



Analytical Report Number: 15-78732

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        | 485218        | 485219                | 485220                  | 485221        | 485222        |
|------------------------------------------|---------------|-----------------------|-------------------------|---------------|---------------|
| Sample Reference                         | Upstream      | Downstream            | MW1                     | MW2           | MW3           |
| Sample Number                            | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 08/09/2015    | 08/09/2015            | 08/09/2015              | 08/09/2015    | 08/09/2015    |
| Time Taken                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |               |

#### General Inorganics

| pH                              | pH Units | N/A   | ISO 17025 | 8.2     | 8.2     | 10.9  | 7.6   | 7.4   |
|---------------------------------|----------|-------|-----------|---------|---------|-------|-------|-------|
| Ammonium as NH <sub>4</sub>     | µg/l     | 15    | ISO 17025 | < 15    | < 15    | 900   | 30000 | 43000 |
| Ammonium as NH <sub>4</sub>     | mg/l     | 0.015 | ISO 17025 | < 0.015 | < 0.015 | 0.90  | 30    | 43    |
| Chemical Oxygen Demand (Total)  | mg/l     | 2     | ISO 17025 | 12      | 9.0     | 100   | 88    | 100   |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1     | ISO 17025 | 1.1     | < 1.0   | < 1.0 | 41    | 29    |
| Total Suspended Solids          | mg/l     | 2     | NONE      | 6.0     | 4.0     | 1700  | 16    | 32    |

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.63   | 810    | 4.7    |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.18   | 73     | 68     |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.26   | 13     | 20     |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 31     | 25     |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 15     | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 5.1    | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.2    | 2.4    | 3.5    |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.78   | 1.6    | 2.0    |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |     |           |        |        |      |     |     |
|-------------------|------|-----|-----------|--------|--------|------|-----|-----|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 | 3.08 | 954 | 123 |
|-------------------|------|-----|-----------|--------|--------|------|-----|-----|



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| Lab Sample Number                        |       |                       |                         | 485218        | 485219        | 485220        | 485221        | 485222        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    | MW1           | MW2           | MW3           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 08/09/2015    | 08/09/2015    | 08/09/2015    | 08/09/2015    | 08/09/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |       |       |
|-----------------------|------|------|-----------|--------|--------|--------|-------|-------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.68   | 0.67   | 1.71   | 2.17  | 2.22  |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1  | < 0.1  | < 0.1  | < 0.1 | < 0.1 |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 60     | 60     | 80     | 110   | 190   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.03   | < 0.02 | 0.03  | 0.03  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  | < 5.0 | < 5.0 |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 5.0    | 4.4    | 4.9    | 5.0   | 4.7   |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 7.7    | 7.7    | 5.5    | 6.0   | 4.8   |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 1.4    | 0.5    | 4.5    | 0.6   | 0.5   |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 19     | 8.4    | 3.3    | 220   | 960   |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.05  | 0.35  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 4.0    | 3.3    | 5.3    | 19    | 51    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 0.8    | 1.1    | 23     | 18    | 36    |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.5    | 0.3    | 1.3    | 1.3   | < 0.2 |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 4.8    | 7.0    | 1.5    | 2.6   | 4.1   |

#### Monoaromatics

|              |      |   |           |       |       |       |      |      |
|--------------|------|---|-----------|-------|-------|-------|------|------|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 408  | 232  |
| Toluene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 791  | 196  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 57.9 | 12.4 |
| p & m-xylene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 595  | 163  |
| o-xylene     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 239  | 59.0 |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |    |      |     |
|------------------|------|----|------|------|------|----|------|-----|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | < 10 | < 10 | 86 | 2100 | 590 |
|------------------|------|----|------|------|------|----|------|-----|



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| Lab Sample Number                        |       |                       |                         | 485218        | 485219        | 485220        | 485221        | 485222        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    | MW1           | MW2           | MW3           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 08/09/2015    | 08/09/2015    | 08/09/2015    | 08/09/2015    | 08/09/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### VOCs

|                                       |      |   |           |       |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 408   | 232   |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 791   | 196   |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 57.9  | 12.4  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 595   | 163   |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tri bromomethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 239   | 59.0  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 29.9  | 14.8  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 68.6  | 30.2  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample

It is not possible to carry out BOD analysis on sample 485223 due to its oily nature; it has been reported as unsuitable for this analysis



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|                                          |       |                       |                         |               |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                        |       |                       |                         | 485223        |  |  |  |  |
| Sample Reference                         |       |                       |                         | MW4           |  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                             |       |                       |                         | 08/09/2015    |  |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### General Inorganics

|                                 |          |       |           |      |  |  |  |  |
|---------------------------------|----------|-------|-----------|------|--|--|--|--|
| pH                              | pH Units | N/A   | ISO 17025 | 7.4  |  |  |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15    | ISO 17025 | 760  |  |  |  |  |
| Ammonium as NH <sub>4</sub>     | mg/l     | 0.015 | ISO 17025 | 0.76 |  |  |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2     | ISO 17025 | 5300 |  |  |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1     | ISO 17025 | U/S  |  |  |  |  |
| Total Suspended Solids          | mg/l     | 2     | NONE      | 860  |  |  |  |  |

#### Speciated PAHs

|                        |      |      |           |        |  |  |  |  |
|------------------------|------|------|-----------|--------|--|--|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 3000   |  |  |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 83     |  |  |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 660    |  |  |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 340    |  |  |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 630    |  |  |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 180    |  |  |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 130    |  |  |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 150    |  |  |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 47     |  |  |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 39     |  |  |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 12     |  |  |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 8.5    |  |  |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 13     |  |  |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |

#### Total PAH

|                   |      |     |           |      |  |  |  |  |
|-------------------|------|-----|-----------|------|--|--|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 5270 |  |  |  |  |
|-------------------|------|-----|-----------|------|--|--|--|--|



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|                                          |       |                       |                         |               |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                        |       |                       |                         | 485223        |  |  |  |  |
| Sample Reference                         |       |                       |                         | MW4           |  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                             |       |                       |                         | 08/09/2015    |  |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### Heavy Metals / Metalloids

|                       |      |      |           |       |  |  |  |  |
|-----------------------|------|------|-----------|-------|--|--|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 6.13  |  |  |  |  |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1 |  |  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 130   |  |  |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.04  |  |  |  |  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0 |  |  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 5.4   |  |  |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 8.0   |  |  |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 2.3   |  |  |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 980   |  |  |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | 0.09  |  |  |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 3.5   |  |  |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.0   |  |  |  |  |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.4   |  |  |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 7.5   |  |  |  |  |

