

Environmental Impact Assessment Report

Volume 3 of 3 – Appendices

For

BLACK LOUGH WIND FARM INTERNAL ELECTRICAL CONNECTION

TAWNAMORE to CLOONKEELAUN COUNTY SLIGO



Prepared for:

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March 2019

Environmental Impact Assessment Report

Volume 3 of 3 – Appendices

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APPENDIX 2-1

METHOD STATEMENT – ELECTRICAL CONNECTION BETWEEN BLACK LOUGH AND CLOONKEELAUN

Black Lough Wind Farm
Tawnamore
County Sligo

Method Statement
Electrical Connection Between Black Lough and Cloonkeelaun

Prepared for:
Black Lough Windfarm Ltd
Tawnamore
County Sligo

Prepared by:
Keohane Geological & Environmental Consultancy
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August 2018

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1 INTRODUCTION

1.1 Overview of Scope of Work

Sligo County Council granted planning permission to John Hallinan for a wind farm consisting of four turbines at Tawnamore in June 2017 – planning number PL17/93 refers. The permission included a control building at Black Lough to facilitate connection to the National Grid at Glenree County Mayo. Two separate planning permissions were granted for this grid connection; planning number PL16/422 in County Sligo and planning number P16/822 in County Mayo.

The permitted cable route between Black Lough and Cloonkeelaun is 6.92km long, entirely underground and largely follows existing public and bog roads; a short section (~330m) goes 'cross-country' at the approach to the Cloonkeelaun control building. Approximately 1.5km of the permitted route passes through the Ox Mountains Bogs SAC. The original route was selected to follow roads as far as possible as it might become an ESB asset (depending on the outcome of the Cloonkeelaun turbines application), connecting the control building at Black Lough to Glenree. The grid connection (i.e. the ESB asset) will now be between Cloonkeelaun and Glenree. The connection between Black Lough and Cloonkeelaun is now, technically, an internal electrical connection.

Due to difficulties with landowner leases along the permitted route between Black Lough and Cloonkeelaun, an alternative electric connection is required. The proposed route is a shorter (2.6km), more direct, route than the permitted one (granted under PL16/422). The proposed route has the required landowner lease in place.

The proposed route will consist of:

1. Approximately 2.3km of overhead line and 340m of underground cabling.
2. The underground sections will use either direct burial of cables or using ducting (150mm diameter PVC ducts); the ducts are installed first, and the cables are pulled through at a later stage, which is the likely method to be used. The trench will be approximately 1.2m deep and 0.4m wide, with earthing conductors and 150mm diameter and 50mm diameter ducting for electrical cables, communications and low voltage cables. The underground sections consist of:
 - a. 240m of underground cabling will extend from turbine T2 at Black Lough to the first wooden pole. This underground section is needed to provide sufficient setback of the overhead line from the turbine in accordance with ESB safety specifications. The underground section at Black Lough will follow the alignment of an existing farm track that passes turbine T2 and extends in a southerly direction.
 - b. 100m of underground cabling from the southern-most pole to the control building at Cloonkeelaun. The underground section at Cloonkeelaun will cross blanket bog.
3. Approximately 18 No single wooden poles with stays at the 2 No. end poles, 4 No angle poles and at locations where ground conditions require stays.
4. Of the total grid route length, approximately 2km of the overhead line will pass through the Ox Mountains Bogs SAC.

This document is produced to outline works involved in the construction of the electrical connection and the environmental mitigation measures required as a result of these works. This Method Statement should be read in conjunction with the Natura Impact Statement (NIS) prepared for the proposed project.

1.2 Environmental Setting

The area surveyed by the project ecologist for this proposal lies largely within the north western part of the Ox Mountains Bogs Special Area of Conservation (site code 002006). The location of the proposed route in relation to the Ox Mountains Bogs SAC is illustrated in Figure 1-1, with typical habitats shown in Plate 1-1.

The survey area is located in the vicinity of the Easky river system, and the electrical connection crosses the Gowlan River (as a pole-mounted overhead line) approximately 1.6km upstream of its confluence with the Easky River – refer to Plate 1-2. The Easky river system is known to be important for salmonids and also supports a population of freshwater pearl mussel *Margaritifera margaritifera*. Both Atlantic salmon and freshwater pearl mussel are listed on Annex II and Annex V of the EU Habitats Directive.

