

**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**

20 February 2017

**Test Report: COV/1361453/2017**

Dear Mr Lloyd

Analysis of your sample(s) submitted on 09 February 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,

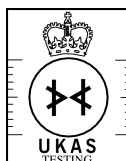
Signed: 

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: **20 February 2017**

Report Number: **COV/1361453/2017**

Issue **1**

**Job Description:** Trehir Landfill Site

**Job Location:** Caerphilly

Number of Samples  
included in this report **20**

Job Received: **09 February 2017**

Number of Test Results  
included in this report **149**

Analysis Commenced: **10 February 2017**

Signed: 

Name: **R. Stocks**

Date: **20 February 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/1361453/2017**

Issue **1**

Laboratory Number: **15872935**

Sample **1** of **20**

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

Sample Point Description: **03**

Sample Description: **03**

Sample Matrix: **Land Leachate**

Sample Date/Time: **09 February 2017 11:07**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.3	Deg C	10/02/2017	N Cov	FIELD
pH	8.0	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1890	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	90.7	mg/l	15/02/2017	Y Cov	WAS055
BOD + ATU (5 day)	7	mg/l	16/02/2017	Y Cov	WAS001
COD (Total)	109	mg/l	15/02/2017	Y Cov	WAS040
Chloride as Cl, High Level	155	mg/l	16/02/2017	Y Cov	WAS036

## Analyst Comments for 15872935:

{/\*}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: **20 February 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872936**

Sample **2** of **20**

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

Sample Point Description: **08**

Sample Description: **08**

Sample Matrix: **Land Leachate**

Sample Date/Time: **09 February 2017 10:02**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	6.2	Deg C	10/02/2017	N Cov	FIELD
pH	8.3	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1440	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	51.7	mg/l	15/02/2017	Y Cov	WAS055
BOD + ATU (5 day)	4	mg/l	16/02/2017	Y Cov	WAS001
COD (Total)	70.0	mg/l	15/02/2017	Y Cov	WAS040
Chloride as Cl, High Level	113	mg/l	16/02/2017	Y Cov	WAS036

## Analyst Comments for 15872936:

{/\*}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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872937**

Sample **3** of **20**

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

Sample Point Description: **MHL28**

Sample Description: **MHL28**

Sample Matrix: **Land Leachate**

Sample Date/Time: **09 February 2017 10:25**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	7.3	Deg C	10/02/2017	N Cov	FIELD
pH	8.3	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1870	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	88.7	mg/l	15/02/2017	Y Cov	WAS055
BOD + ATU (5 day)	5	mg/l	16/02/2017	Y Cov	WAS001
COD (Total)	102	mg/l	15/02/2017	Y Cov	WAS040
Chloride as Cl, High Level	156	mg/l	16/02/2017	Y Cov	WAS036

## Analyst Comments for 15872937:

{/\*}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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872938**

Sample **4** of **20**

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

Sample Point Description: **N2**

Sample Description: **N2**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:55**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	8.9	Deg C	10/02/2017	N Cov	FIELD
pH	7.4	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	192	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	9.1	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	1.9	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	<11.0	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	4.23	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872938:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872939**

Sample **5** of **20**

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

Sample Point Description: **N5**

Sample Description: **N5**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 11:48**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.3	Deg C	10/02/2017	N Cov	FIELD
pH	7.7	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1120	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	1.29	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	174	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	1.0	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	248	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	3.28	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872939:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872940**

Sample **6** of **20**

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

Sample Point Description: **N6**

Sample Description: **N6**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 12:08**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.1	Deg C	10/02/2017	N Cov	FIELD
pH	7.2	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	886	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	17.1	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	55.4	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	0.7	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	49.0	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	0.00	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872940:

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: **20 February 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872941**

Sample **7** of **20**

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

Sample Point Description: **N8**

Sample Description: **N8**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 12:38**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.3	Deg C	10/02/2017	N Cov	FIELD
pH	7.8	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	808	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	193	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	4.6	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	58.0	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	2.72	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872941:

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: **20 February 2017**

Title: **Inorganic Team Leader**

**ALS Environmental Ltd**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872942**

Sample **8** of **20**

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

Sample Point Description: **NBH1**

Sample Description: **NBH1**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 11:25**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation		Method
Field Temperature	11.7	Deg C	10/02/2017	N	Cov	FIELD
pH	7.3	pH units	11/02/2017	Y	Cov	WAS039
Conductivity- Electrical 20C	1310	uS/cm	11/02/2017	Y	Cov	WAS039
Ammoniacal Nitrogen as N	21.7	mg/l	15/02/2017	N	Cov	WAS036
Chloride as Cl	84.2	mg/l	15/02/2017	N	Cov	WAS036
Dissolved Oxygen, Fixed	<0.5	mg/l	13/02/2017	Y	Cov	WAS052
COD (Total)	3150	mg/l	15/02/2017	Y	Cov	WAS040
Water Level to top of Casing	4.20	m	10/02/2017	N	Cov	IN SITU M

Analyst Comments for 15872942:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872943**

Sample **9** of **20**

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

Sample Point Description: **NBH3**

Sample Description: **NBH3**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 11:07**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	7.9	Deg C	10/02/2017	N Cov	FIELD
pH	6.9	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	979	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	9.32	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	32.2	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	3.3	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	112	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	6.41	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872943:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872944**