#### Monoaromatics

|              |      |   |           |       |  |  |  |  |
|--------------|------|---|-----------|-------|--|--|--|--|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Toluene      | µg/l | 1 | ISO 17025 | 7.7   |  |  |  |  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | 49.9  |  |  |  |  |
| p & m-xylene | µg/l | 1 | ISO 17025 | 58.4  |  |  |  |  |
| o-xylene     | µg/l | 1 | ISO 17025 | 32.0  |  |  |  |  |

#### Petroleum Hydrocarbons

|                  |      |    |      |       |  |  |  |  |
|------------------|------|----|------|-------|--|--|--|--|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 40000 |  |  |  |  |
|------------------|------|----|------|-------|--|--|--|--|



Analytical Report Number: 15-78732

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 485223        |                       |                         |  |  |
| Sample Reference                         |  |  |  | MW4           |                       |                         |  |  |
| Sample Number                            |  |  |  | None Supplied |                       |                         |  |  |
| Depth (m)                                |  |  |  | None Supplied |                       |                         |  |  |
| Date Sampled                             |  |  |  | 08/09/2015    |                       |                         |  |  |
| Time Taken                               |  |  |  | None Supplied |                       |                         |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### VOCs

|                                       |      |   |           |       |  |  |  |  |
|---------------------------------------|------|---|-----------|-------|--|--|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 |  |  |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 |  |  |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | 7.7   |  |  |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | 49.9  |  |  |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 58.4  |  |  |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | 32.0  |  |  |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | 11.2  |  |  |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | 6.5   |  |  |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 28.7  |  |  |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 89.4  |  |  |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample

It is not possible to carry out BOD analysis on sample 485223 due to its oily nature; it f



**Analytical Report Number : 15-78732**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX in water                           | Determination of BTEX in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                               | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water            | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                     | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                                                         | L080-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Mark Dodd**

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## **Analytical Report Number : 15-77836**

|                             |                 |                               |            |
|-----------------------------|-----------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham         | <b>Samples received on:</b>   | 27/08/2015 |
| <b>Your job number:</b>     | HC15016         | <b>Samples instructed on:</b> | 27/08/2015 |
| <b>Your order number:</b>   | HC15016/29180   | <b>Analysis completed by:</b> | 04/09/2015 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>      | 04/09/2015 |
| <b>Samples Analysed:</b>    | 7 water samples |                               |            |

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-77836

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        |       |                       |                         | 479862        | 479863        | 479864        | 479865        | 479866        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    | MW1           | MW2           | MW3           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 26/08/2015    | 26/08/2015    | 26/08/2015    | 26/08/2015    | 26/08/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### General Inorganics

|                                 |          |       |           |       |       |      |        |       |
|---------------------------------|----------|-------|-----------|-------|-------|------|--------|-------|
| pH                              | pH Units | N/A   | ISO 17025 | 8.1   | 8.1   | 10.8 | 7.7    | 7.4   |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15    | ISO 17025 | 1200  | 640   | 1800 | 220000 | 63000 |
| Ammonium as NH <sub>4</sub>     | mg/l     | 0.015 | ISO 17025 | 1.2   | 0.64  | 1.8  | 220    | 63    |
| Chemical Oxygen Demand (Total)  | mg/l     | 2     | ISO 17025 | 20    | 17    | 48   | 480    | 130   |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | 5.3  | 59     | 42    |
| Total Suspended Solids          | mg/l     | 2     | NONE      | 11    | 4.0   | 170  | 880    | 1000  |

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 2900   | 360    |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 140    | 160    |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.92   | 19     | 39     |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.67   | 63     | 87     |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 90     | 100    |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 22     | 25     |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.95   | 26     | 23     |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.69   | 22     | 16     |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |     |           |        |        |      |      |     |
|-------------------|------|-----|-----------|--------|--------|------|------|-----|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 | 3.23 | 3240 | 811 |
|-------------------|------|-----|-----------|--------|--------|------|------|-----|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |        |        |
|-----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.49   | 0.56   | 1.75   | 11.0   | 2.85   |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1  | < 0.1  | < 0.1  | 0.1    | < 0.1  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 62     | 61     | 110    | 130    | 250    |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.02   | 0.02   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  | < 5.0  | < 5.0  |
| Chromium (III)        | µg/l | 1    | NONE      | < 1.0  | < 1.0  | 2.2    | 4.0    | < 1.0  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.3    | 0.3    | 2.2    | 4.0    | 0.3    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 13     | 7.2    | 6.3    | 5.8    | 6.9    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 0.7    | 0.4    | 2.9    | 3.6    | 0.6    |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 12     | 5.7    | 3.2    | 130    | 1900   |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | 0.21   | < 0.05 | < 0.05 |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.5    | 2.0    | 4.5    | 6.2    | 2.5    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 0.9    | 0.9    | 11     | 14     | 7.9    |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.4    | 0.4    | 2.7    | 9.4    | < 0.2  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 5.0    | 5.1    | 0.9    | 3.2    | 1.8    |

#### Monoaromatics

|              |      |   |           |       |       |       |      |      |
|--------------|------|---|-----------|-------|-------|-------|------|------|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 48.0  | 4520 | 2260 |
| Toluene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 9170 | 910  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 236  | 70.2 |
| p & m-xylene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 2640 | 389  |
| o-xylene     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 1030 | 265  |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |      |      |     |
|------------------|------|----|------|------|------|------|------|-----|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | < 10 | < 10 | < 10 | 3200 | 810 |
|------------------|------|----|------|------|------|------|------|-----|

Iss No 15-77836-1

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number: 15-77836

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        |       |                       |                         | 479862        | 479863        | 479864        | 479865        | 479866        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    | MW1           | MW2           | MW3           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 26/08/2015    | 26/08/2015    | 26/08/2015    | 26/08/2015    | 26/08/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### VOCs

|                                       |      |   |           |       |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 48.0  | 4520  | 2260  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 9170  | 910   |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 236   | 70.2  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 2640  | 389   |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 1030  | 265   |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 3.9   | 2.8   |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 3.8   | 2.8   |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 4.0   | 76.1  | 41.8  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 201   | 106   |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number: 15-77836

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                    |                      |  |  |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|--|--|
| Lab Sample Number                        |  |  |  | 479867        | 479868             |                      |  |  |
| Sample Reference                         |  |  |  | MW4           | GWTP Discharge     |                      |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied      |                      |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      |                      |  |  |
| Date Sampled                             |  |  |  | 26/08/2015    | 26/08/2015         |                      |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied      |                      |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |  |  |