The north-eastern section of the proposed route lies to the east of the Gowlan River, where it passes through improved grassland and modified blanket bog, following an existing farm track for part of its length. The proposed route then crosses the river and extends in a south westerly direction across peatland habitats on the western side of the river. Here, the proposed route passes through both wet heath (Fossitt habitat HH3) and intact upland blanket bog (Fossitt category PB2), some of which contains extensive pool systems. The general area of the proposed route is underlain by peat over thick glacial till deposits over limestone bedrock.



Plate 1-1: Typical Blanket Bog Habitat Along Route within SAC



Plate 1-2: Overhead Line Crossing Location of Gowlan River

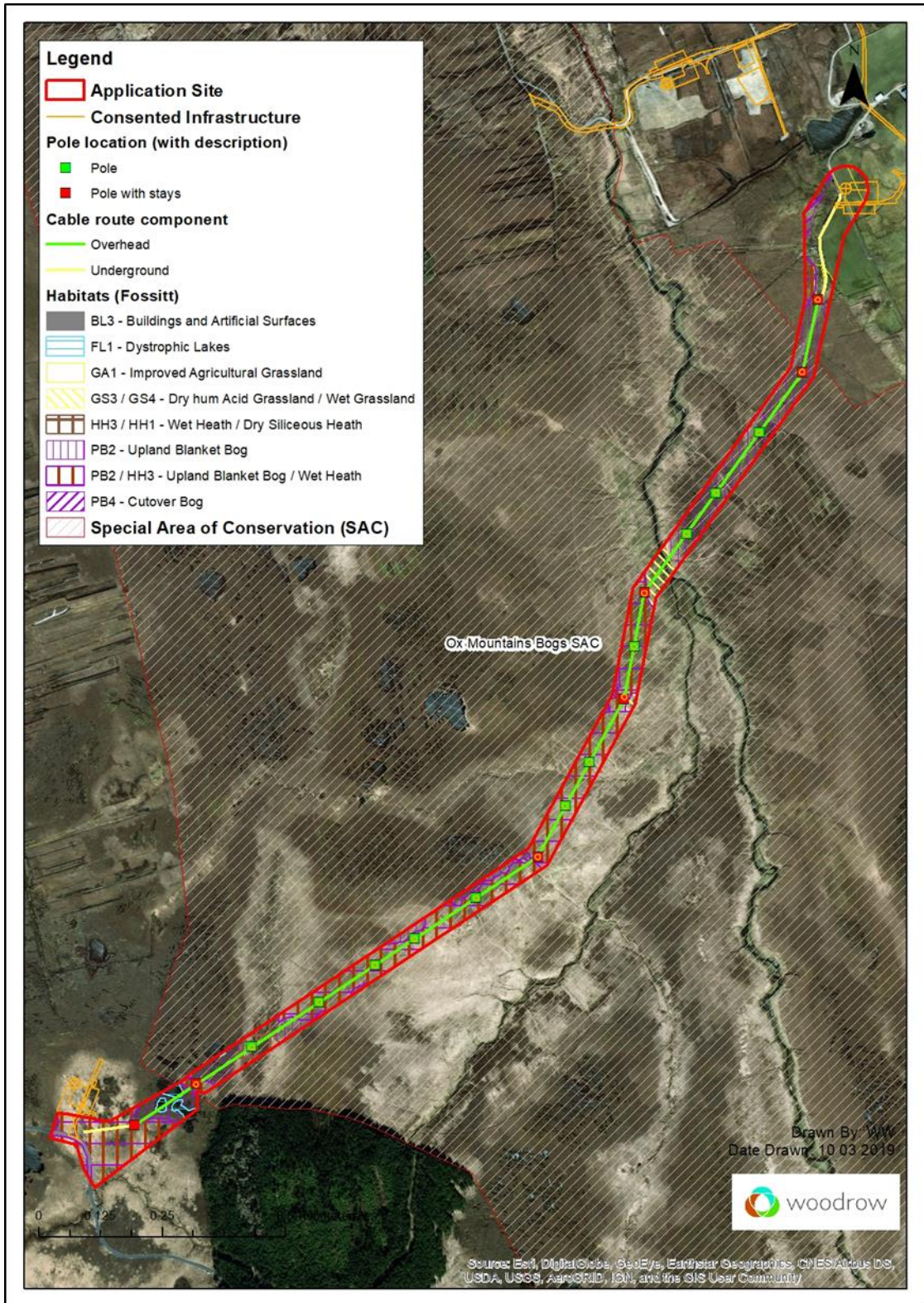


Figure 1-1: Route of Proposed Electrical Connection

2 CONSTRUCTION WORKS

The construction of the electrical connection will involve the following components:

1. Installation of approximately 240m of underground cable from turbine T2 at Black Lough to the first pole. This will follow an existing farm track.
2. Installation of approximately 100m of underground cable from the control building at Cloonkeelaun to the last (southerly-most) pole. This will cross blanket bog.
3. Delivery and installation of approximately 18 wooden poles.
4. Stringing of conductors (cables) on the wooden poles and pulling through the ducting at each end.

