00 - 0.00	Dark Brown	Silty Clay	0.063 - 0.1 mm	Stones	None
10259761	SP5_73	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Brick
10259765	SP5_74	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259769	SP5_75	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259778	SP5_76	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None
10259782	SP5_77	0.00 - 0.00	Dark Brown	Silty Clay Loam	0.063 - 0.1 mm	Stones	Vegetation
10259786	SP5_78	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation
10259791	SP5_79	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	None



CERTIFICATE OF ANALYSIS

SDG:	141025-71	Location:	Coed Darcy	Order Number:	CD0912
Job:	H_ATKINS_LDC-271	Customer:	Atkins Global Ltd	Report Number:	298178
Client Reference:	stockpile 115	Attention:	Barney Irlam	Superseded Report:	

			Colour	Description	Grain size	Inclusions	Inclusions 2
10259799	SP5_80	0.00 - 0.00	Dark Brown	Sandy Loam	0.1 - 2 mm	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS 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 materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

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Customer: Atkins Global Ltd
Attention: Barney Irlam

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Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
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Superseded Report:

PAH by GCMS

[illegible]



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_1	SP5_2	SP5_3	SP5_4	SP5_5	SP5_6
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
aq	Aqueous / settled sample.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
diss.filt	Dissolved / filtered sample.		24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed		25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014
1-5&\$@	Sample deviation (see appendix)		141025-71	141025-71	141025-71	141025-71	141025-71	141025-71
			10259437	10259492	10259540	10259585	10259639	10259691
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	94	87	92	97	81	106
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			M	♦ M	♦ M	M	♦ M	♦ M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			M	♦ M	♦ M	M	♦ M	♦ M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			M	♦ M	♦ M	M	♦ M	♦ M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
			M	♦ M	♦ M	M	♦ M	♦ M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			M	♦ M	♦ M	M	♦ M	♦ M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			M	♦ M	♦ M	M	♦ M	♦ M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			M	♦ M	♦ M	M	♦ M	♦ M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
				♦	♦		♦	♦
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
				♦	♦		♦	♦
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	846	1630	<100	7080	3740	5910
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	846	1630	<100	7080	3740	5910
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
				♦	♦		♦	♦
Aromatics >EC12-EC16	<100 µg/kg	TM173	713	<100	<100	529	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1070	738	<100	865	<100	899
Aromatics >EC21-EC35	<100 µg/kg	TM173	5660	3840	1860	4390	<100	3900
Aromatics >EC35-EC44	<100 µg/kg	TM173	832	4980	2440	880	<100	1090
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	2680	1450	164	<100	347
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	8280	9560	4300	6670	<100	5890
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	9030	11200	4310	13700	3760	11800



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.							
M	mCERTS accredited.	Depth (m)						
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.	Sample Type						
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.	Date Sampled						
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed	Date Received						
1-5&*\$@	Sample deviation (see appendix)							
		Lab Sample No.(s)						
		AGS Reference						
Component	LOD/Units	Method	SP5_7	SP5_8	SP5_9	SP5_10	SP5_11	SP5_12
GRO Surrogate % recovery**	%	TM089	112	81	85	89	90	108
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 M	<176 M	<176 M	<176 M	<176 M	<176 M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 M	<20 M	<20 M	<20 M	<20 M	<20 M
Benzene	<10 µg/kg	TM089	<40 M	<40 M	<40 M	<40 M	<40 M	<40 M
Toluene	<2 µg/kg	TM089	<8 M	<8 M	<8 M	<8 M	<8 M	<8 M
Ethylbenzene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
m,p-Xylene	<6 µg/kg	TM089	<24 M	<24 M	<24 M	<24 M	<24 M	<24 M
o-Xylene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	1260	<100	<100	2690	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	1250	<100	<100	2550	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	2350	4190	2960	<100	6890	6130
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	1490	<100	<100	2320	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	2350	8190	2960	<100	14500	6130
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100	1750	1630
Aromatics >EC16-EC21	<100 µg/kg	TM173	273	389	352	<100	2650	2780
Aromatics >EC21-EC35	<100 µg/kg	TM173	5200	4540	2730	2980	7720	8260
Aromatics >EC35-EC44	<100 µg/kg	TM173	3120	4020	2060	<100	2570	2230
Aromatics >EC40-EC44	<100 µg/kg	TM173	1500	1940	1100	<100	882	725
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	8600	8950	5140	2980	14700	14900
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	11100	17100	8110	2980	29100	21000