#### General Inorganics

|                                 |          |       |           |      |      |  |  |  |
|---------------------------------|----------|-------|-----------|------|------|--|--|--|
| pH                              | pH Units | N/A   | ISO 17025 | 7.4  | 8.2  |  |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15    | ISO 17025 | 1500 | 2100 |  |  |  |
| Ammonium as NH <sub>4</sub>     | mg/l     | 0.015 | ISO 17025 | 1.5  | 2.1  |  |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2     | ISO 17025 | 120  | 7.5  |  |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1     | ISO 17025 | 48   | 2.2  |  |  |  |
| Total Suspended Solids          | mg/l     | 2     | NONE      | 42   | 9.0  |  |  |  |

#### Speciated PAHs

|                        |      |      |           |        |        |  |  |  |
|------------------------|------|------|-----------|--------|--------|--|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 40     | < 0.01 |  |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 28     | < 0.01 |  |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 250    | < 0.01 |  |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 120    | < 0.01 |  |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 200    | < 0.01 |  |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 59     | < 0.01 |  |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 46     | < 0.01 |  |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 53     | < 0.01 |  |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 19     | < 0.01 |  |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 15     | < 0.01 |  |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 8.1    | < 0.01 |  |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 5.2    | < 0.01 |  |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 10     | < 0.01 |  |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 2.6    | < 0.01 |  |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 3.0    | < 0.01 |  |  |  |

#### Total PAH

|                   |      |     |           |     |        |  |  |  |
|-------------------|------|-----|-----------|-----|--------|--|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 852 | < 0.20 |  |  |  |
|-------------------|------|-----|-----------|-----|--------|--|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |  |  |  |
|-----------------------|------|------|-----------|--------|--------|--|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 1.54   | 2.87   |  |  |  |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1  | < 0.1  |  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 130    | 120    |  |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.08   | < 0.02 |  |  |  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  |  |  |  |
| Chromium (III)        | µg/l | 1    | NONE      | < 1.0  | < 1.0  |  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  |  |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 4.1    | 3.8    |  |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 1.0    | 0.3    |  |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 1200   | 680    |  |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 |  |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.0    | 2.9    |  |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.0    | 1.4    |  |  |  |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | < 0.2  | 2.8    |  |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 6.1    | 45     |  |  |  |

#### Monoaromatics

|              |      |   |           |       |       |  |  |  |
|--------------|------|---|-----------|-------|-------|--|--|--|
| Benzene      | µg/l | 1 | ISO 17025 | 2.7   | < 1.0 |  |  |  |
| Toluene      | µg/l | 1 | ISO 17025 | 3.1   | < 1.0 |  |  |  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene | µg/l | 1 | ISO 17025 | 8.0   | < 1.0 |  |  |  |
| o-xylene     | µg/l | 1 | ISO 17025 | 4.6   | < 1.0 |  |  |  |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |  |  |  |
|------------------|------|----|------|------|------|--|--|--|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 5100 | < 10 |  |  |  |
|------------------|------|----|------|------|------|--|--|--|



Analytical Report Number: 15-77836

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 479867        | 479868                |                         |  |  |
| Sample Reference                         |  |  |  | MW4           | GWTP Discharge        |                         |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Date Sampled                             |  |  |  | 26/08/2015    | 26/08/2015            |                         |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### VOCs

|                                       |      |   |           |       |       |  |  |  |
|---------------------------------------|------|---|-----------|-------|-------|--|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | 2.7   | < 1.0 |  |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | 3.1   | < 1.0 |  |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 8.0   | < 1.0 |  |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | 4.6   | < 1.0 |  |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 4.7   | < 1.0 |  |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 11.5  | < 1.0 |  |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample

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**Analytical Report Number : 15-77836**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX in water                           | Determination of BTEX in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                               | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Cr (III) in water                       | In-house method by calculation from total Cr and Cr VI.                                                                                                                        | In-house method by calculation                                                                                                                       | L080-PL       | W                  | NONE                 |
| Hexavalent chromium in water            | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                     | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                                                         | L080-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Mark Dodd**

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## **Analytical Report Number : 15-76844**

|                             |                 |                               |            |
|-----------------------------|-----------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham         | <b>Samples received on:</b>   | 06/08/2015 |
| <b>Your job number:</b>     | HC15016         | <b>Samples instructed on:</b> | 10/08/2015 |
| <b>Your order number:</b>   | HC15016/29180   | <b>Analysis completed by:</b> | 17/08/2015 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>      | 17/08/2015 |
| <b>Samples Analysed:</b>    | 5 water samples |                               |            |

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-76844

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        | 474247        | 474248                | 474249                  | 474250        | 474251         |
|------------------------------------------|---------------|-----------------------|-------------------------|---------------|----------------|
| Sample Reference                         | MW1           | MW2                   | MW3                     | MW4           | GWTP Discharge |
| Sample Number                            | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied  |
| Depth (m)                                | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied  |
| Date Sampled                             | 05/08/2015    | 05/08/2015            | 05/08/2015              | 05/08/2015    | 05/08/2015     |
| Time Taken                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |                |

#### General Inorganics

| pH                              | pH Units | N/A | ISO 17025 | 11.7 | 8.0    | 7.8   | 7.8  | 8.3  |
|---------------------------------|----------|-----|-----------|------|--------|-------|------|------|
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 2200 | 250000 | 88000 | 1300 | 4100 |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 41   | 460    | 220   | 470  | 3.8  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 38   | 260    | 59    | 27   | 1.0  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 9.0  | 260    | 80    | 1700 | 2.0  |

#### Speciated PAHs

|                        |      |      |           |        |      |        |      |        |
|------------------------|------|------|-----------|--------|------|--------|------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 6.7    | 7300 | 3100   | 190  | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 22     | 430  | 170    | 340  | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 29     | 72   | 32     | 600  | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 28     | 320  | 58     | 410  | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 32     | 1000 | 76     | 780  | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 5.8    | 290  | 17     | 250  | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 4.4    | 680  | 17     | 220  | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 2.9    | 520  | 13     | 240  | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | 260  | < 0.01 | 90   | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | 210  | < 0.01 | 74   | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | 200  | < 0.01 | 48   | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | 98   | < 0.01 | 23   | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | 180  | < 0.01 | 46   | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | 70   | < 0.01 | 14   | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | 14   | < 0.01 | 0.85 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | 82   | < 0.01 | 14   | < 0.01 |