2.1 Site Access

The Gowlan River splits the project corridor in two. Access to the site to the east of the Gowlan River will be through the Black Lough Wind Farm using existing farm tracks and roads upgraded for the wind farm. Access to the site to the west of the Gowlan River will be from the forestry / wind farm road at Cloonkeelaun.

There will be no in-stream works or machinery crossing of the Gowlan River during the construction of the electrical connection.

2.2 Plant & Equipment

An indicative list of the main plant and equipment to be used for the construction of the electrical connection is set out in Table 2-1.

Table 2-1: Indicative List of Main Plant & Equipment to be Used

Plant & Equipment
2 No. 13-tonne low ground pressure, wide-track excavators (bogmaster)—see Plate 2-1
1 No. Argocat, low ground pressure vehicle with rubber tracks (if required) —see Plate 2-2
Cable drum carrier—see Plate 2-3
Cable Winch / Rope Puller—see Plate 2-4
Cable rollers (mounted on pole cross-arms)-see Plate 2-5
Various tools for connecting cables and removing the rollers



Plate 2-1: Wide-Track Excavator (Bog Master)



Plate 2-2: Argocat, Low Ground Pressure Vehicle with Rubber Tracks



Plate 2-3: Cable Drum Carrier



Plate 2-4: Typical Cable Winch / Rope Puller

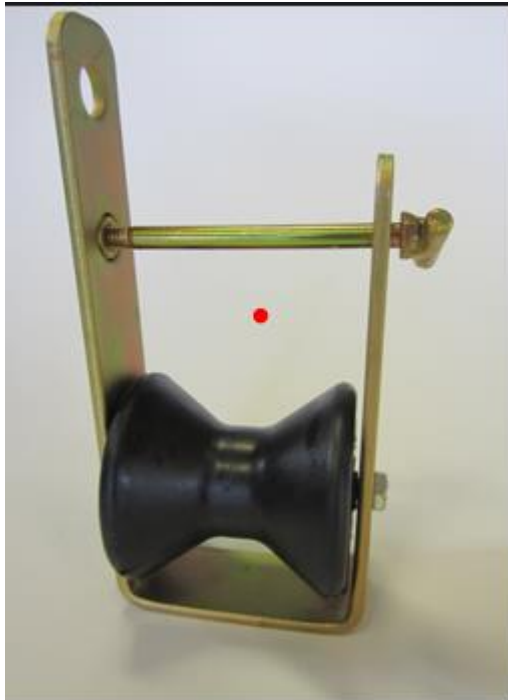


Plate 2-5: Cable Rollers

2.3 Construction of Overhead Line

The construction of the overhead line is summarized as follows:

