

**ALS Environmental Ltd**  
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**Mr Lloyd**  
**Caerphilly County B.C.**  
**Caerphilly County Borough**  
**Council**  
**Unit B5**  
**Tiryberth Depot**  
**Hengoed CF82 8AU**  
**Caerphilly**

12 May 2017

**Test Report: COV/1384870/2017**

Dear Mr Lloyd

Analysis of your sample(s) submitted on 27 April 2017 is now complete and we have pleasure in enclosing the appropriate test report(s).

An invoice for the analysis carried out will be sent under separate cover.

Should you have any queries regarding this report(s) or any part of our service, please contact Customer Services on +44 (0)24 7642 1213 who will be happy to discuss your requirements.

If you would like to arrange any further analysis, please contact Customer Services. To arrange container delivery or sample collection, please call the Couriers Department directly on 024 7685 6562.

Thank you for using ALS Environmental Ltd and we look forward to receiving your next samples.

Yours Sincerely,

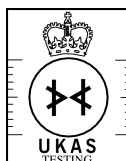
Signed: 

Name: R. Stocks

Title: Inorganic Team Leader



# Report Summary



1314  
0897  
4409



**Mr Rhodri Lloyd  
Caerphilly County B.C.  
Caerphilly County Borough  
Council  
Unit B5  
Tiryberth Depot  
Hengoed  
Caerphilly**

Date of Issue: **12 May 2017**

Report Number: **COV/1384870/2017**

Issue **1**

This issue replaces  
all previous issues

**Job Description:** Trehir Landfill Site

**Job Location:** Caerphilly

Number of Samples  
included in this report **18**

Job Received: **27 April 2017**

Number of Test Results  
included in this report **134**

Analysis Commenced: **28 April 2017**

Signed: 

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

ALS Environmental Ltd was responsible for sampling. Sampling is not covered by our UKAS accreditation.

Information on the methods of analysis and performance characteristics are available on request.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

Tests marked 'Not UKAS Accredited' in this Report/Certificate are not included in the UKAS Accreditation Schedule for our laboratory.

This communication has been sent to you by ALS Environmental Ltd. Registered in England and Wales. Registration No. 02148934. Registered Office: ALS Environmental Limited, Torrington Avenue, Coventry, CV4 9GU.

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047646**

Sample **1** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **03**

Sample Description: **03**

Sample Matrix: **Land Leachate**

Sample Date/Time: **27 April 2017 12:20**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.5	Deg C	28/04/2017	N Cov	FIELD
pH	7.7	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	3550	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	12.3	mg/l	29/04/2017	Y Cov	WAS036
BOD + ATU (5 day)	15	mg/l	04/05/2017	Y Cov	WAS001
COD (Total)	282	mg/l	02/05/2017	Y Cov	WAS040
Chloride as Cl, High Level	344	mg/l	04/05/2017	Y Cov	WAS036

## Analyst Comments for 16047646:

{/\*}Ammonia analysed by colorimetric method{\*/}

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047647**

Sample **2** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **08**

Sample Description: **08**

Sample Matrix: **Land Leachate**

Sample Date/Time: **27 April 2017 10:50**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	11.6	Deg C	28/04/2017	N Cov	FIELD
pH	8.1	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1670	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	4.02	mg/l	29/04/2017	Y Cov	WAS036
BOD + ATU (5 day)	5	mg/l	04/05/2017	Y Cov	WAS001
COD (Total)	111	mg/l	02/05/2017	Y Cov	WAS040
Chloride as Cl, High Level	166	mg/l	04/05/2017	Y Cov	WAS036

## Analyst Comments for 16047647:

{/\*}Ammonia analysed by colorimetric method{\*/}

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047648**

Sample **3** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **MHL28**

Sample Description: **MHL28**

Sample Matrix: **Land Leachate**

Sample Date/Time: **27 April 2017 11:20**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.2	Deg C	28/04/2017	N Cov	FIELD
pH	8.2	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	3150	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	11.3	mg/l	29/04/2017	Y Cov	WAS036
BOD + ATU (5 day)	7	mg/l	04/05/2017	Y Cov	WAS001
COD (Total)	234	mg/l	02/05/2017	Y Cov	WAS040
Chloride as Cl, High Level	314	mg/l	04/05/2017	Y Cov	WAS036