#### Total PAH

|                   |      |     |           |     |       |      |      |        |
|-------------------|------|-----|-----------|-----|-------|------|------|--------|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 131 | 11800 | 3470 | 3330 | < 0.20 |
|-------------------|------|-----|-----------|-----|-------|------|------|--------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |        |        |
|-----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.92   | 10.4   | 3.01   | 2.56   | 14.7   |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 70     | 130    | 320    | 130    | 170    |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.02   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 2.1    | 2.7    | 0.3    | 0.3    | 0.3    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 7.0    | 5.7    | 3.5    | 1.8    | 1.4    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 24     | 2.2    | 0.5    | 0.5    | 1.5    |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 5.3    | 130    | 1700   | 1600   | 760    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | 0.25   | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 7.8    | 4.9    | 2.0    | 1.2    | < 0.5  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 3.0    | 16     | 9.9    | 1.1    | 1.4    |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 1.6    | 3.5    | 1.9    | < 0.5  | 64     |

#### Monoaromatics

|              |      |   |           |      |      |      |       |       |
|--------------|------|---|-----------|------|------|------|-------|-------|
| Benzene      | µg/l | 1 | ISO 17025 | 46.7 | 3400 | 2990 | 7.3   | < 1.0 |
| Toluene      | µg/l | 1 | ISO 17025 | 10.2 | 7460 | 1340 | 6.2   | < 1.0 |
| Ethylbenzene | µg/l | 1 | ISO 17025 | 3.2  | 263  | 132  | < 1.0 | < 1.0 |
| p & m-xylene | µg/l | 1 | ISO 17025 | 11.2 | 3650 | 1230 | 40.7  | < 1.0 |
| o-xylene     | µg/l | 1 | ISO 17025 | 6.3  | 1530 | 549  | 24.5  | < 1.0 |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |       |       |       |      |
|------------------|------|----|------|------|-------|-------|-------|------|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 1300 | 95000 | 44000 | 63000 | < 10 |
|------------------|------|----|------|------|-------|-------|-------|------|

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number: 15-76844

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        |       |                       |                         | 474247        | 474248        | 474249        | 474250        | 474251         |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|----------------|
| Sample Reference                         |       |                       |                         | MW1           | MW2           | MW3           | MW4           | GWTP Discharge |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied  |
| Date Sampled                             |       |                       |                         | 05/08/2015    | 05/08/2015    | 05/08/2015    | 05/08/2015    | 05/08/2015     |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |                |

#### VOCs

|                                       |      |   |           |       |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | 46.7  | 3400  | 2990  | 7.3   | < 1.0 |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | 10.2  | 7460  | 1340  | 6.2   | < 1.0 |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | 3.2   | 263   | 132   | < 1.0 | < 1.0 |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 11.2  | 3650  | 1230  | 40.7  | < 1.0 |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | 6.3   | 1530  | 549   | 24.5  | < 1.0 |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | 4.1   | 4.6   | < 1.0 | < 1.0 |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | 4.9   | 3.3   | < 1.0 | < 1.0 |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 4.1   | 94.7  | 88.8  | 23.6  | < 1.0 |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 4.8   | 273   | 264   | 69.2  | < 1.0 |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | 2.2   | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 15-76844-1

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The results included within the report are representative of the samples submitted for analysis.

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**Analytical Report Number : 15-76844**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX in water                           | Determination of BTEX in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                               | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Mark Dodd**

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## **Analytical Report Number : 15-76085**

|                             |                  |                               |            |
|-----------------------------|------------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham          | <b>Samples received on:</b>   | 27/07/2015 |
| <b>Your job number:</b>     | HC15016          | <b>Samples instructed on:</b> | 27/07/2015 |
| <b>Your order number:</b>   | HC15016/29180    | <b>Analysis completed by:</b> | 04/08/2015 |
| <b>Report Issue Number:</b> | 1                | <b>Report issued on:</b>      | 04/08/2015 |
| <b>Samples Analysed:</b>    | 10 water samples |                               |            |

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-76085

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        |       |                       |                         | 469776        | 469777        | 469778        | 469779        | 469780        | 469781        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | upstream      | downstream    | AW1           | AW2           | AW3           | AW4           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |               |

#### General Inorganics

| pH                              | pH Units | N/A | ISO 17025 | 7.7   | 7.9   | 7.6  | 7.5  | 7.4   | 7.7   |
|---------------------------------|----------|-----|-----------|-------|-------|------|------|-------|-------|
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | < 15  | 49    | 3500 | 7200 | 40000 | 61000 |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 2.5   | < 2.0 | 26   | 94   | 170   | 54    |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | < 1.0 | < 1.0 | 1.9  | 5.4  | 120   | 1.2   |
| Total Suspended Solids          | mg/l     | 2   | NONE      | < 2.0 | < 2.0 | 140  | 4100 | 560   | 140   |

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | 3.3    | 130    | 3.3    |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 7.7    | 1.2    | 28     | 0.46   |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 49     | 3.2    | 5.2    | 0.95   |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 19     | 1.3    | 8.1    | 0.43   |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.98   | 0.55   | 0.75   | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 2.4    | 0.89   | 2.6    | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 8.9    | 2.2    | 4.1    | 0.53   |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 6.2    | 1.8    | 3.0    | 0.61   |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.7    | < 0.01 | 1.1    | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.3    | < 0.01 | 0.81   | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.91   | < 0.01 | 0.72   | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.67   | < 0.01 | 0.42   | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.83   | < 0.01 | 0.62   | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |     |           |        |        |      |      |     |      |
|-------------------|------|-----|-----------|--------|--------|------|------|-----|------|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 | 99.6 | 14.4 | 190 | 6.26 |
|-------------------|------|-----|-----------|--------|--------|------|------|-----|------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |      |        |       |      |        |
|-----------------------|------|------|-----------|--------|------|--------|-------|------|--------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 1.04   | 0.63 | 1.10   | 1.22  | 4.26 | 2.76   |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 64     | 63   | 160    | 100   | 110  | 140    |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.04   | 0.04 | 0.02   | 0.06  | 0.04 | < 0.02 |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.4    | 0.3  | 0.6    | < 0.2 | 0.8  | 1.2    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 5.7    | 8.6  | 6.1    | 7.2   | 4.7  | 14     |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 0.4    | 0.9  | 1.3    | 0.4   | 1.1  | 1.8    |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 1.6    | 1.5  | 1100   | 490   | 470  | 750    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | 0.39 | < 0.05 | 0.11  | 0.66 | 0.20   |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 1.3    | 1.5  | 1.4    | 4.8   | 9.7  | 1.4    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | < 0.6  | 0.9  | 0.7    | 3.4   | 23   | 2.0    |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 3.4    | 4.6  | 39     | 6.4   | 10   | 92     |

#### Monoaromatics

|                                    |      |   |           |       |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 792   | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 467   | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 14.1  | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 123   | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 58.1  | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                  |      |    |      |     |      |      |    |     |      |
|------------------|------|----|------|-----|------|------|----|-----|------|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 310 | < 10 | 1200 | 14 | 780 | < 10 |
|------------------|------|----|------|-----|------|------|----|-----|------|