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample R	SP5_13	SP5_14	SP5_15	SP5_16	SP5_17	SP5_18
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.			24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	91	96	129	83	90	105	
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 M	<176 M	<176 M	<176 M	<176 M	<176 M	
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 M	<20 M	<20 M	<20 M	<20 M	<20 M	
Benzene	<10 µg/kg	TM089	<40 M	<40 M	<40 M	<40 M	<40 M	<40 M	
Toluene	<2 µg/kg	TM089	<8 M	<8 M	<8 M	<8 M	<8 M	<8 M	
Ethylbenzene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
m,p-Xylene	<6 µg/kg	TM089	<24 M	<24 M	<24 M	<24 M	<24 M	<24 M	
o-Xylene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9	
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24	
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	1950	1280	
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100	1740	1100	
Aliphatics >C21-C35	<100 µg/kg	TM173	962	856	3710	5380	4890	8650	
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	<100	1690	670	
Total Aliphatics >C12-C44	<100 µg/kg	TM173	962	856	3710	5380	10300	11700	
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC12-EC16	<100 µg/kg	TM173	545	563	321	<100	1150	2180	
Aromatics >EC16-EC21	<100 µg/kg	TM173	960	859	585	493	1520	3630	
Aromatics >EC21-EC35	<100 µg/kg	TM173	7700	5430	3540	4170	5220	12400	
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	661	941	1880	1620	2990	
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	291	742	434	663	
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	9200	7520	5390	6540	9510	21200	
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	10200	8450	9110	11900	19800	32900	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample R	SP5_19	SP5_20	SP5_21	SP5_22	SP5_23	SP5_24
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.			24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&*\$@	Sample deviation (see appendix)								
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	86	95	95	92	100	61	
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 M	<176 M	<176 M	<176 M	<176 M	<176 M	
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 M	<20 M	<20 M	<20 M	<20 M	<20 M	
Benzene	<10 µg/kg	TM089	<40 M	<40 M	<40 M	<40 M	<40 M	<40 M	
Toluene	<2 µg/kg	TM089	<8 M	<8 M	<8 M	<8 M	<8 M	<8 M	
Ethylbenzene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
m,p-Xylene	<6 µg/kg	TM089	<24 M	<24 M	<24 M	<24 M	<24 M	<24 M	
o-Xylene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9	
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24	
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	618	<100	<100	<100	<100	
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	184	<100	<100	<100	<100	
Aliphatics >C21-C35	<100 µg/kg	TM173	1570	2590	4210	<100	6080	1170	
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100	
Total Aliphatics >C12-C44	<100 µg/kg	TM173	1570	3390	4210	<100	6080	1170	
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40	
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	1780	479	<100	925	<100	
Aromatics >EC16-EC21	<100 µg/kg	TM173	1090	3050	763	673	1450	<100	
Aromatics >EC21-EC35	<100 µg/kg	TM173	7010	10100	3280	2880	5430	<100	
Aromatics >EC35-EC44	<100 µg/kg	TM173	1060	1550	1850	<100	1650	<100	
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	931	<100	569	<100	
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	9150	16500	6370	3560	9460	<100	
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	10800	19900	10700	3570	15500	1170	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample R		SP5_25	SP5_26	SP5_27	SP5_28	SP5_29	SP5_30
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference							
M	mCERTS accredited.									
aq	Aqueous / settled sample.									
diss.filt	Dissolved / filtered sample.									
tot.unfilt	Total / unfiltered sample.									
*	Subcontracted test.									
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
(F)	Trigger breach confirmed									
1-5&\$@	Sample deviation (see appendix)									
Component	LOD/Units	Method								
GRO Surrogate % recovery**	%	TM089		90	87	89	142	85	88	
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176 M	<176 M	<176 M	<176 M	<176 M	<176 M	
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20 M	<20 M	<20 M	<20 M	<20 M	<20 M	
Benzene	<10 µg/kg	TM089		<40 M	<40 M	<40 M	<40 M	<40 M	<40 M	
Toluene	<2 µg/kg	TM089		<8 M	<8 M	<8 M	<8 M	<8 M	<8 M	
Ethylbenzene	<3 µg/kg	TM089		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
m,p-Xylene	<6 µg/kg	TM089		<24 M	<24 M	<24 M	<24 M	<24 M	<24 M	
o-Xylene	<3 µg/kg	TM089		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M	
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9	<9	<9	<9	<9	<9	
sum of detected BTEX by GC	<24 µg/kg	TM089		<24	<24	<24	<24	<24	<24	
Aliphatics >C5-C6	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aliphatics >C6-C8	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aliphatics >C8-C10	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aliphatics >C10-C12	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aliphatics >C12-C16	<100 µg/kg	TM173		<100	5510	643	<100	<100	3190	
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	3900	570	<100	1590	3700	
Aliphatics >C21-C35	<100 µg/kg	TM173		<100	10500	3780	4140	10400	10200	
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	1300	<100	<100	1360	2430	
Total Aliphatics >C12-C44	<100 µg/kg	TM173		<100	21200	4990	4140	13300	19500	
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40	
Aromatics >EC12-EC16	<100 µg/kg	TM173		<100	867	569	2000	376	2780	
Aromatics >EC16-EC21	<100 µg/kg	TM173		<100	5220	1400	3550	725	4210	
Aromatics >EC21-EC35	<100 µg/kg	TM173		<100	19800	7180	10800	5160	12400	
Aromatics >EC35-EC44	<100 µg/kg	TM173		<100	7420	4560	<100	1740	4130	
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	3030	2160	<100	508	1570	
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		<100	33300	13700	16400	8000	23500	
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		<100	54600	18700	20500	21300	43000	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_31	SP5_32	SP5_33	SP5_34	SP5_35	SP5_36
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
aq	Aqueous / settled sample.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
diss.filt	Dissolved / filtered sample.		24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014
(F)	Trigger breach confirmed		141025-71	141025-71	141025-71	141025-71	141025-71	141025-71
1-5&*\$@	Sample deviation (see appendix)		10259548	10259552	10259556	10259560	10259564	10259569
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	88	129	87	82	87	94
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			M	M	M	M	M	M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			M	M	M	M	M	M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			M	M	M	M	M	M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
			M	M	M	M	M	M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			M	M	M	M	M	M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			M	M	M	M	M	M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			M	M	M	M	M	M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	54.5	<40
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	282	<100	473	<100	490
Aliphatics >C21-C35	<100 µg/kg	TM173	5290	1760	3210	482	<100	2410
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	5290	2040	3210	955	<100	2900
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC12-EC16	<100 µg/kg	TM173	1010	952	717	<100	386	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1330	1280	1130	<100	502	956
Aromatics >EC21-EC35	<100 µg/kg	TM173	4600	5090	5680	5960	4270	5990
Aromatics >EC35-EC44	<100 µg/kg	TM173	1220	738	702	1010	575	971
Aromatics >EC40-EC44	<100 µg/kg	TM173	349	<100	<100	<100	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	8150	8050	8230	6960	5730	7920
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	13400	10100	11400	7960	5930	10800