## Analyst Comments for 16047648:

{/\*}Ammonia analysed by colorimetric method{\*/}

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047649**

Sample **4** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **N2**

Sample Description: **N2**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 10:40**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.7	Deg C	28/04/2017	N Cov	FIELD
pH	7.1	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	205	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	11.6	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	2.0	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	27.0	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	10.26	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047649:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047650**

Sample **5** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **N5**

Sample Description: **N5**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 13:35**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.9	Deg C	28/04/2017	N Cov	FIELD
pH	7.6	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1130	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	2.10	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	180	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	7.3	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	252	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	5.45	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047650:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047651**

Sample **6** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **N6**

Sample Description: **N6**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 13:10**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.9	Deg C	28/04/2017	N Cov	FIELD
pH	7.2	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	945	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	20.1	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	57.8	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	<0.5	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	89.0	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	0.50	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047651:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047652**

Sample **7** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **N8**

Sample Description: **N8**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 14:05**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.9	Deg C	28/04/2017	N Cov	FIELD
pH	7.7	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	862	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	197	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	5.9	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	88.0	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	2.83	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047652:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047653**

Sample **8** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **NBH1**

Sample Description: **NBH1**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 12:45**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	13.9	Deg C	28/04/2017	N Cov	FIELD
pH	7.3	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1890	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	57.0	mg/l	30/04/2017	N Cov	WAS036
Chloride as Cl	187	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	<0.5	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	10800	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	3.30	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047653:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047654**

Sample **9** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **NBH3**

Sample Description: **NBH3**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 12:00**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.3	Deg C	28/04/2017	N Cov	FIELD
pH	6.8	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	957	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	11.7	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	31.7	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	0.8	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	62.0	mg/l	02/05/2017	Y Cov	WAS040
Water Level to top of Casing	7.10	m	28/04/2017	N Cov	IN SITU M

Analyst Comments for 16047654:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047655**

Sample **10** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **NBH4**

Sample Description: **NBH4**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 11:45**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation		Method
Field Temperature	13.2	Deg C	28/04/2017	N	Cov	FIELD
pH	6.6	pH units	29/04/2017	Y	Cov	WAS039
Conductivity- Electrical 20C	468	uS/cm	29/04/2017	Y	Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N	Cov	WAS036
Chloride as Cl	16.4	mg/l	29/04/2017	N	Cov	WAS036
Dissolved Oxygen, Fixed	5.3	mg/l	28/04/2017	Y	Cov	WAS052
COD (Total)	73.0	mg/l	02/05/2017	Y	Cov	WAS040
Water Level to top of Casing	12.20	m	28/04/2017	N	Cov	IN SITU M

Analyst Comments for 16047655:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047656**

Sample **11** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **NBH5**

Sample Description: **NBH5**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 11:09**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation		Method
Field Temperature	10.6	Deg C	28/04/2017	N	Cov	FIELD
pH	6.5	pH units	29/04/2017	Y	Cov	WAS039
Conductivity- Electrical 20C	503	uS/cm	29/04/2017	Y	Cov	WAS039
Ammoniacal Nitrogen as N	0.95	mg/l	29/04/2017	N	Cov	WAS036
Chloride as Cl	19.1	mg/l	29/04/2017	N	Cov	WAS036
Dissolved Oxygen, Fixed	1.5	mg/l	28/04/2017	Y	Cov	WAS052
COD (Total)	30.0	mg/l	02/05/2017	Y	Cov	WAS040
Water Level to top of Casing	7.03	m	28/04/2017	N	Cov	IN SITU M

Analyst Comments for 16047656:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047657**

Sample **12** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **W1**

Sample Description: **W1**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 09:55**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.1	Deg C	28/04/2017	N Cov	FIELD
pH	8.4	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	510	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	19.2	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	11.1	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	16.0	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047657:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047658**