Analytical Report Number: 15-76085

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number | 469776        | 469777        | 469778        | 469779        | 469780        | 469781        |
|-------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference  | upstream      | downstream    | AW1           | AW2           | AW3           | AW4           |
| Sample Number     | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled      | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    |
| Time Taken        | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |

| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |  |  |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|--|--|--|--|--|--|
|------------------------------------------|-------|-----------------------|-------------------------|--|--|--|--|--|--|

#### VOCs

|                                       |      |   |           |       |       |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 792   | < 1.0 |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 467   | < 1.0 |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 14.1  | < 1.0 |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 123   | < 1.0 |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 58.1  | < 1.0 |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 16.4  | < 1.0 |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 15-76085-1

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number: 15-76085

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |               |                       |                         |               |
|------------------------------------------|---------------|-----------------------|-------------------------|---------------|
| Lab Sample Number                        | 469782        | 469783                | 469784                  | 469785        |
| Sample Reference                         | MW1           | MW2                   | MW3                     | MW4           |
| Sample Number                            | None Supplied | None Supplied         | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied         | None Supplied           | None Supplied |
| Date Sampled                             | 23/07/2015    | 23/07/2015            | 23/07/2015              | 23/07/2015    |
| Time Taken                               | None Supplied | None Supplied         | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |

#### General Inorganics

|                                 |          |     |           |      |       |        |      |
|---------------------------------|----------|-----|-----------|------|-------|--------|------|
| pH                              | pH Units | N/A | ISO 17025 | 11.6 | 8.0   | 7.7    | 7.7  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 2900 | 83000 | 130000 | 2400 |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 77   | 230   | 400    | 12   |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 4.0  | 190   | 330    | 4.2  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 64   | 160   | 160    | 4.0  |

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 87     | 490    | 530    | 2.2    |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 30     | 12     | 27     | 11     |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 31     | 2.0    | 4.3    | 23     |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 24     | 4.1    | 8.7    | 13     |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 28     | 4.2    | 12     | 9.9    |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 4.7    | 0.99   | 2.9    | 3.6    |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 5.2    | 0.65   | 1.9    | 2.7    |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 3.8    | 0.41   | 1.3    | 2.6    |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 0.99   | < 0.01 | < 0.01 | 0.67   |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 0.88   | < 0.01 | < 0.01 | 0.53   |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |     |           |     |     |     |      |
|-------------------|------|-----|-----------|-----|-----|-----|------|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 215 | 515 | 585 | 68.9 |
|-------------------|------|-----|-----------|-----|-----|-----|------|

#### Heavy Metals / Metalloids

|                       |      |      |           |      |      |        |       |
|-----------------------|------|------|-----------|------|------|--------|-------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 2.88 | 5.94 | 4.12   | 0.48  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 38   | 64   | 390    | 130   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.06 | 0.04 | < 0.02 | 0.08  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 2.4  | 1.5  | 0.5    | < 0.2 |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 15   | 4.6  | 2.8    | 5.2   |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 15   | 1.0  | 0.4    | 0.3   |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 11   | 130  | 2100   | 1700  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | 0.77 | 0.66 | 0.74   | 0.16  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 12   | 8.5  | 2.2    | 1.2   |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 6.1  | 27   | 17     | 0.9   |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 7.0  | 3.3  | 2.1    | 4.9   |

#### Monoaromatics

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | 49.4  | 1480  | 3180  | 6.3   |
| Toluene                            | µg/l | 1 | ISO 17025 | 68.5  | 3570  | 1950  | 2.3   |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | 16.5  | 177   | 127   | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | 35.4  | 1880  | 1380  | 4.3   |
| o-xylene                           | µg/l | 1 | ISO 17025 | 17.5  | 821   | 591   | 4.6   |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |      |     |
|------------------|------|----|------|------|------|------|-----|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 1200 | 1300 | 2100 | 600 |
|------------------|------|----|------|------|------|------|-----|



Analytical Report Number: 15-76085

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                   |               |               |               |               |
|-------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number | 469782        | 469783        | 469784        | 469785        |
| Sample Reference  | MW1           | MW2           | MW3           | MW4           |
| Sample Number     | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled      | 23/07/2015    | 23/07/2015    | 23/07/2015    | 23/07/2015    |
| Time Taken        | None Supplied | None Supplied | None Supplied | None Supplied |

| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|--|--|--|--|
|------------------------------------------|-------|-----------------------|-------------------------|--|--|--|--|

#### VOCs

|                                       |      |   |           |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | 49.4  | 1480  | 3180  | 6.3   |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | 68.5  | 3570  | 1950  | 2.3   |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | 16.5  | 177   | 127   | < 1.0 |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 35.4  | 1880  | 1380  | 4.3   |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | 17.5  | 821   | 591   | 4.6   |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | 3.3   | 4.4   | < 1.0 |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 3.3   | 88.4  | 83.5  | 1.5   |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 9.6   | 218   | 235   | 3.6   |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 15-76085**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water                  | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                      | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Mark Dodd**

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## **Analytical Report Number : 15-75457**

|                             |                 |                               |            |
|-----------------------------|-----------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham         | <b>Samples received on:</b>   | 16/07/2015 |
| <b>Your job number:</b>     | HC15016         | <b>Samples instructed on:</b> | 16/07/2015 |
| <b>Your order number:</b>   | HC15016/29180   | <b>Analysis completed by:</b> | 24/07/2015 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>      | 24/07/2015 |
| <b>Samples Analysed:</b>    | 2 water samples |                               |            |

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Analytical Report Number: 15-75457

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |       |                       |                         |               |               |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Lab Sample Number                        |       |                       |                         | 465806        | 465807        |  |  |  |
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                             |       |                       |                         | 13/07/2015    | 13/07/2015    |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |

#### General Inorganics

|                                 |          |     |           |     |       |  |  |  |
|---------------------------------|----------|-----|-----------|-----|-------|--|--|--|
| pH                              | pH Units | N/A | ISO 17025 | 7.2 | 7.7   |  |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 30  | 25    |  |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 26  | 22    |  |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 1.2 | 1.0   |  |  |  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 3.0 | < 2.0 |  |  |  |

#### Speciated PAHs

|                        |      |      |           |        |        |  |  |  |
|------------------------|------|------|-----------|--------|--------|--|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |

#### Total PAH

|                   |      |     |           |        |        |  |  |  |
|-------------------|------|-----|-----------|--------|--------|--|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 |  |  |  |
|-------------------|------|-----|-----------|--------|--------|--|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |  |  |  |
|-----------------------|------|------|-----------|--------|--------|--|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.43   | 0.40   |  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 59     | 58     |  |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.02   | 0.03   |  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.4    | 0.3    |  |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 11     | 9.8    |  |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 0.7    | 0.9    |  |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 3.9    | 2.7    |  |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 |  |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 3.1    | 2.1    |  |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.0    | 0.9    |  |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 12     | 8.5    |  |  |  |