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_37	SP5_38	SP5_39	SP5_40	SP5_41	SP5_42
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014
aq	Aqueous / settled sample.		25/10/2014 141025-71 10259573	25/10/2014 141025-71 10259577	25/10/2014 141025-71 10259581	25/10/2014 141025-71 10259589	25/10/2014 141025-71 10259599	25/10/2014 141025-71 10259604
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	98	96	84	97	90	105
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 M	<176 M	<176 M	<176 M	<176 M	<176 M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 M	<20 M	<20 M	<20 M	<20 M	<20 M
Benzene	<10 µg/kg	TM089	<40 M	<40 M	<40 M	<40 M	<40 M	<40 M
Toluene	<2 µg/kg	TM089	<8 M	<8 M	<8 M	<8 M	<8 M	<8 M
Ethylbenzene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
m,p-Xylene	<6 µg/kg	TM089	<24 M	<24 M	<24 M	<24 M	<24 M	<24 M
o-Xylene	<3 µg/kg	TM089	<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	2960	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	1700	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	<100	5150	1450	<100	728
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	1700	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100	<100	11500	1450	<100	728
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	776	747	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	436	1240	1030	<100	640
Aromatics >EC21-EC35	<100 µg/kg	TM173	4080	2890	4820	5410	1630	3430
Aromatics >EC35-EC44	<100 µg/kg	TM173	512	<100	<100	695	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	4590	3320	6840	7890	1630	4070
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	4590	3320	18400	9350	1640	4810



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample R	SP5_43		SP5_44		SP5_45		SP5_46		SP5_47		SP5_48		
#	ISO17025 accredited.			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014		0.00 - 0.00 Soil/Solid 24/10/2014		0.00 - 0.00 Soil/Solid 24/10/2014		0.00 - 0.00 Soil/Solid 24/10/2014		0.00 - 0.00 Soil/Solid 24/10/2014		0.00 - 0.00 Soil/Solid 24/10/2014	
M	mCERTS accredited.															
aq	Aqueous / settled sample.															
diss.filt	Dissolved / filtered sample.															
tot.unfilt	Total / unfiltered sample.															
*	Subcontracted test.															
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery															
(F)	Trigger breach confirmed															
1-5&*\$@	Sample deviation (see appendix)															
Component			LOD/Units	Method												
GRO Surrogate % recovery**			%	TM089	125		119		97		121		85		92	
GRO TOT (Moisture Corrected)			<44 µg/kg	TM089	<176 M		<176 M		<176 M		<176 M		<176 M		<176 M	
Methyl tertiary butyl ether (MTBE)			<5 µg/kg	TM089	<20 M		<20 M		<20 M		<20 M		<20 M		<20 M	
Benzene			<10 µg/kg	TM089	<40 M		<40 M		<40 M		<40 M		<40 M		<40 M	
Toluene			<2 µg/kg	TM089	<8 M		<8 M		<8 M		<8 M		<8 M		<8 M	
Ethylbenzene			<3 µg/kg	TM089	<12 M		<12 M		<12 M		<12 M		<12 M		<12 M	
m,p-Xylene			<6 µg/kg	TM089	<24 M		<24 M		<24 M		<24 M		<24 M		<24 M	
o-Xylene			<3 µg/kg	TM089	<12 M		<12 M		<12 M		<12 M		<12 M		<12 M	
sum of detected mpo xylene by GC			<9 µg/kg	TM089	<9		<9		<9		<9		<9		<9	
sum of detected BTEX by GC			<24 µg/kg	TM089	<24		<24		<24		<24		<24		<24	
Aliphatics >C5-C6			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aliphatics >C6-C8			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aliphatics >C8-C10			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aliphatics >C10-C12			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aliphatics >C12-C16			<100 µg/kg	TM173	<100		<100		<100		<100		<100		1620	
Aliphatics >C16-C21			<100 µg/kg	TM173	<100		<100		<100		<100		<100		1660	
Aliphatics >C21-C35			<100 µg/kg	TM173	737		1040		318		1370		2970		17500	
Aliphatics >C35-C44			<100 µg/kg	TM173	<100		<100		<100		<100		<100		8180	
Total Aliphatics >C12-C44			<100 µg/kg	TM173	737		1040		318		1370		2970		28900	
Aromatics >EC5-EC7			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aromatics >EC7-EC8			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aromatics >EC8-EC10			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aromatics >EC10-EC12			<10 µg/kg	TM089	<40		<40		<40		<40		<40		<40	
Aromatics >EC12-EC16			<100 µg/kg	TM173	<100		<100		<100		584		<100		<100	
Aromatics >EC16-EC21			<100 µg/kg	TM173	355		889		552		867		1170		<100	
Aromatics >EC21-EC35			<100 µg/kg	TM173	3250		6840		4830		6230		6450		12600	
Aromatics >EC35-EC44			<100 µg/kg	TM173	<100		666		284		654		1090		12300	
Aromatics >EC40-EC44			<100 µg/kg	TM173	<100		<100		<100		<100		<100		5730	
Total Aromatics >EC12-EC44			<100 µg/kg	TM173	3610		8400		5670		8330		8700		25000	
Total Aliphatics & Aromatics >C5-C44			<100 µg/kg	TM173	4350		9440		6110		9540		11700		53900	