1. The craneage hardstand at turbine T2 will be used as the main staging area for plant and equipment at Black Lough. A second staging area at the T17 hardstand at Cloonkeelaun will also be used.
2. Surveyors will walk the line route and peg each pole position.
3. Peat depth at each pole location will be probed and ground conditions noted.
4. The working corridor will be marked on the ground by the ECoW using timber post & rope and appropriate signage.
5. Once delivered to the hardstand at T2, the poles will be assembled with cross-arms, rollers, insulators and sleepers. Sleepers will be assembled to suit the ground conditions at each location – poles will be specific to each location to maximise the pre-assembly on the hardstand and minimise works along the route.
6. A helicopter will then deliver the assembled poles, stays and sleepers to each specific location. This will be completed in one day.
7. A low ground-pressure excavator (with split bucket) will enter from the Cloonkeelaun side carrying two bog mats. Bog mats will be used where required for accessing pole locations.
8. Working from the southwestern end of the overhead line, the excavator will dig each hole for poles and temporary store excavated material on bog mats.
9. The excavator will then place pole into the hole and held by two general operatives (GOs) while the excavator backfills the hole. Material will be returned into the hole in reverse order – tills first, followed by catotelm peat then acrotelm peat. The excavator will then move to next pole along the delineated corridor, until it has erected all the poles on the western side of the Gowlan River.
10. At the two stay positions, (for pole locations requiring stays), the excavator will dig and store material on bog mats and then place timber stay in the hole and backfill.
11. The GOs will pull a rope through each of the three rollers mounted on cross arms as they progress. This excavator will remain at the pole nearest the western bank of the Gowlan River until needed for carrying out rollers.

12. A second low ground-pressure excavator will enter the site from the Black Lough side and continue erecting poles and progressively pulling ropes until all the poles are erected. At this stage, three ropes will be strung through the rollers of each pole along the entire overhead route.
13. The ropes will be attached to the end of the cables, which will then be pulled from one end of the line to the other – see Plate 2-4 for cable winch/rope puller. The cable will be mounted on a cable drum carrier, which will be staged on hardstanding outside the SAC.
14. When the three cables are pulled, a GO will walk the line climbing poles, removing rollers and attaching each conductor to the insulators.
15. The rollers will be collected and carried by excavator as it exists the site towards Cloonkeelaun.

It is anticipated that the poles can be erected in 1 or 2 days, with a further 2 or 3 days needed to pull the cable and transfer the cable from the rollers to insulators.

2.4 Construction of Underground Sections

The underground section at the northeastern end of the connection is approximately 240m long. It follows the alignment of an existing farm track (refer to Plate 2-6) and is outside the SAC.



Plate 2-6: Farm Track in Black Lough – Underground Section of Connection

There are no roadside drains along this farm track where the underground cable is being constructed. There is one culvert under the track along the underground route. The underground section will be constructed as follows:

1. An excavator will be used to dig a trench approximately 1.2m deep and 04.m wide along one side of the farm track. The trenching will commence near the foundation of T2 where the cables will enter the turbine structure.
2. Peat / topsoil and subsoil will be kept separate for reuse in backfill and ground restoration.
3. The trenching, installation of ducting, backfilling and restoration will be carried out on an on-going basis.
4. Once the trench has advanced approximately 20m, ducting, earthing and warning tape/tiles will be installed. Excavated material will be reused to backfill the trench.
5. The trench will continue to the first pole at the Black Lough end of the overhead line.
6. The trenching and installation of ducting will take one to two days to complete.

The underground section at the southwestern end of the connection is approximately 100m long. It crosses blanket bog and is outside the SAC.

1. A wide-track excavator will be used to dig a trench approximately 1.2m deep and 04.m wide. The peat depth is greater than 1.2m along the entire section.

2. Vegetated turves (acrotelm) will be removed to a depth of approximately 500mm and placed to the side of the works area. These turves will be kept whole and in good condition for reuse in restoration of the trench.
3. The catotelm peat will be stored separately for reuse in backfill.
4. The trenching will commence near the location of the control building.
5. The trenching, installation of ducting, backfilling and restoration will be carried out on an on-going basis.
6. Once the trench has advanced approximately 20m, ducting, earthing and warning tape/tiles will be installed. Excavated material will be reused to backfill the trench.
7. The trench will continue to the first pole at the Cloonkeelaun end of the overhead line.
8. The trenching and installation of ducting will take one day to complete.