#### Monoaromatics

|              |      |   |           |       |       |  |  |  |
|--------------|------|---|-----------|-------|-------|--|--|--|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Toluene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| o-xylene     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |  |  |  |
|------------------|------|----|------|------|------|--|--|--|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
|------------------|------|----|------|------|------|--|--|--|



Analytical Report Number: 15-75457

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |       |                       |                         |               |               |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Lab Sample Number                        |       |                       |                         | 465806        | 465807        |  |  |  |
| Sample Reference                         |       |                       |                         | Upstream      | Downstream    |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                             |       |                       |                         | 13/07/2015    | 13/07/2015    |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |

#### VOCs

|                                       |      |   |           |       |       |  |  |  |
|---------------------------------------|------|---|-----------|-------|-------|--|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 15-75457**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX in water                           | Determination of BTEX in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                               | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Mark Dodd**

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## **Analytical Report Number : 15-74555**

|                             |                 |                               |            |
|-----------------------------|-----------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham         | <b>Samples received on:</b>   | 02/07/2015 |
| <b>Your job number:</b>     | HC15016         | <b>Samples instructed on:</b> | 02/07/2015 |
| <b>Your order number:</b>   | HC15016/29180   | <b>Analysis completed by:</b> | 10/07/2015 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>      | 10/07/2015 |
| <b>Samples Analysed:</b>    | 2 water samples |                               |            |

**Signed:**

Dr Irma Doyle  
Assistant Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 - 711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-74555

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |       |                       |                         |               |               |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Lab Sample Number                        |       |                       |                         | 460741        | 460742        |  |  |  |
| Sample Reference                         |       |                       |                         | Upstream 4    | Downstream 4  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                             |       |                       |                         | 01/06/2015    | 01/06/2015    |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |

#### General Inorganics

|                                 |          |     |           |       |      |  |  |  |
|---------------------------------|----------|-----|-----------|-------|------|--|--|--|
| pH                              | pH Units | N/A | ISO 17025 | 7.9   | 7.9  |  |  |  |
| Total Cyanide                   | µg/l     | 10  | ISO 17025 | < 10  | < 10 |  |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 46    | 43   |  |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 5.4   | 5.3  |  |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | < 1.0 | 1.5  |  |  |  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 2.0   | 2.0  |  |  |  |

#### Speciated PAHs

|                        |      |      |           |        |        |  |  |  |
|------------------------|------|------|-----------|--------|--------|--|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |  |  |  |

#### Total PAH

|                   |      |     |           |        |        |  |  |  |
|-------------------|------|-----|-----------|--------|--------|--|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 |  |  |  |
|-------------------|------|-----|-----------|--------|--------|--|--|--|



Analytical Report Number: 15-74555

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 460741        | 460742                |                         |  |  |
| Sample Reference                         |  |  |  | Upstream 4    | Downstream 4          |                         |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Date Sampled                             |  |  |  | 01/06/2015    | 01/06/2015            |                         |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |  |  |  |
|-----------------------|------|------|-----------|--------|--------|--|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.57   | 0.43   |  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 72     | 71     |  |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 |  |  |  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  |  |  |  |
| Chromium (III)        | µg/l | 1    | NONE      | < 1.0  | < 1.0  |  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.3    | 1.0    |  |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 4.9    | 4.6    |  |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  |  |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 10     | 8.5    |  |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 |  |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 3.3    | 3.8    |  |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.2    | 0.8    |  |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | < 0.5  | < 0.5  |  |  |  |

#### Monoaromatics

|                                    |      |   |           |       |       |  |  |  |
|------------------------------------|------|---|-----------|-------|-------|--|--|--|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |

#### Petroleum Hydrocarbons

|                                       |      |    |      |      |      |  |  |  |
|---------------------------------------|------|----|------|------|------|--|--|--|
| TPH-CWG - Aliphatic >C5 - C6          | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C6 - C8          | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C8 - C10         | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C10 - C12        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C12 - C16        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C16 - C21        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aliphatic >C21 - C35        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| <b>TPH-CWG - Aliphatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |

|                                      |      |    |      |      |      |  |  |  |
|--------------------------------------|------|----|------|------|------|--|--|--|
| TPH-CWG - Aromatic >C5 - C7          | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C7 - C8          | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C8 - C10         | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C10 - C12        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C12 - C16        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C16 - C21        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| TPH-CWG - Aromatic >C21 - C35        | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |
| <b>TPH-CWG - Aromatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 | < 10 |  |  |  |



Analytical Report Number: 15-74555

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 460741        | 460742                |                         |  |  |
| Sample Reference                         |  |  |  | Upstream 4    | Downstream 4          |                         |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Date Sampled                             |  |  |  | 01/06/2015    | 01/06/2015            |                         |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         |                         |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### VOCs

|                                       |      |   |           |       |       |  |  |  |
|---------------------------------------|------|---|-----------|-------|-------|--|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |  |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 15-74555**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water                  | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                      | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Cr (III) in water                       | In-house method by calculation from total Cr and Cr VI.                                                                                                                        | In-house method by calculation                                                                                                                       | L080-PL       | W                  | NONE                 |
| Hexavalent chromium in water            | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                     | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                                                         | L080-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| Total cyanide in water                  | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                          | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)                                      | L080-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                         | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                     | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Mark Dodd**

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## **Analytical Report Number : 15-74214**

|                             |                                 |                               |            |
|-----------------------------|---------------------------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham                         | <b>Samples received on:</b>   | 25/06/2015 |
| <b>Your job number:</b>     | HC15016                         | <b>Samples instructed on:</b> | 25/06/2015 |
| <b>Your order number:</b>   | HC15016/29180                   | <b>Analysis completed by:</b> | 01/07/2015 |
| <b>Report Issue Number:</b> | 1                               | <b>Report issued on:</b>      | 02/07/2015 |
| <b>Samples Analysed:</b>    | 1 soil sample - 3 water samples |                               |            |

**Signed:**

Neil Donovan  
Environmental Forensics Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-74214

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                         |       |                       |                         |               |  |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                       |       |                       |                         | 458393        |  |  |  |  |
| Sample Reference                        |       |                       |                         | Import 1      |  |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                            |       |                       |                         | 23/06/2015    |  |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |
| Stone Content                           | %     | 0.1                   | NONE                    | < 0.1         |  |  |  |  |
| Moisture Content                        | %     | N/A                   | NONE                    | 0.49          |  |  |  |  |
| Total mass of sample received           | kg    | 0.001                 | NONE                    | 0.47          |  |  |  |  |

