

Permit Number: EA/EPR/BK3638IF/V002

Operator: Hydro Aluminium Limited

Facility: Wrexham Aluminium Works

Form Number: Water1

Reporting of emissions to water (other than to sewer) and land for the period from 01/07/2017 to 30/09/2017

| Emission Point | Substance / Parameter | Emission Limit Value | Reference Period | Result | Test Method                                                                                                                                      | Sample Date and Times | Uncertainty |
|----------------|-----------------------|----------------------|------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------|
| W1             | BOD                   | 10 mg/l              | Single sample    | 3.91   | TM045: MEWAM BOD5 2nd Ed, HMSO 1988 / Method 5210B, AWWA/APHA, 20th ed, 1999; SCA Blue Book 130                                                  | 15/08/17, 08:45       | ±6.9%       |
| W1             | Suspended Solids      | 35 mg/l              | Single sample    | 12.6   | TM022: Method 2540D, AWWA/APHA, 20 <sup>th</sup> ed, 1999 / BS2690 Part 120 1981; BS EN 872                                                      | 15/08/17, 08:45       | ±3%         |
| W1             | pH                    | 6 – 9                | Single sample    | 7.66   | TM256: determination of pH in water using the GLpH Meter                                                                                         | 15/08/17, 08:45       | ±0.02%      |
| W1             | COD                   | 125 mg/l             | Single sample    | 34.0   | TM107: ISO6060:1989                                                                                                                              | 15/08/17, 08:45       | ±1.2%       |
| W1             | Ammoniacal Nitrogen   | 5 mg /l              | Single sample    | 0.261  | TM099: BS2690 Part 7, 1968 / BS6068 Part 2.11, 1984                                                                                              | 15/08/17, 08:45       | ±3.8%       |
| W1             | Aluminium             | 0.5 mg/l             | Single sample    | 0.068  | TM152: Method 3125B, AWWA/APHA, 20 <sup>th</sup> ed, 1999                                                                                        | 15/08/17, 08:45       | ±3.8%       |
| W1             | Total Hydrocarbon Oil | 2 mg/l               | Single sample    | <1     | TM235: Determination of total petroleum hydrocarbons in waters by infrared spectroscopy                                                          | 15/08/17, 08:45       | ±10.5%      |
| W1             | Temperature           | 25 °C                | Single sample    | 18     | Mercury thermometer                                                                                                                              | 15/08/17, 08:45       | Not known   |
| W1             | Flow                  | N/A                  | -                | -      | Not measured – agreed that water emission volumes can be calculated from cooling water bleed-off and casting pit emptying (CAR I/110329/BK3638). | -                     | -           |

Signed .....Joel Priest.....  
 (Authorised to sign as representative of Operator)

Date .....17/10/2017.....

Results have been corrected as per condition 3.1.4.