

VT/vt/2270010/8622

Sandvik Osprey
Milland Road
Neath
SA11 1NJ

17th April 2020

RE: Aluminium Sizing Facility, Red Jacket Works, Milland Road, Neath SA11 1NJ

Further to our recent Ground Investigation Report (GIR), reference 2270100, dated November 2019, Natural Resources Wales (NRW) raised concerns regarding possible risks to controlled waters from the metal concentrations identified in the soil tested in location WS1, due to the high pH level recorded in the soil.

Whilst the soil concentrations recorded in borehole WS1 were relatively low and it was considered that the high pH was unlikely to have any significant leaching effect on the metals, groundwater analysis was undertaken on a sample from borehole WS2 to confirm concentrations.

It was not possible to sample the groundwater at the location of WS1 as a monitoring standpipe was not installed in this borehole, however, borehole WS2, in which a monitoring standpipe was installed, was located in very close proximity. A site plan showing the locations of the exploratory holes is attached, Figure A1.1. A sample of the groundwater was taken on the 26th March 2020 and dispatched immediately to UKAS accredited laboratory, together with a schedule for analysis comprising a full metals suite (arsenic, boron, cadmium, chromium, hexavalent chromium, copper, lead, mercury, nickel and zinc), and pH.

It should be noted that the sampling was not undertaken directly by an IFA engineer and the sample was not collected in a HNO₃ preserved container, which is usually used for metal analysis to prevent metals adhering to the sampling container, resulting in lower concentrations. However, the sample was processed quickly and the results, which are provided in the laboratory test report attached, Figure A2.1, were significantly low. The site is situated above Secondary A and Secondary Undifferentiated aquifers. The Neath Canal is located on the north western boundary of the site and the River Neath is located 100m to the west. The concentrations for many of the metals were below the laboratory limits of detection, and all of the concentrations were below the Water Supply (Water Quality) Regulations and the freshwater Environmental Quality Standards (EQS) adopted for controlled waters risk assessment.

The results of the chemical tests and relevant screening value are summarised in the table below:

Contaminant	Units	Concentration (WS2)	EQS Freshwater ^{1,5}	Water Supply ^{4,6}
Arsenic	ug/l	1	50 ²	10
Boron	mg/l	0.107	2	1
Cadmium	ug/l	<0.2	0.45 ³	5
Chromium III	ug/l	<1	4.7 ²	50
Chromium VI	ug/l	<0.01	3.4 ²	-
Copper	ug/l	1	1 ²	2
Lead	ug/l	<1	7.2 ²	10
Mercury	ug/l	<0.1	0.07	1
Nickel	ug/l	2	20 ²	20
Selenium	ug/l	<1	-	10
Zinc	ug/l	<1	11.9 ²	5000

¹ MAC – Maximum Allowed Concentration

² AA – Average Annualised

³ Dependant on pH

⁴ For sample taken at consumers' taps

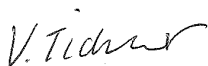
⁵ Water Supply (Water Quality) Regulations 2000, Statutory Instrument 2000 No. 3184, Crown Copyright 2000

⁶ Directive 2008/105/EC of the European Parliament and of the Council on Environmental Quality Standards in the Field of Water Policy, amending and subsequently repealing Directives 82/176/EEC, 83/513/EEC, 84/491/EEC and 86/280/EEC and amending Directive 2000/60/EC, December 2008

The subject site is to be entirely capped by the proposed building and therefore, infiltration on the site on completion of the development will be negligible. High pH levels were recorded in both the soil and the groundwater, however, given the significantly low concentrations of metals identified in the groundwater, even considering the sampling limitations, it is considered that these metals represent a low risk to controlled waters.

We trust this is satisfactory for your requirements.