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R		SP5_49	SP5_50	SP5_51	SP5_52	SP5_53	SP5_54
#	ISO17025 accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.			Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.			24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
*	Subcontracted test.								
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery								
(F)	Trigger breach confirmed								
1-5&\$@	Sample deviation (see appendix)								
Component		LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089		88	106	70	74	110	77
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089		<176	<176	<176	<176	<176	<176
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089		<20	<20	<20	<20	<20	<20
Benzene	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Toluene	<2 µg/kg	TM089		<8	<8	<8	<8	<8	<8
Ethylbenzene	<3 µg/kg	TM089		<12	<12	<12	<12	<12	<12
m,p-Xylene	<6 µg/kg	TM089		<24	<24	<24	<24	<24	<24
o-Xylene	<3 µg/kg	TM089		<12	<12	<12	<12	<12	<12
sum of detected mpo xylene by GC	<9 µg/kg	TM089		<9	<9	<9	<9	<9	<9
sum of detected BTEX by GC	<24 µg/kg	TM089		<24	<24	<24	<24	<24	<24
Aliphatics >C5-C6	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aliphatics >C6-C8	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aliphatics >C8-C10	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aliphatics >C10-C12	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aliphatics >C12-C16	<100 µg/kg	TM173		805	<100	1050	<100	<100	<100
Aliphatics >C16-C21	<100 µg/kg	TM173		<100	<100	181	<100	<100	<100
Aliphatics >C21-C35	<100 µg/kg	TM173		1010	1380	<100	<100	<100	<100
Aliphatics >C35-C44	<100 µg/kg	TM173		<100	<100	<100	<100	<100	<100
Total Aliphatics >C12-C44	<100 µg/kg	TM173		1820	1380	1240	<100	<100	<100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aromatics >EC7-EC8	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aromatics >EC8-EC10	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aromatics >EC10-EC12	<10 µg/kg	TM089		<40	<40	<40	<40	<40	<40
Aromatics >EC12-EC16	<100 µg/kg	TM173		645	<100	1190	745	1340	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173		934	285	2510	1390	2650	<100
Aromatics >EC21-EC35	<100 µg/kg	TM173		4440	3500	8020	7030	9140	<100
Aromatics >EC35-EC44	<100 µg/kg	TM173		534	173	<100	2470	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173		<100	<100	<100	658	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173		6550	3960	11700	11600	13100	<100
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173		8370	5340	13000	11600	13100	<100



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_55	SP5_56	SP5_57	SP5_58	SP5_59	SP5_60
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014
aq	Aqueous / settled sample.		25/10/2014 141025-71 10259666	25/10/2014 141025-71 10259670	25/10/2014 141025-71 10259679	25/10/2014 141025-71 10259683	25/10/2014 141025-71 10259687	25/10/2014 141025-71 10259695
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	77 &	81 &	124 &	85 &	78 &	78 &
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176 & M	<176 & M	<176 & M	<176 & M	<176 & M	<176 & M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20 & M	<20 & M	<20 & M	<20 & M	<20 & M	<20 & M
Benzene	<10 µg/kg	TM089	<40 & M	<40 & M	<40 & M	<40 & M	<40 & M	<40 & M
Toluene	<2 µg/kg	TM089	<8 & M	<8 & M	<8 & M	<8 & M	<8 & M	<8 & M
Ethylbenzene	<3 µg/kg	TM089	<12 & M	<12 & M	<12 & M	<12 & M	<12 & M	<12 & M
m,p-Xylene	<6 µg/kg	TM089	<24 & M	<24 & M	<24 & M	<24 & M	<24 & M	<24 & M
o-Xylene	<3 µg/kg	TM089	<12 & M	<12 & M	<12 & M	<12 & M	<12 & M	<12 & M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9 &	<9 &	<9 &	<9 &	<9 &	<9 &
sum of detected BTEX by GC	<24 µg/kg	TM089	<24 &	<24 &	<24 &	<24 &	<24 &	<24 &
Aliphatics >C5-C6	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aliphatics >C6-C8	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aliphatics >C8-C10	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aliphatics >C10-C12	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aliphatics >C12-C16	<100 µg/kg	TM173	986	639	1810	3210	1210	1350
Aliphatics >C16-C21	<100 µg/kg	TM173	179	<100	1130	3220	<100	440
Aliphatics >C21-C35	<100 µg/kg	TM173	1390	<100	3490	9410	<100	3040
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	285	<100	<100	494
Total Aliphatics >C12-C44	<100 µg/kg	TM173	2560	639	6720	15800	1210	5330
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40 &	<40 &	<40 &	<40 &	<40 &	<40 &
Aromatics >EC12-EC16	<100 µg/kg	TM173	644	1540	557	1090	1470	994
Aromatics >EC16-EC21	<100 µg/kg	TM173	912	2470	1200	2370	2570	1570
Aromatics >EC21-EC35	<100 µg/kg	TM173	2490	10900	4570	7760	9590	5220
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	2520	397	<100	3260	832
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	925	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	4050	17400	6730	11200	16900	8610
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	6610	18000	13400	27100	18100	13900