#### General Inorganics

|                                                   |       |      |        |       |  |  |  |  |
|---------------------------------------------------|-------|------|--------|-------|--|--|--|--|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1   |  |  |  |  |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | < 0.5 |  |  |  |  |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | < 0.3 |  |  |  |  |

#### Total Phenols

|                            |       |   |        |       |  |  |  |  |
|----------------------------|-------|---|--------|-------|--|--|--|--|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
|----------------------------|-------|---|--------|-------|--|--|--|--|

#### Speciated PAHs

|                        |       |      |        |        |  |  |  |  |
|------------------------|-------|------|--------|--------|--|--|--|--|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 |  |  |  |  |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Fluorene               | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Anthracene             | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Pyrene                 | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Chrysene               | mg/kg | 0.05 | MCERTS | < 0.05 |  |  |  |  |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | < 0.10 |  |  |  |  |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 |  |  |  |  |

#### Total PAH

|                             |       |     |        |        |  |  |  |  |
|-----------------------------|-------|-----|--------|--------|--|--|--|--|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | < 1.60 |  |  |  |  |
|-----------------------------|-------|-----|--------|--------|--|--|--|--|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |  |  |  |  |
|------------------------------------|-------|------|--------|-------|--|--|--|--|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | < 1.0 |  |  |  |  |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | < 0.1 |  |  |  |  |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 0.2   |  |  |  |  |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.3   |  |  |  |  |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 |  |  |  |  |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 5.6   |  |  |  |  |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 3.4   |  |  |  |  |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 8.8   |  |  |  |  |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 91    |  |  |  |  |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 |  |  |  |  |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 3.2   |  |  |  |  |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 |  |  |  |  |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 2.9   |  |  |  |  |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 15    |  |  |  |  |



Analytical Report Number: 15-74214

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                         |       |                       |                         |               |  |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                       |       |                       |                         | 458393        |  |  |  |  |
| Sample Reference                        |       |                       |                         | Import 1      |  |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                            |       |                       |                         | 23/06/2015    |  |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### Monoaromatics

|                                    |       |   |        |       |  |  |  |  |
|------------------------------------|-------|---|--------|-------|--|--|--|--|
| Benzene                            | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
| Toluene                            | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
| Ethylbenzene                       | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
| p & m-xylene                       | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
| o-xylene                           | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 1 | MCERTS | < 1.0 |  |  |  |  |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |  |  |  |  |
|-----------------------------------------|-------|-----|--------|-------|--|--|--|--|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 |  |  |  |  |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 |  |  |  |  |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | < 8.0 |  |  |  |  |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | 13    |  |  |  |  |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 13    |  |  |  |  |

|                                        |       |     |        |       |  |  |  |  |
|----------------------------------------|-------|-----|--------|-------|--|--|--|--|
| TPH-CWG - Aromatic >EC5 - EC7          | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aromatic >EC7 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aromatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 |  |  |  |  |
| TPH-CWG - Aromatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 |  |  |  |  |
| TPH-CWG - Aromatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 |  |  |  |  |
| TPH-CWG - Aromatic >EC16 - EC21        | mg/kg | 10  | MCERTS | < 10  |  |  |  |  |
| TPH-CWG - Aromatic >EC21 - EC35        | mg/kg | 10  | MCERTS | < 10  |  |  |  |  |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | < 10  |  |  |  |  |



Analytical Report Number: 15-74214

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |               |                       |                         |  |  |
|------------------------------------------|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        | 458394        | 458395                | 458396                  |  |  |
| Sample Reference                         | Foul Sewer    | Upstream              | Downstream              |  |  |
| Sample Number                            | None Supplied | None Supplied         | None Supplied           |  |  |
| Depth (m)                                | None Supplied | None Supplied         | None Supplied           |  |  |
| Date Sampled                             | 19/06/2015    | 19/06/2015            | 19/06/2015              |  |  |
| Time Taken                               | None Supplied | None Supplied         | None Supplied           |  |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### General Inorganics

|                                 |          |     |           |      |       |      |  |  |
|---------------------------------|----------|-----|-----------|------|-------|------|--|--|
| pH                              | pH Units | N/A | ISO 17025 | 6.8  | 7.8   | 7.9  |  |  |
| Total Cyanide                   | µg/l     | 10  | ISO 17025 | 1800 | < 10  | < 10 |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 380  | < 15  | < 15 |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 1100 | 11    | 7.6  |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 68   | < 1.0 | 1.1  |  |  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 1600 | 2.0   | 3.0  |  |  |

#### Speciated PAHs

|                        |      |      |           |      |        |        |  |  |
|------------------------|------|------|-----------|------|--------|--------|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 3900 | < 0.01 | < 0.01 |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 270  | < 0.01 | < 0.01 |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 220  | < 0.01 | < 0.01 |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 290  | < 0.01 | < 0.01 |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 890  | < 0.01 | < 0.01 |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 190  | < 0.01 | < 0.01 |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 430  | < 0.01 | < 0.01 |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 320  | < 0.01 | < 0.01 |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 120  | < 0.01 | < 0.01 |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 99   | < 0.01 | < 0.01 |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 92   | < 0.01 | < 0.01 |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 38   | < 0.01 | < 0.01 |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 80   | < 0.01 | < 0.01 |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 28   | < 0.01 | < 0.01 |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 5.0  | < 0.01 | < 0.01 |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 27   | < 0.01 | < 0.01 |  |  |

#### Total PAH

|                   |      |     |           |      |        |        |  |  |
|-------------------|------|-----|-----------|------|--------|--------|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 7020 | < 0.20 | < 0.20 |  |  |
|-------------------|------|-----|-----------|------|--------|--------|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |  |  |
|-----------------------|------|------|-----------|--------|--------|--------|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 4.45   | 0.34   | 0.39   |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 43     | 63     | 63     |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.06   | 0.03   | < 0.02 |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.4    | 0.2    | 0.3    |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.6    | 4.8    | 12     |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 5.8    | 0.5    | 0.4    |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 1000   | 2.6    | 1.2    |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.3    | 1.0    | 1.1    |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.0    | 0.6    | 0.8    |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 11     | 2.1    | 4.4    |  |  |