Sample **10** of **20**

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

Sample Point Description: **NBH4**

Sample Description: **NBH4**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:50**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation		Method
Field Temperature	8.9	Deg C	10/02/2017	N	Cov	FIELD
pH	6.9	pH units	11/02/2017	Y	Cov	WAS039
Conductivity- Electrical 20C	583	uS/cm	11/02/2017	Y	Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N	Cov	WAS036
Chloride as Cl	14.3	mg/l	15/02/2017	N	Cov	WAS036
Dissolved Oxygen, Fixed	6.5	mg/l	13/02/2017	Y	Cov	WAS052
COD (Total)	90.0	mg/l	15/02/2017	Y	Cov	WAS040
Water Level to top of Casing	16.57	m	10/02/2017	N	Cov	IN SITU M

Analyst Comments for 15872944:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872945**

Sample **11** of **20**

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

Sample Point Description: **NBH5**

Sample Description: **NBH5**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:15**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.7	Deg C	10/02/2017	N Cov	FIELD
pH	7.1	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	514	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	15.5	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	3.4	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	24.0	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	5.45	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872945:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872946**

Sample **12** of **20**

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

Sample Point Description: **NBH6**

Sample Description: **NBH6**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:10**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.5	Deg C	10/02/2017	N Cov	FIELD
pH	7.0	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	169	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	12.8	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	4.8	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	69.0	mg/l	15/02/2017	Y Cov	WAS040
Water Level to top of Casing	8.92	m	10/02/2017	N Cov	IN SITU M

Analyst Comments for 15872946:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872947**

Sample **13** of **20**

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

Sample Point Description: **W1**

Sample Description: **W1**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:30**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	6.1	Deg C	10/02/2017	N Cov	FIELD
pH	7.8	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	257	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	0.51	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	23.2	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	10.5	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	<11.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872947:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872948**

Sample **14** of **20**

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

Sample Point Description: **W2**

Sample Description: **W2**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:35**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	6.1	Deg C	10/02/2017	N Cov	FIELD
pH	7.9	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	293	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	1.00	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	24.8	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	9.2	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	<11.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872948:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872949**

Sample **15** of **20**

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

Sample Point Description: **W3**

Sample Description: **W3**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:40**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	6.1	Deg C	10/02/2017	N Cov	FIELD
pH	8.2	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	296	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	15.6	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	11.6	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	<11.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872949:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872950**

Sample **16** of **20**

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

Sample Point Description: **W5**

Sample Description: **W5**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:30**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	9.3	Deg C	10/02/2017	N Cov	FIELD
pH	7.7	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	133	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	12.6	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	11.0	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	<11.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872950:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872951**

Sample **17** of **20**

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

Sample Point Description: **Groundwater Sump**

Sample Description: **Sump**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:15**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	8.9	Deg C	10/02/2017	N Cov	FIELD
pH	7.3	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	967	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	4.08	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	101	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	6.1	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	1010	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872951:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872952**

Sample **18** of **20**

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

Sample Point Description: **Land Drain 1**

Sample Description: **Land Drain 1a**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:50**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	5.9	Deg C	10/02/2017	N Cov	FIELD
pH	8.0	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	776	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	5.65	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	56.6	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	3.9	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	29.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872952:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872953**

Sample **19** of **20**

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

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

Sample Description: **Land Drain 1b**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 09:53**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	6.3	Deg C	10/02/2017	N Cov	FIELD
pH	8.3	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	1840	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	83.1	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	151	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	6.5	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	108	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872953:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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# Certificate of Analysis



Report Number: **COV/1361453/2017**

Issue **1**

Laboratory Number: **15872954**

Sample **20** of **20**

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

Sample Point Description: **Land Drain 2**

Sample Description: **Land Drain 2**

Sample Matrix: **Ground Water**

Sample Date/Time: **09 February 2017 10:09**

Sample Received: **09 February 2017**

Analysis Complete: **20 February 2017**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	5.9	Deg C	10/02/2017	N Cov	FIELD
pH	8.3	pH units	11/02/2017	Y Cov	WAS039
Conductivity- Electrical 20C	882	uS/cm	11/02/2017	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	15/02/2017	N Cov	WAS036
Chloride as Cl	89.3	mg/l	15/02/2017	N Cov	WAS036
Dissolved Oxygen, Fixed	11.3	mg/l	13/02/2017	Y Cov	WAS052
COD (Total)	25.0	mg/l	15/02/2017	Y Cov	WAS040

Analyst Comments for 15872954:

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: **20 February 2017**

Title: **Inorganic Team Leader**

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## ANALYST COMMENTS FOR REPORT

COV/1361453/2017

Issue 1

Date of Issue: 20 February 2017

Sample No	Analysis Comments
15872935	{/*}Ammonia analysed by colorimetric method{/*}
15872936	{/*}Ammonia analysed by colorimetric method{/*}
15872937	{/*}Ammonia analysed by colorimetric method{/*}
15872938	
15872939	
15872940	
15872941	
15872942	
15872943	
15872944	
15872945	
15872946	
15872947	
15872948	
15872949	
15872950	
15872951	
15872952	
15872953	
15872954	

Signed: 

Name: R. Stocks

Date: 20 February 2017

Title: Inorganic Team Leader

## DETERMINAND COMMENTS FOR REPORT COV/1361453/2017

ISSUE 1

Date of Issue : 20 February 2017

Sample No	Description	Determinand	Comments

Signed:



Name: R. Stocks

Date: 20 February 2017

Title: Inorganic Team Leader