Once the cables are strung on the poles, each end will be pulled through the ducting of the underground sections; one end terminated in T2 and the other terminated in the control building.

3 MITIGATION MEASURES

Measures to be put in place for the overhead line construction include:

1. All contractors will be given a comprehensive toolbox talk by the ECoW on the sensitive ecological receptors in the area and the use of Best Practice work methods during construction.
2. All materials needed for pole installation and stringing will be delivered to each pole site by helicopter, including assembled poles with cross arms, stays and rollers fitted.
3. All works, and access will be limited to a delineated working corridor within the site. This will be a maximum of 6m wide between pole locations; of maximum dimensions 10m x 10m at pole locations; and of maximum dimensions 5m x 5m at stay locations. This working corridor will be clearly marked out with stakes and rope with signage indicating no access beyond the corridor. This corridor has been mapped as part of the NIS and any amendments will be agreed with the Planning Authority and NPWS in advance of works. The route mapped will be adhered to by workers and maps will be within all machinery entering the site.
4. Any concerns over potential impacts on habitats and or water quality will result in the works being suspended and additional control measures put in place. Such measures may include silt fences / traps and curtains to protect downstream environments or a temporary delay in works during adverse weather conditions. Any potential impacts on habitats will have additional controls such as offsetting of machinery corridors (within the overall working corridor) or temporary delay in works during adverse weather conditions if rutting of peat habitats is occurring. Work will not continue until the ECoW is satisfied that there is no pollution risk or damage to sensitive habitats.
5. Plant machinery must be in good working order and must be checked for any fuel or oil leaks or drips every day prior to the commencement of works.
6. Any pollution incident will be immediately reported to the site manager and the on-site ECoW and the Emergency Spill Response protocol for the site will be followed.
7. The excavator used on the western side of the Gowlan River will track in and out only once. This will avoid rutting. An argocat, low ground pressure vehicle with rubber tracks will be used if necessary to transport equipment into/from the site.
8. Refuelling of machinery will be carried out without the need for machinery to be tracking out of the bog, but while avoiding any potential impact on sensitive habitats and watercourses. This will minimise rutting of the surface of the bog habitat if movements are reduced. If required, machinery can be refuelled at pole locations using small containers – jerry cans. These containers can dispense fuel in a controlled and safe manner. However, refuelling will still not be permitted within 50m of the watercourse. Fuel containers will be transported to site using a low pressure argocat rubber tracked vehicle which will reduce the impact on bog habitats. Spill-kits and hydrocarbon nappies will always be onsite in the event of a fuel spill. It is however expected that the excavator can complete the pole installation without the need for refuelling.
9. The excavator will be left secured onsite at the end of each day thus reducing travelling on bog habitats. The machine will always be left outside of the watercourse buffer zone in the event of a fuel spill. A hydrocarbon nappy will be deployed at the end of each day on the underneath of the excavator to prevent any hydrocarbon leaks or hydraulic fluids from escaping to the environment whilst left unattended.
10. The Gowlan River will not be crossed by any type of machinery or vehicles. The pilot ropes will be taken across the river by hand or thrown. The Gowlan River is approximately 4-5m wide at the crossing point and so the pilot rope can be manually handled across the river. A buffer zone of 50m for this river will ensure no machinery can come into this exclusion zone.

Additional measures to be put in place for the underground sections include:

1. Peat will be used as backfill in the trenches, so the trenches don't act as preferential pathways for water movement. Bedding sand will not be used.
2. Areas stripped of vegetation will be kept to a minimum, thereby reducing the areas of soil exposed to erosion.
3. Trenching works will be suspended in periods of heavy rainfall. In this regard, weather forecasts will be monitored and during Met Eireann orange alerts¹, excavations will be suspended.
4. Materials excavated from the trenches will be reused as backfill.

¹ Orange Weather Alert for Rainfall = 50 – 70mm in 24 hours, 40 – 50mm in 12 hours; or 30 – 40mm in 6 hours.