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	SP5_61	SP5_62	SP5_63	SP5_64	SP5_65	SP5_66
#	ISO17025 accredited.		0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
M	mCERTS accredited.		Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid	Soil/Solid
aq	Aqueous / settled sample.		24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014	24/10/2014
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.		25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014	25/10/2014
*	Subcontracted test.		141025-71	141025-71	141025-71	141025-71	141025-71	141025-71
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery		10259699	10259704	10259709	10259713	10259717	10259724
(F)	Trigger breach confirmed							
1-5&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	81	85	89	105	76	80
			&	&	&	&	&	&
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<44	<176
			& M	& M	& M	& M	& M	& M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<5	<20
			& M	& M	& M	& M	& M	& M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			& M	& M	& M	& M	& M	& M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<2	<8
			& M	& M	& M	& M	& M	& M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<3	<12
			& M	& M	& M	& M	& M	& M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<6	<24
			& M	& M	& M	& M	& M	& M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<3	<12
			& M	& M	& M	& M	& M	& M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
			&	&	&	&	&	&
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			&	&	&	&	&	&
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aliphatics >C12-C16	<100 µg/kg	TM173	439	1290	<100	<100	<100	1130
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	715	<100	<100	<100	1140
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	9420	<100	<100	<100	16500
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	635	<100	<100	<100	15500
Total Aliphatics >C12-C44	<100 µg/kg	TM173	439	12100	<100	<100	<100	34300
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<10	<40
			&	&	&	&	&	&
Aromatics >EC12-EC16	<100 µg/kg	TM173	1050	<100	<100	<100	<100	350
Aromatics >EC16-EC21	<100 µg/kg	TM173	1770	<100	<100	<100	<100	1090
Aromatics >EC21-EC35	<100 µg/kg	TM173	8430	1580	<100	<100	<100	12900
Aromatics >EC35-EC44	<100 µg/kg	TM173	2890	1200	<100	<100	<100	21000
Aromatics >EC40-EC44	<100 µg/kg	TM173	734	451	<100	<100	<100	9920
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	14100	2780	<100	<100	<100	35400
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	14600	14800	<100	<100	<100	69700



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_67	SP5_68	SP5_69	SP5_70	SP5_71	SP5_72
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014
aq	Aqueous / settled sample.		25/10/2014 141025-71 10259730	25/10/2014 141025-71 10259734	25/10/2014 141025-71 10259739	25/10/2014 141025-71 10259748	25/10/2014 141025-71 10259753	25/10/2014 141025-71 10259757
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*&@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	97	89	129	70	102	75
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<9	<9
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<24	<24
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	1520	<100	929
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	<100	<100	1150
Aliphatics >C21-C35	<100 µg/kg	TM173	7780	<100	<100	<100	<100	9030
Aliphatics >C35-C44	<100 µg/kg	TM173	643	<100	<100	<100	<100	904
Total Aliphatics >C12-C44	<100 µg/kg	TM173	8420	<100	<100	1520	<100	12000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	318	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	<100	2750	<100	<100	178
Aromatics >EC21-EC35	<100 µg/kg	TM173	<100	<100	9600	<100	<100	1330
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	<100	<100	12300	318	<100	1510
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	8460	<100	12300	1840	<100	13600



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R						
#	ISO17025 accredited.		SP5_73	SP5_74	SP5_75	SP5_76	SP5_77	SP5_78
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014	0.00 - 0.00 Soil/Solid 24/10/2014
aq	Aqueous / settled sample.		25/10/2014 141025-71 10259761	25/10/2014 141025-71 10259765	25/10/2014 141025-71 10259769	25/10/2014 141025-71 10259778	25/10/2014 141025-71 10259782	25/10/2014 141025-71 10259786
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	86	83	101	74	67	63
			&	&	&	&	&	&
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176	<176	<176	<176	<176
			& M	& M	& M	& M	& M	& M
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20	<20	<20	<20	<20
			& M	& M	& M	& M	& M	& M
Benzene	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			& M	& M	& M	& M	& M	& M
Toluene	<2 µg/kg	TM089	<8	<8	<8	<8	<8	<8
			& M	& M	& M	& M	& M	& M
Ethylbenzene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			& M	& M	& M	& M	& M	& M
m,p-Xylene	<6 µg/kg	TM089	<24	<24	<24	<24	<24	<24
			& M	& M	& M	& M	& M	& M
o-Xylene	<3 µg/kg	TM089	<12	<12	<12	<12	<12	<12
			& M	& M	& M	& M	& M	& M
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9	<9	<9	<36	<36
			&	&	&	&	&	&
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24	<24	<24	<96	<96
			&	&	&	&	&	&
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	1170
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100	<100	1000	<100	943
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	<100	<100	11700	10200	15200
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100	<100	3960	858	6490
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100	<100	<100	16700	11100	23800
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40	<40	<40	<40	<40
			&	&	&	&	&	&
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100	<100	<100	<100	<100
Aromatics >EC16-EC21	<100 µg/kg	TM173	1430	<100	<100	<100	<100	641
Aromatics >EC21-EC35	<100 µg/kg	TM173	5380	<100	<100	<100	1330	5100
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	4840
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100	<100	<100	<100	2360
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	6810	<100	<100	<100	1330	10600
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	6810	<100	<100	16700	12500	34400