Yours faithfully

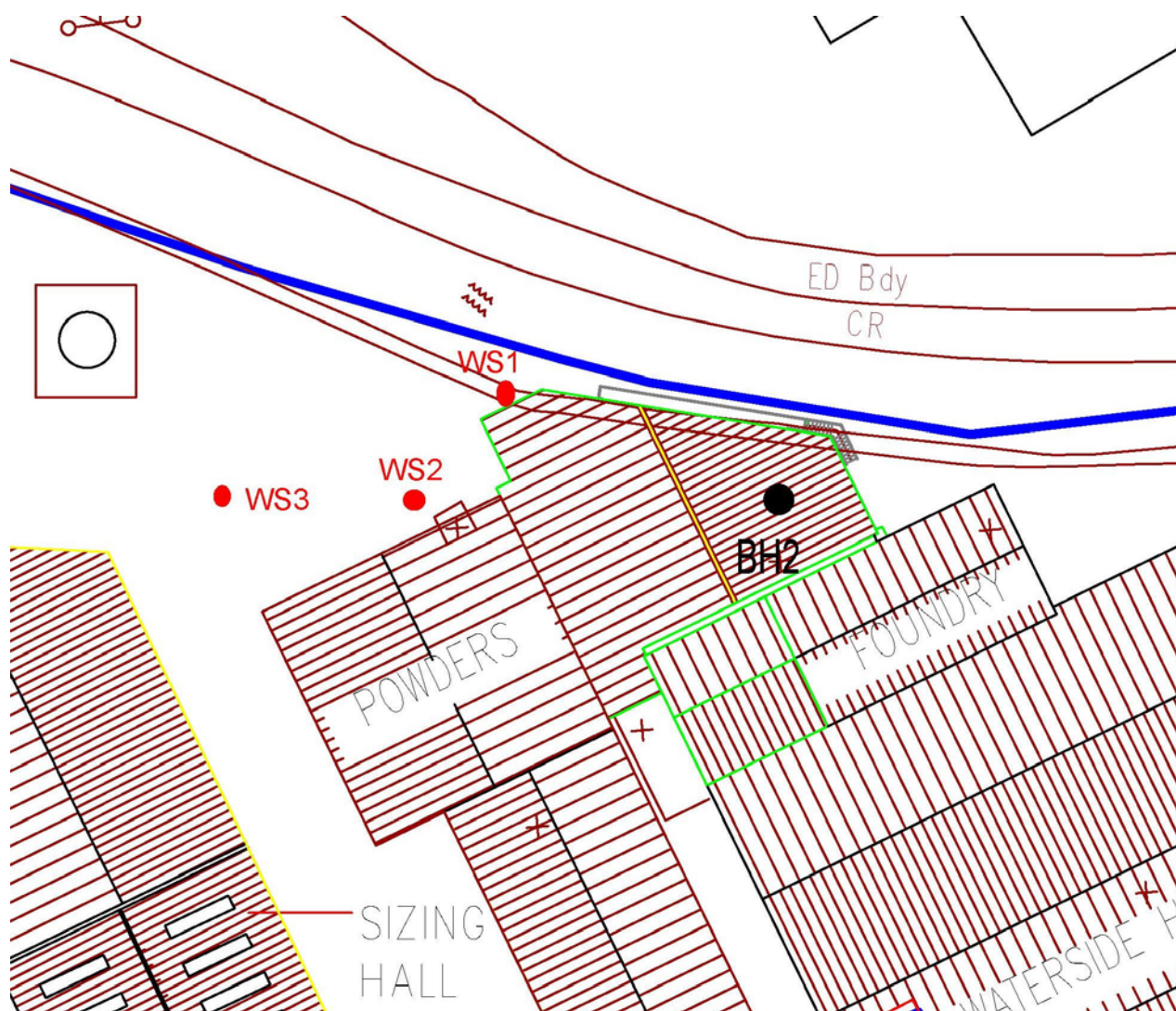


Victoria Tickner
Principal Environmental Engineer

Figure A1.1 - Site Plan
Figure A2.1 - Laboratory Test Report

Job No: 2270010

Site: Sandvik Osprey, Neath



Site Plan

**Figure
A1.1**



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 20/03133
Issue Number: 1
Date: 09 April, 2020

Client: Ian Farmer Associates (Harpenden)
1A Batford Mill
Lower Luton Road
Harpenden
Hertfordshire
UK
AL5 5BZ

Project Manager: Bill Sell/Victoria Tickner
Project Name: Sandvik Osprey, Milland Road
Project Ref: 2270010
Order No: P7522179
Date Samples Received: 27/03/20
Date Instructions Received: 02/04/20
Date Analysis Completed: 07/04/20

Prepared by:



Holly Neary-King
Administration & Client Services Supervisor

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 20/03133

Client Project Name: Sandvik Osprey, Milland Road

Client Project Ref: 2270010

Lab Sample ID	20/03133/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS2									
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-20									
Sample Type	Water - EW									
Sample Matrix Code	N/A									
pH (w) _A [#]	8.32							pH	0.01	A-T-031w
Arsenic (dissolved) _A [#]	1							µg/l	1	A-T-025w
Boron (dissolved) _A [#]	107							µg/l	10	A-T-025w
Cadmium (dissolved) _A [#]	<0.2							µg/l	0.2	A-T-025w
Copper (dissolved) _A [#]	1							µg/l	1	A-T-025w
Chromium (dissolved) _A [#]	<1							µg/l	1	A-T-025w
Chromium (hexavalent) (w) _A [#]	<0.01							mg/l	0.01	A-T-040w
Lead (dissolved) _A [#]	<1							µg/l	1	A-T-025w
Mercury (dissolved) _A [#]	<0.1							µg/l	0.1	A-T-025w
Nickel (dissolved) _A [#]	2							µg/l	1	A-T-025w
Selenium (dissolved) _A [#]	<1							µg/l	1	A-T-025w
Zinc (dissolved) _A [#]	<1							µg/l	1	A-T-025w

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25 °C / 11550µS/cm @ 20 °C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Ian Farmer Associates (Harpenden), 1A Batford Mill, Lower Luton Road,
Harpenden, Hertfordshire, UK, AL5 5BZ

Project: Sandvik Osprey, Milland Road

Clients Project No: 2270010

Project No: 20/03133

Date Received: 02/04/2020 (am)

Cool Box Temperatures (°C): 8.2

Lab Sample ID	20/03133/1
Client Sample No	
Client Sample ID/Depth	WS2
Date Sampled	26/03/20
Deviation Code	
A7 (no HNO3)	✓

Key
A7 (no HNO3) No HNO3 preserved bottle provided (dissolved metals will be deviating)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.