APPENDIX 3-1
LANDSCAPE & VISUAL ASSESSMENT BOOKLET

APPENDIX 5-1

NOISE MONITORING EQUIPMENT – CALIBRATION CERTIFICATES

CERTIFICATE OF CALIBRATION

ISSUED BY Gracey & Associates BSI CERTIFICATE FS 25913
DATE OF ISSUE 19 April 2016 CERTIFICATE NUMBER 2016-0329
DATE OF CALIBRATION 25 February 2016
CALIBRATION INTERVAL 12 months PAGE 1 OF 2



Gracey & Associates
Barn Court Shelton Road
Upper Dean PE28 0NQ
Tel: 01234 708835
Fax: 01234 252332
www.gracey.com

TEST ENGINEER APPROVING SIGNATORY
Jamie Bishop Greg Rice

Equipment **B&K 4231, s/n: 2010166**
Description Calibrator - Acoustic - Class 1, Bruel & Kjaer UK Limited
Customer Gracey & Associates

Standards
BS EN 60942 Class 1

Conditions
Atmospheric Pressure 101.0 kPa
Temperature 20.3 °C
Relative Humidity 35.0 %

Calibration Data

Output Level 93.93 dB
Frequency 999.85 Hz

Calibration Reference Sources

Equipment	S/N	Last Cal	Equipment	S/N	Last Cal
B&K 4134 L	1935995	12-Mar-15	Druck DPI 141	479	29-Oct-15
HP 34401	3146A16728	02-Nov-15	Nor 1253	22456	12-Mar-15
Stanford DS36	33213	02-Nov-15	Vaisala HMP23	S2430007	04-Nov-15

Notes

We certify that the above product was duly tested and found to be within the specification at the points measured (except where indicated). Measurements are traceable to UKAS reference sources from the UK National Physical Laboratory. Where no national or international standards exist, traceability is to standards maintained by the manufacturer. Our Quality Management System has been assessed to comply with BS EN ISO 9001:2008 - BSI Certificate number FS 25913. Tests were carried out in environmental conditions controlled to the extent appropriate to the instrument's specification. All relevant test certificates are available for inspection.

The uncertainties are for a confidence probability of not less than 95%.

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Sound Calibrator Certificate



Calibrator: Bruel and Kjaer 4231

Serial no: 2010166

Level: 93.93 dB

Frequency: 999.85 Hz

The stated level is valid at reference conditions.

Frequency stability: 0.00 %

Measured according to IEC 60942.

The stated level is relative to 20 μ Pa.

All results quoted are directly traceable to the National Physical Laboratory, London with a calculated uncertainty less than 0.10 dB (2 \times sd).

Reference conditions:

Pressure: 101.325 kPa

Temperature: 23.0 $^{\circ}$ C

Relative humidity: 50 %RH

Measurement conditions:

Pressure: 101.02 kPa

Temperature: 20.3 $^{\circ}$ C

Relative humidity: 35 % RH

Date: 25/02/2016

Signature:

Sound Calibrator Certificate



Calibrator: Bruel and Kjaer 4231

Serial no: 2010166

Level: 93.93 dB

Frequency: 999.85 Hz

The stated level is valid at reference conditions.

Frequency stability: 0.00 %

Measured according to IEC 60942.

The stated level is relative to 20 μ Pa.

All results quoted are directly traceable to the National Physical Laboratory, London with a calculated uncertainty less than 0.10 dB (2 \times sd).

Reference conditions:

Pressure: 101.325 kPa

Temperature: 23.0 $^{\circ}$ C

Relative humidity: 50 %RH

Measurement conditions:

Pressure: 101.02 kPa

Temperature: 20.3 $^{\circ}$ C

Relative humidity: 35 % RH

Date: 25/02/2016

Signature:

Comment:

CERTIFICATE OF CALIBRATION

ISSUED BY Gracey & Associates BSI CERTIFICATE FS 25913
DATE OF ISSUE 05 February 2016 CERTIFICATE NUMBER 2015-0678
DATE OF CALIBRATION 18 January 2016
CALIBRATION INTERVAL 12 months PAGE 1 OF 1



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TEST ENGINEER APPROVING SIGNATORY
Jamie Bishop Greg Rice

