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

26 October 2016

Test Report: COV/1327523/2016

Dear Mr Lloyd

Analysis of your sample(s) submitted on 17 October 2016 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: P. Patel

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: **26 October 2016**

Report Number: **COV/1327523/2016**

Issue **1**

Job Description: Trehir Landfill Site

Job Location: Caerphilly

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

Job Received: **17 October 2016**

Number of Test Results
included in this report **135**

Analysis Commenced: **17 October 2016**

Signed:

Name: **P. Patel**

Date: **26 October 2016**

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.

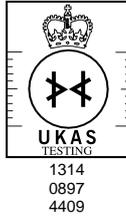
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation. The results relate only to the items tested.

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/1327523/2016**

Issue **1**

Laboratory Number: **15622762**

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

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

Sample Point Description: **08**

Sample Description: **08**

Sample Matrix: **Land Leachate**

Sample Date/Time: **17 October 2016 13:00**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	15.2	Deg C	17/10/2016	N Cov	FIELD
pH	8.0	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1030	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	43.3	mg/l	20/10/2016	Y Cov	WAS036
BOD + ATU (5 day)	6	mg/l	24/10/2016	Y Cov	WAS001
COD (Total)	62.0	mg/l	18/10/2016	Y Cov	WAS040
Chloride as Cl, High Level	103	mg/l	18/10/2016	Y Cov	WAS036

Analyst Comments for 15622762:

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

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622763**

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

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

Sample Point Description: **MHL28**

Sample Description: **MHL28**

Sample Matrix: **Land Leachate**

Sample Date/Time: **17 October 2016 12:10**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	17.1	Deg C	17/10/2016	N Cov	FIELD
pH	8.1	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1810	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	118	mg/l	25/10/2016	Y Cov	WAS055
BOD + ATU (5 day)	9	mg/l	24/10/2016	Y Cov	WAS001
COD (Total)	144	mg/l	18/10/2016	Y Cov	WAS040
Chloride as Cl, High Level	197	mg/l	18/10/2016	Y Cov	WAS036

Analyst Comments for 15622763:

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

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622764**

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

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

Sample Point Description: **N2**

Sample Description: **N2**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 09:30**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	15.1	Deg C	17/10/2016	N Cov	FIELD
pH	6.6	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	152	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	10.4	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	6.0	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	9.81	m	25/10/2016	N Cov	IN SITU M

Analyst Comments for 15622764: No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:  Name: **P. Patel** Date: **26 October 2016**
Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622765**

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

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

Sample Point Description: **N5**

Sample Description: **N5**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 09:30**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.1	Deg C	17/10/2016	N Cov	FIELD
pH	7.0	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	639	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	0.56	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	91.7	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	6.0	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	15.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	5.79	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622765:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622766**

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

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

Sample Point Description: **N6**

Sample Description: **N6**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 10:02**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.3	Deg C	17/10/2016	N Cov	FIELD
pH	7.0	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	847	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	19.7	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	63.0	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	0.6	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	36.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	0.00	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622766:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

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Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622767**

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

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

Sample Point Description: **N8**

Sample Description: **N8**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 12:30**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	12.2	Deg C	17/10/2016	N Cov	FIELD
pH	7.3	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	799	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	1.48	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	194	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	1.8	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	20.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	4.51	m	25/10/2016	N Cov	IN SITU M

Analyst Comments for 15622767:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622768**

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

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

Sample Point Description: **NBH1**

Sample Description: **NBH1**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 11:40**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	17.2	Deg C	17/10/2016	N Cov	FIELD
pH	7.3	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1480	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	44.6	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	174	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	<0.5	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	187	mg/l	21/10/2016	Y Cov	WAS040
Water Level to top of Casing	3.15	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622768:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

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Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622769**

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

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

Sample Point Description: **NBH3**

Sample Description: **NBH3**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 10:55**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	15.1	Deg C	17/10/2016	N Cov	FIELD
pH	6.9	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1080	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	18.5	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	46.2	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	2.0	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	20.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	8.42	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622769:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622770**

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

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

Sample Point Description: **NBH4**

Sample Description: **NBH4**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 10:35**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	13.8	Deg C	17/10/2016	N Cov	FIELD
pH	6.6	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	448	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	12.9	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	9.2	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	16.50	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622770:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