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample R	SP5_79	SP5_80				
#	ISO17025 accredited.							
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	0.00 - 0.00 Soil/Solid 24/10/2014 . 25/10/2014 141025-71 10259791	0.00 - 0.00 Soil/Solid 24/10/2014 . 25/10/2014 141025-71 10259799				
aq	Aqueous / settled sample.							
diss.filt	Dissolved / filtered sample.							
tot.unfilt	Total / unfiltered sample.							
*	Subcontracted test.							
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
(F)	Trigger breach confirmed							
1-5&*\$@	Sample deviation (see appendix)							
Component	LOD/Units	Method						
GRO Surrogate % recovery**	%	TM089	79	85				
			&	&				
GRO TOT (Moisture Corrected)	<44 µg/kg	TM089	<176	<176				
			& M	& M				
Methyl tertiary butyl ether (MTBE)	<5 µg/kg	TM089	<20	<20				
			& M	& M				
Benzene	<10 µg/kg	TM089	<40	<40				
			& M	& M				
Toluene	<2 µg/kg	TM089	<8	<8				
			& M	& M				
Ethylbenzene	<3 µg/kg	TM089	<12	<12				
			& M	& M				
m,p-Xylene	<6 µg/kg	TM089	<24	<24				
			& M	& M				
o-Xylene	<3 µg/kg	TM089	<12	<12				
			& M	& M				
sum of detected mpo xylene by GC	<9 µg/kg	TM089	<9	<9				
			&	&				
sum of detected BTEX by GC	<24 µg/kg	TM089	<24	<24				
			&	&				
Aliphatics >C5-C6	<10 µg/kg	TM089	<40	<40				
			&	&				
Aliphatics >C6-C8	<10 µg/kg	TM089	<40	<40				
			&	&				
Aliphatics >C8-C10	<10 µg/kg	TM089	<40	<40				
			&	&				
Aliphatics >C10-C12	<10 µg/kg	TM089	<40	<40				
			&	&				
Aliphatics >C12-C16	<100 µg/kg	TM173	<100	<100				
Aliphatics >C16-C21	<100 µg/kg	TM173	<100	<100				
Aliphatics >C21-C35	<100 µg/kg	TM173	<100	<100				
Aliphatics >C35-C44	<100 µg/kg	TM173	<100	<100				
Total Aliphatics >C12-C44	<100 µg/kg	TM173	<100	<100				
Aromatics >EC5-EC7	<10 µg/kg	TM089	<40	<40				
			&	&				
Aromatics >EC7-EC8	<10 µg/kg	TM089	<40	<40				
			&	&				
Aromatics >EC8-EC10	<10 µg/kg	TM089	<40	<40				
			&	&				
Aromatics >EC10-EC12	<10 µg/kg	TM089	<40	<40				
			&	&				
Aromatics >EC12-EC16	<100 µg/kg	TM173	<100	<100				
Aromatics >EC16-EC21	<100 µg/kg	TM173	<100	1720				
Aromatics >EC21-EC35	<100 µg/kg	TM173	<100	7150				
Aromatics >EC35-EC44	<100 µg/kg	TM173	<100	<100				
Aromatics >EC40-EC44	<100 µg/kg	TM173	<100	<100				
Total Aromatics >EC12-EC44	<100 µg/kg	TM173	<100	8870				
Total Aliphatics & Aromatics >C5-C44	<100 µg/kg	TM173	<100	8870				



SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP5_17 0.00 - 0.00 SOLID 24/10/2014 00:00:00 14/11/2014 15:48:05 141025-71 10259480 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP5_55 0.00 - 0.00 SOLID 24/10/2014 00:00:00 07/01/2015 06:28:24 141025-71 10259666 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP5_57 0.00 - 0.00 SOLID 24/10/2014 00:00:00 07/01/2015 08:01:35 141025-71 10259679 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP5_70 0.00 - 0.00 SOLID 24/10/2014 00:00:00 07/01/2015 07:54:26 141025-71 10259748 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SP5_77 0.00 - 0.00 SOLID 24/10/2014 00:00:00 07/01/2015 06:35:13 141025-71 10259782 TM 304	None (#)	N/C	<0.001 (#)	<0.001 (#)	<0.001 (#)