Equipment **B&K 2250, s/n: 2506361**
Description Hand Held Analyser, Bruel & Kjaer UK Limited
Customer Gracey & Associates

Standards
BS EN 60651 Class 1
BS EN 60804 Class 1

Conditions
Atmospheric Pressure 100.7 kPa
Temperature 20.1 °C
Relative Humidity 35.0 %

Calibration Reference Sources

Equipment	S/N	Last Cal	Equipment	S/N	Last Cal
Druck DPI 141	479	29-Oct-15	HP 34401	3146A16728	02-Nov-15
Vaisala HMP23	S2430007	04-Nov-15			

Notes

We certify that the above product was duly tested and found to be within the specification at the points measured (except where indicated). Measurements are traceable to UKAS reference sources from the UK National Physical Laboratory. Where no national or international standards exist, traceability is to standards maintained by the manufacturer. Our Quality Management System has been assessed to comply with BS EN ISO 9001:2008 - BSI Certificate number FS 25913. Tests were carried out in environmental conditions controlled to the extent appropriate to the instrument's specification. All relevant test certificates are available for inspection.

The uncertainties are for a confidence probability of not less than 95%.

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CERTIFICATE OF CALIBRATION

ISSUED BY Gracey & Associates BSI CERTIFICATE FS 25913
DATE OF ISSUE 23 June 2016 CERTIFICATE NUMBER 2016-0559
DATE OF CALIBRATION 22 June 2016
CALIBRATION INTERVAL 12 months PAGE 1 OF 1



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www.gracey.com

TEST ENGINEER APPROVING SIGNATORY
Jamie Bishop Greg Rice

Equipment **B&K 2250, s/n: 2506363**
Description Hand Held Analyser, Bruel & Kjaer UK Limited
Customer Gracey & Associates

Standards
BS EN 60651 Class 1
BS EN 60804 Class 1

Conditions
Atmospheric Pressure 101.2 kPa
Temperature 23.7 °C
Relative Humidity 48.0 %

Calibration Reference Sources

Equipment	S/N	Last Cal	Equipment	S/N	Last Cal
Druck DPI 141	479	29-Oct-15	HP 34401	3146A16728	02-Nov-15
Vaisala HMP23	S2430007	04-Nov-15			

Notes

We certify that the above product was duly tested and found to be within the specification at the points measured (except where indicated). Measurements are traceable to UKAS reference sources from the UK National Physical Laboratory. Where no national or international standards exist, traceability is to standards maintained by the manufacturer. Our Quality Management System has been assessed to comply with BS EN ISO 9001:2008 - BSI Certificate number FS 25913. Tests were carried out in environmental conditions controlled to the extent appropriate to the instrument's specification. All relevant test certificates are available for inspection.

The uncertainties are for a confidence probability of not less than 95%.

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APPENDIX 7-1
SUMMARY OF PEAT PROBE DATA

Peat Probe Depth Data

Probe ID	Easting	Northing	Peat Depth (m)
P1	537565	823894	2.9
P2	537560	823880	2.3
P3	537575	823862	1.5
P4	537586	823856	1.0
P5	537578	823847	1.0
P6	537570	823846	0.8
P7	537572	823836	1.0
P8	537568	823817	1.0
P9	537580	823815	1.2
P10	537599	823816	1.2
P11	537600	823828	1.3
P12	537586	823833	1.0
P13	537574	823812	1.2
P14	537573	823791	1.1
P15	537574	823770	1.7
P16	537570	823752	1.7
P17	537580	823747	1.3
P18	537585	823767	1.5
P19	537589	823795	1.0
P20	537590	823807	1.3
P21	537599	823737	1.1
P22	537603	823734	1.1
P23	537612	823702	1.5
P24	537612	823703	1.7
P25	537614	823692	2.0
P26	537614	823687	2.7
P27	537623	823686	2.6
P28	537619	823703	1.3
P29	537620	823707	2.7
P30	537632	823716	2.9
P31	537651	823730	3.4
P32	537674	823744	3.7
P33	537700	823761	4.0
P34	537708	823763	4.0
P35	537826	823845	2.9
P36	537858	823469	0.6
P37	537854	823493	1.8
P38	537852	823518	0.0
P39	537851	823543	2.5
P40	537842	823576	3.5
P41	537845	823622	3.6
P42	537823	823690	3.7
P43	537843	823736	3.6
P44	537872	823815	2.7
P45	537829	823837	2.1
P46	537786	823798	3.9
P47	537786	823861	3.0
P48	537795	823883	4.1
P49	537756	823878	2.3
P50	537761	823908	3.9
P51	537718	823900	3.6
P52	537735	823928	3.7
P53	537681	823926	3.5