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Torrington Avenue, Coventry, CV4 9GU
Tel:+44 (0)24 7642 1213 Fax:+44 (0)24 7685 6575

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622771**

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

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

Sample Point Description: **NBH5**

Sample Description: **NBH5**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 10:15**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	13.7	Deg C	17/10/2016	N Cov	FIELD
pH	6.6	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	523	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	18.4	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	7.7	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	36.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	5.35	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622771:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622772**

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

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

Sample Point Description: **NBH6**

Sample Description: **NBH6**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 09:55**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.3	Deg C	17/10/2016	N Cov	FIELD
pH	6.9	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	250	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	9.8	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	3.6	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040
Water Level to top of Casing	12.40	m	17/10/2016	N Cov	IN SITU M

Analyst Comments for 15622772:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

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Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622773**

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

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

Sample Point Description: **W1**

Sample Description: **W1**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 13:10**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.6	Deg C	17/10/2016	N Cov	FIELD
pH	8.2	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	357	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	14.5	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	10.4	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622773:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622774**

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

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

Sample Point Description: **W2**

Sample Description: **W2**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 13:10**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.5	Deg C	17/10/2016	N Cov	FIELD
pH	8.2	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	357	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	13.8	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	10.2	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622774:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622775**

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

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

Sample Point Description: **W3**

Sample Description: **W3**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 13:05**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.5	Deg C	17/10/2016	N Cov	FIELD
pH	8.2	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	357	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	13.6	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	9.5	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	<11.0	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622775:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622776**

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: **17 October 2016 12:00**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	13.2	Deg C	17/10/2016	N Cov	FIELD
pH	7.4	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1230	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	21.0	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	189	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	5.4	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	301	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622776:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622777**

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

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

Sample Point Description: **Land Drain 1**

Sample Description: **Land Drain 1a**

Sample Matrix: **Ground Water**

Sample Date/Time: **17 October 2016 12:50**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.1	Deg C	17/10/2016	N Cov	FIELD
pH	7.5	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	516	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	2.28	mg/l	21/10/2016	N Cov	WAS036
Chloride as Cl	45.4	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	4.4	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	24.0	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622777:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622778**

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: **17 October 2016 12:50**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.1	Deg C	17/10/2016	N Cov	FIELD
pH	8.1	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	1800	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	117	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	197	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	4.1	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	155	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622778:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

Certificate of Analysis



Report Number: **COV/1327523/2016**

Issue **1**

Laboratory Number: **15622779**

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: **17 October 2016 12:55**

Sample Received: **17 October 2016**

Analysis Complete: **26 October 2016**

Test Description	Result	Units	Analysis Date	Accreditation	Method
Field Temperature	14.6	Deg C	17/10/2016	N Cov	FIELD
pH	8.0	pH units	20/10/2016	Y Cov	WAS039
Conductivity- Electrical 20C	726	uS/cm	20/10/2016	Y Cov	WAS039
Ammoniacal Nitrogen as N	<0.41	mg/l	19/10/2016	N Cov	WAS036
Chloride as Cl	90.5	mg/l	19/10/2016	N Cov	WAS036
Dissolved Oxygen, Fixed	8.7	mg/l	18/10/2016	Y Cov	WAS052
COD (Total)	13.0	mg/l	18/10/2016	Y Cov	WAS040

Analyst Comments for 15622779:

No Analyst Comment

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).

I/S=Insufficient sample For soil/sludge samples: AR=As received, DW=Dry weight.

Signed:

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

ANALYST COMMENTS FOR REPORT

COV/1327523/2016

Issue 1

Date of Issue: 26 October 2016

Sample No	Analysis Comments
15622762	{/*}Ammonia analysed by colorimetric method{/*}
15622763	{/*}Ammonia analysed by colorimetric method{/*}
15622764	
15622765	
15622766	
15622767	
15622768	
15622769	
15622770	
15622771	
15622772	
15622773	
15622774	
15622775	
15622776	
15622777	
15622778	
15622779	

Signed: 

Name: **P. Patel**

Date: **26 October 2016**

Title: **Inorganic Team Leader**

DETERMINAND COMMENTS FOR REPORT COV/1327523/2016

ISSUE 1

Date of Issue : 26 October 2016

Sample No	Description	Determinand	Comments

Signed: 	Name: P. Patel	Date: 26 October 2016
	Title: Inorganic Team Leader	