SDG:	141025-71	Location:	Coed Darcy	Order Number:	CD0912
Job:	H_ATKINS_LDC-271	Customer:	Atkins Global Ltd	Report Number:	298178
Client Reference:	stockpile 115	Attention:	Barney Irlam	Superseded Report:	

Table of Results - Appendix

Method No	Reference	Description	Wet/Dry Sample ¹	Surrogate Corrected
ASB_PREP				
PM001		Preparation of Samples for Metals Analysis		
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material		
SUB (ASB)				
TM 304				
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)		
TM132	In - house Method	ELTRA CS800 Operators Guide		
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter		
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID		
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES		
TM218	Microwave extraction – EPA method 3546	Microwave extraction - EPA method 3546		

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



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

Test Completion Dates

Lab Sample No(s)	10259437	10259492	10259540	10259585	10259639	10259691	10259743	10259795	10259804	10259446
Customer Sample Ref.	SP5_1	SP5_2	SP5_3	SP5_4	SP5_5	SP5_6	SP5_7	SP5_8	SP5_9	SP5_10
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014
EPH CWG (Aliphatic) GC (S)	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
EPH CWG (Aromatic) GC (S)	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
GRO by GC-FID (S)	10-Nov-2014	11-Nov-2014	11-Nov-2014	08-Nov-2014	11-Nov-2014	11-Nov-2014	10-Nov-2014	08-Nov-2014	10-Nov-2014	08-Nov-2014
Metals in solid samples by OES	07-Nov-2014	11-Nov-2014	10-Nov-2014	11-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014
PAH by GCMS	09-Nov-2014	07-Nov-2014	08-Nov-2014	07-Nov-2014	09-Nov-2014	07-Nov-2014	08-Nov-2014	09-Nov-2014	08-Nov-2014	09-Nov-2014
pH	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Sample description	28-Oct-2014	29-Oct-2014	28-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014	29-Oct-2014
Total Organic Carbon	06-Nov-2014									
TPH CWG GC (S)	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014

Lab Sample No(s)	10259450	10259455	10259460	10259468	10259472	10259476	10259480	10259484	10259488	10259497
Customer Sample Ref.	SP5_11	SP5_12	SP5_13	SP5_14	SP5_15	SP5_16	SP5_17	SP5_18	SP5_19	SP5_20
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014
Asbestos Quantification - Full							26-Nov-2014			
EPH CWG (Aliphatic) GC (S)	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
EPH CWG (Aromatic) GC (S)	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
GRO by GC-FID (S)	08-Nov-2014	08-Nov-2014	08-Nov-2014	10-Nov-2014	08-Nov-2014	10-Nov-2014	10-Nov-2014	08-Nov-2014	10-Nov-2014	08-Nov-2014
Metals in solid samples by OES	11-Nov-2014	11-Nov-2014	07-Nov-2014	07-Nov-2014	11-Nov-2014	11-Nov-2014	10-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
PAH by GCMS	09-Nov-2014	07-Nov-2014	08-Nov-2014	08-Nov-2014	09-Nov-2014	09-Nov-2014	09-Nov-2014	09-Nov-2014	08-Nov-2014	09-Nov-2014
pH	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	07-Nov-2014	06-Nov-2014	07-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Sample description	29-Oct-2014	29-Oct-2014	28-Oct-2014	28-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014
Total Organic Carbon		11-Nov-2014								
TPH CWG GC (S)	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014

Lab Sample No(s)	10259501	10259505	10259509	10259513	10259517	10259521	10259528	10259532	10259536	10259544
Customer Sample Ref.	SP5_21	SP5_22	SP5_23	SP5_24	SP5_25	SP5_26	SP5_27	SP5_28	SP5_29	SP5_30
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014
EPH CWG (Aliphatic) GC (S)	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014
EPH CWG (Aromatic) GC (S)	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014
GRO by GC-FID (S)	10-Nov-2014	10-Nov-2014	08-Nov-2014	08-Nov-2014	10-Nov-2014	10-Nov-2014	11-Nov-2014	11-Nov-2014	08-Nov-2014	11-Nov-2014
Metals in solid samples by OES	11-Nov-2014	12-Nov-2014	11-Nov-2014	10-Nov-2014	11-Nov-2014	10-Nov-2014	11-Nov-2014	07-Nov-2014	11-Nov-2014	11-Nov-2014
PAH by GCMS	09-Nov-2014	09-Nov-2014	09-Nov-2014	09-Nov-2014	07-Nov-2014	09-Nov-2014	06-Nov-2014	09-Nov-2014	09-Nov-2014	09-Nov-2014
pH	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	07-Nov-2014	06-Nov-2014
Sample description	29-Oct-2014	28-Oct-2014	29-Oct-2014	28-Oct-2014	29-Oct-2014	28-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014
Total Organic Carbon			11-Nov-2014							
TPH CWG GC (S)	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	11-Nov-2014	11-Nov-2014