Probe ID	Easting	Northing	Peat Depth (m)
P54	537699	823947	3.8
P55	537729	823983	4.2
P56	537960	824177	0.7
P57	537942	824117	0.6
P58	537952	824064	0.8
P59	537972	824010	0.6
P60	537953	823946	0.6
P61	537938	823896	0.6
P62	537936	823851	1.6
P63	537922	823830	0.9
P64	537938	823920	1.8
P65	538026	824043	0.9
P66	538075	824011	1.3
P67	538088	824066	0.6
P68	538149	824097	2.4
P69	538188	824086	2.5
P70	538213	824124	3.6
P71	538268	824140	3.5
P72	538284	824160	3.6
P73	538312	824188	0.9
P74	538354	824211	2.0
P75	538393	824222	1.1
P76	538415	824243	2.4
P77	538469	824275	1.1
P78	538505	824279	0.9
P79	538518	824305	1.4
P80	538562	824379	1.5
P81	538573	824409	2.1
P82	538595	824436	2.5
P83	538603	824464	1.1
P84	538616	824502	2.0
P85	538622	824498	2.0
P86	538643	824532	2.0
P87	538674	824592	1.6
P88	538692	824631	1.4
P89	538701	824674	1.6
P90	538705	824729	1.4
P91	538712	824732	1.5
P92	538716	824814	1.1
P93	538734	824840	0.3
P94	538759	824882	2.0
P95	538780	824902	river
P96	538790	824915	1.8
P97	538810	824939	2.6
P98	538820	824960	3.0
P99	538834	824971	3.1
P100	538870	825022	2.9
P101	538880	825043	2.5
P102	538888	825060	1.5
P103	538906	825065	2.1
P104	538935	825100	2.7
P105	538957	825169	2.4
P106	538967	825165	2.7
P107	538969	825206	track over stream

Probe ID	Easting	Northing	Peat Depth (m)
P108	539024	825269	1.1
P109	539054	825287	1.0
P110	539085	825434	1.5
P111	539090	825385	1.4
P112	539092	825519	culvert
P113	539103	825619	0.1
P114	539105	825609	0.1
P115	539113	825621	0.1
P116	539114	825632	0.2
P117	539114	825641	0.1
P118	539114	825651	0.5
P119	539114	825661	0.1
P120	539114	825612	0.0
P121	539123	825664	0.1
P122	539124	825623	0.1
P123	539124	825654	0.1
P124	539125	825610	0.1
P125	539125	825643	0.1
P126	539134	825662	0.2
P127	539135	825652	0.1
P128	539135	825642	0.0
P129	539114	825657	0.0
P130	539114	825607	0.0
P131	539064	825607	2.0
P132	539014	825607	2.2
P133	539014	825557	2.8
P134	539064	825557	2.8
P135	539114	825557	2.5
P136	539164	825557	0.8
P137	539164	825507	0.6
P138	539114	825507	0.4
P139	539064	825507	1.2
P140	539014	825507	1.4
P141	539014	825457	1.2
P142	539064	825457	1.2
P143	539114	825457	1.0
P144	539164	825457	0.6
P145	539164	825407	1.4
P146	539114	825407	0.7
P147	539064	825407	0.8
P148	539014	825407	1.2
P149	539014	825357	1.8
P150	539064	825357	1.5
P151	539114	825357	0.7
P152	539164	825357	1.0
P153	539114	825307	2.0
P154	539064	825307	0.8
P155	539014	825307	1.5
P156	539014	825257	1.9
P157	539064	825257	1.5
P158	539114	825257	1.7
P159	539135	825374	1.0
P160	539140	825402	1.1