Sample **13** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **W2**

Sample Description: **W2**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 10:00**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.0	Deg C	28/04/2017	N Cov	FIELD
pH	8.4	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	510	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	18.9	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	10.9	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	14.0	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047658:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047659**

Sample **14** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **W3**

Sample Description: **W3**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 10:05**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.2	Deg C	28/04/2017	N Cov	FIELD
pH	8.4	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	510	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	18.9	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	10.8	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	51.0	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047659:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047660**

Sample **15** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **Groundwater Sump**

Sample Description: **Sump**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 11:10**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.7	Deg C	28/04/2017	N Cov	FIELD
pH	7.4	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1480	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	17.8	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	202	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	3.8	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	1440	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047660:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047661**

Sample **16** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description:

Sample Description: **Land Drain 1a**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 10:30**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	10.3	Deg C	28/04/2017	N Cov	FIELD
pH	8.3	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	3100	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	198	mg/l	03/05/2017	Y Cov	WAS055
Chloride as Cl	304	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	1.8	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	246	mg/l	02/05/2017	Y Cov	WAS040

## Analyst Comments for 16047661:

{/\*}Ammonia analysed by colorimetric method{\*/}

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047662**

Sample **17** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **Land Drain 1b**

Sample Description: **Land Drain 1b**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 10:25**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	13.7	Deg C	28/04/2017	N Cov	FIELD
pH	7.7	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	756	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	8.82	mg/l	30/04/2017	N Cov	WAS036
Chloride as Cl	76.3	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	6.1	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	39.0	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047662:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1384870/2017**

Issue **1**

Laboratory Number: **16047663**

Sample **18** of **18**

Sample Source: **Caerphilly County B.C.**

Sample Point Description: **Land Drain 2**

Sample Description: **Land Drain 2**

Sample Matrix: **Ground Water**

Sample Date/Time: **27 April 2017 13:40**

Sample Received: **27 April 2017**

Analysis Complete: **12 May 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.8	Deg C	28/04/2017	N Cov	FIELD
pH	8.4	pH units	29/04/2017	Y Cov	WAS039
Conductivity- Electrical 20C	860	uS/cm	29/04/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	29/04/2017	N Cov	WAS036
Chloride as Cl	86.7	mg/l	29/04/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	6.2	mg/l	28/04/2017	Y Cov	WAS052
COD (Total)	61.0	mg/l	02/05/2017	Y Cov	WAS040

Analyst Comments for 16047663:

No Analyst Comment

This issue replaces all previous issues

Accreditation Codes: Y = UKAS / ISO17025 Accredited, N = Not UKAS / ISO17025 Accredited, M = MCERTS.

Analysed at: Cov = Coventry(CV4 9GU), Che = Chester(CH4 9EP), Ott = Otterbourne(SO21 2SW), S = Subcontracted, Trb = Subcontracted to Trowbridge(BA14 0XD), Wak = Wakefield(WF5 9TG).

For Microbiological determinands 0 or ND=Not Detected, For Legionella ND=Not Detected in volume of sample filtered. The LOD for the Legionella analysis will increase where the volume analysed is <1000g (1g is approximately equivalent to 1ml for sample volume analysed).

Signed:

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

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## ANALYST COMMENTS FOR REPORT

COV/1384870/2017

Issue 1

Date of Issue: 12 May 2017

Sample No	Analysis Comments
16047646	{/*}Ammonia analysed by colorimetric method{/*}
16047647	{/*}Ammonia analysed by colorimetric method{/*}
16047648	{/*}Ammonia analysed by colorimetric method{/*}
16047649	
16047650	
16047651	
16047652	
16047653	
16047654	
16047655	
16047656	
16047657	
16047658	
16047659	
16047660	
16047661	{/*}Ammonia analysed by colorimetric method{/*}
16047662	
16047663	

Signed: 

Name: **R. Stocks**

Date: **12 May 2017**

Title: **Inorganic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1384870/2017

ISSUE 1

Date of Issue : 12 May 2017

Sample No	Description	Determinand	Comments

Signed:



Name: R. Stocks

Date: 12 May 2017

Title: Inorganic Team Leader