Lab Sample No(s)	10259548	10259552	10259556	10259560	10259564	10259569	10259573	10259577	10259581	10259589
Customer Sample Ref.	SP5_31	SP5_32	SP5_33	SP5_34	SP5_35	SP5_36	SP5_37	SP5_38	SP5_39	SP5_40
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014
EPH CWG (Aliphatic) GC (S)	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
EPH CWG (Aromatic) GC (S)	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
GRO by GC-FID (S)	08-Nov-2014	10-Nov-2014	08-Nov-2014	10-Nov-2014	10-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	10-Nov-2014
Metals in solid samples by OES	11-Nov-2014	10-Nov-2014	10-Nov-2014	07-Nov-2014	10-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014
PAH by GCMS	09-Nov-2014	09-Nov-2014	06-Nov-2014	09-Nov-2014	04-Nov-2014	09-Nov-2014	09-Nov-2014	06-Nov-2014	08-Nov-2014	09-Nov-2014
pH	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014
Sample description	29-Oct-2014	29-Oct-2014	28-Oct-2014	29-Oct-2014	28-Oct-2014	29-Oct-2014	29-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014
Total Organic Carbon						06-Nov-2014				
TPH CWG GC (S)	11-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014



CERTIFICATE OF ANALYSIS

SDG: 141025-71
Job: H_ATKINS_LDC-271
Client Reference: stockpile 115

Location: Coed Darcy
Customer: Atkins Global Ltd
Attention: Barney Irlam

Order Number: CD0912
Report Number: 298178
Superseded Report:

Lab Sample No(s)	10259599	10259604	10259609	10259613	10259618	10259622	10259626	10259630	10259634	10259644
Customer Sample Ref.	SP5_41	SP5_42	SP5_43	SP5_44	SP5_45	SP5_46	SP5_47	SP5_48	SP5_49	SP5_50
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014	05-Nov-2014
EPH CWG (Aliphatic) GC (S)	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
EPH CWG (Aromatic) GC (S)	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014
GRO by GC-FID (S)	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014
Metals in solid samples by OES	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	07-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014	10-Nov-2014
PAH by GCMS	08-Nov-2014	08-Nov-2014	08-Nov-2014	08-Nov-2014	09-Nov-2014	09-Nov-2014	08-Nov-2014	09-Nov-2014	08-Nov-2014	08-Nov-2014
pH	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	06-Nov-2014	07-Nov-2014	06-Nov-2014
Sample description	28-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014	28-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014	29-Oct-2014
Total Organic Carbon						06-Nov-2014				06-Nov-2014
TPH CWG GC (S)	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014	12-Nov-2014

Lab Sample No(s)	10259649	10259654	10259658	10259662	10259666	10259670	10259679	10259683	10259687	10259695
Customer Sample Ref.	SP5_51	SP5_52	SP5_53	SP5_54	SP5_55	SP5_56	SP5_57	SP5_58	SP5_59	SP5_60
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014
Asbestos Quantification - Full					08-Jan-2015		08-Jan-2015			
EPH CWG (Aliphatic) GC (S)	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014
EPH CWG (Aromatic) GC (S)	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	04-Dec-2014	05-Dec-2014	05-Dec-2014	04-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014
Metals in solid samples by OES	08-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	03-Dec-2014	05-Dec-2014	03-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014
PAH by GCMS	05-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	06-Dec-2014	06-Dec-2014	07-Dec-2014
pH	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014
Sample description	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014	01-Dec-2014
Total Organic Carbon									04-Dec-2014	
TPH CWG GC (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014

Lab Sample No(s)	10259699	10259704	10259709	10259713	10259717	10259724	10259730	10259734	10259739	10259748
Customer Sample Ref.	SP5_61	SP5_62	SP5_63	SP5_64	SP5_65	SP5_66	SP5_67	SP5_68	SP5_69	SP5_70
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014
Asbestos Quantification - Full										08-Jan-2015
EPH CWG (Aliphatic) GC (S)	05-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014
EPH CWG (Aromatic) GC (S)	05-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014
Metals in solid samples by OES	05-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	05-Dec-2014	05-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	05-Dec-2014
PAH by GCMS	06-Dec-2014	06-Dec-2014	07-Dec-2014	05-Dec-2014	07-Dec-2014	07-Dec-2014	04-Dec-2014	04-Dec-2014	06-Dec-2014	06-Dec-2014
pH	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014
Sample description	01-Dec-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
TPH CWG GC (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	09-Dec-2014	07-Dec-2014

Lab Sample No(s)	10259753	10259757	10259761	10259765	10259769	10259778	10259782	10259786	10259791	10259799
Customer Sample Ref.	SP5_71	SP5_72	SP5_73	SP5_74	SP5_75	SP5_76	SP5_77	SP5_78	SP5_79	SP5_80
AGS Ref.										
Depth	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Asbestos fibres in Soil*	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014	09-Dec-2014
Asbestos Quantification - Full							08-Jan-2015			
EPH CWG (Aliphatic) GC (S)	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014
EPH CWG (Aromatic) GC (S)	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014	06-Dec-2014
GRO by GC-FID (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014
Metals in solid samples by OES	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014	08-Dec-2014
PAH by GCMS	05-Dec-2014	04-Dec-2014	06-Dec-2014	05-Dec-2014	04-Dec-2014	07-Dec-2014	05-Dec-2014	06-Dec-2014	04-Dec-2014	07-Dec-2014
pH	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014	05-Dec-2014
Sample description	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014	28-Nov-2014
Total Organic Carbon	03-Dec-2014									
TPH CWG GC (S)	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014	07-Dec-2014