Analytical Report Number: 15-74214

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 458394        | 458395                | 458396                  |  |  |
| Sample Reference                         |  |  |  | Foul Sewer    | Upstream              | Downstream              |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Date Sampled                             |  |  |  | 19/06/2015    | 19/06/2015            | 19/06/2015              |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### Monoaromatics

|                                    |      |   |           |       |       |       |  |  |
|------------------------------------|------|---|-----------|-------|-------|-------|--|--|
| Benzene                            | µg/l | 1 | ISO 17025 | 88.4  | < 1.0 | < 1.0 |  |  |
| Toluene                            | µg/l | 1 | ISO 17025 | 295   | < 1.0 | < 1.0 |  |  |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | 72.5  | < 1.0 | < 1.0 |  |  |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | 733   | < 1.0 | < 1.0 |  |  |
| o-xylene                           | µg/l | 1 | ISO 17025 | 308   | < 1.0 | < 1.0 |  |  |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |

#### Petroleum Hydrocarbons

|                                       |      |    |      |      |      |      |  |  |
|---------------------------------------|------|----|------|------|------|------|--|--|
| TPH-CWG - Aliphatic >C5 - C6          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C6 - C8          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C8 - C10         | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C10 - C12        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C12 - C16        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C16 - C21        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C21 - C35        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| <b>TPH-CWG - Aliphatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |

|                                      |      |    |      |       |      |      |  |  |
|--------------------------------------|------|----|------|-------|------|------|--|--|
| TPH-CWG - Aromatic >C5 - C7          | µg/l | 10 | NONE | 88    | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C7 - C8          | µg/l | 10 | NONE | 300   | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C8 - C10         | µg/l | 10 | NONE | 4500  | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C10 - C12        | µg/l | 10 | NONE | 5600  | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C12 - C16        | µg/l | 10 | NONE | 2500  | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C16 - C21        | µg/l | 10 | NONE | 3200  | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C21 - C35        | µg/l | 10 | NONE | 1000  | < 10 | < 10 |  |  |
| <b>TPH-CWG - Aromatic (C5 - C35)</b> | µg/l | 10 | NONE | 17000 | < 10 | < 10 |  |  |



Analytical Report Number: 15-74214

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 458394        | 458395                | 458396                  |  |  |
| Sample Reference                         |  |  |  | Foul Sewer    | Upstream              | Downstream              |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Date Sampled                             |  |  |  | 19/06/2015    | 19/06/2015            | 19/06/2015              |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### VOCs

|                                       |      |   |           |       |       |       |  |  |
|---------------------------------------|------|---|-----------|-------|-------|-------|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | 88.4  | < 1.0 | < 1.0 |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | 295   | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | 72.5  | < 1.0 | < 1.0 |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 733   | < 1.0 | < 1.0 |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | 71.2  | < 1.0 | < 1.0 |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | 308   | < 1.0 | < 1.0 |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | 18.5  | < 1.0 | < 1.0 |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | 8.2   | < 1.0 | < 1.0 |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 215   | < 1.0 | < 1.0 |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 502   | < 1.0 | < 1.0 |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | 20.0  | < 1.0 | < 1.0 |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |



**Analytical Report Number: 15-74214**

**Project / Site name: Wrexham**

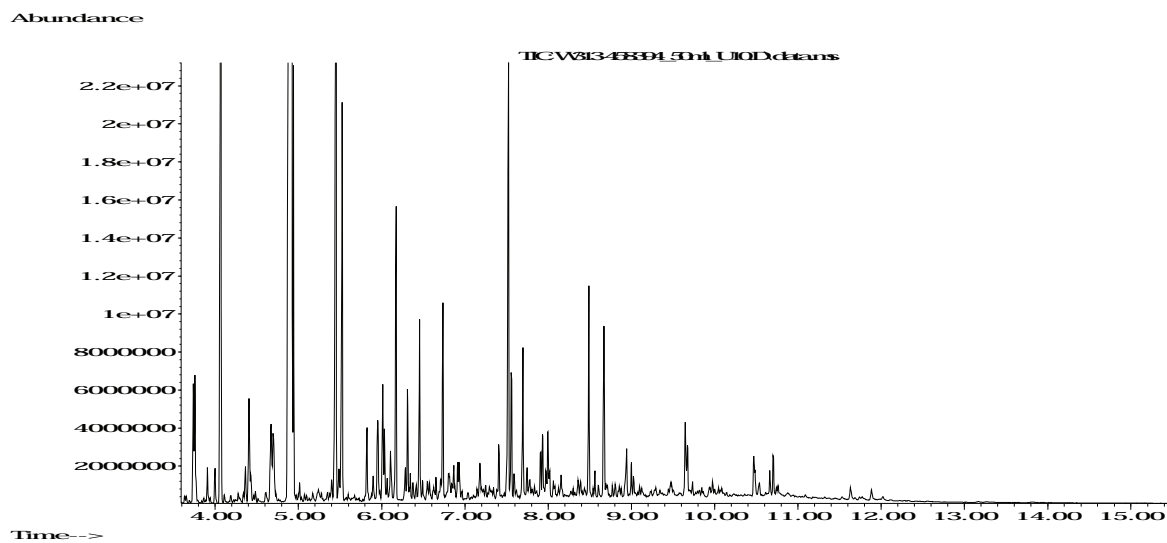
**Your Order No: HC15016/29180**

|                                                  |              |                               |                                 |               |               |               |  |  |
|--------------------------------------------------|--------------|-------------------------------|---------------------------------|---------------|---------------|---------------|--|--|
| <b>Lab Sample Number</b>                         |              |                               |                                 | 458394        | 458395        | 458396        |  |  |
| <b>Sample Reference</b>                          |              |                               |                                 | Foul Sewer    | Upstream      | Downstream    |  |  |
| <b>Sample Number</b>                             |              |                               |                                 | None Supplied | None Supplied | None Supplied |  |  |
| <b>Depth (m)</b>                                 |              |                               |                                 | None Supplied | None Supplied | None Supplied |  |  |
| <b>Date Sampled</b>                              |              |                               |                                 | 19/06/2015    | 19/06/2015    | 19/06/2015    |  |  |
| <b>Time Taken</b>                                |              |                               |                                 | None Supplied | None Supplied | None Supplied |  |  |
| <b>Analytical Parameter<br/>(Water Analysis)</b> | <b>Units</b> | <b>Limit of<br/>detection</b> | <b>Accreditation<br/>Status</b> |               |               |               |  |  |

**Miscellaneous Organics**

|            |  |     |      |              |   |   |  |  |
|------------|--|-----|------|--------------|---|---|--|--|
| Product ID |  | N/A | NONE | See Attached | - | - |  |  |
|------------|--|-----|------|--------------|---|---|--|--|

U/S = Unsuitable Sample    I/S = Insufficient Sample



The sample shows a complex range of aromatic compounds with some potential aliphatics also present. The trace is not indicative of one source e.g. petrol or diesel but most likely multiple sources i.e. petrol and diesel or similar boiling point fraction like white spirit.



**Analytical Report Number : 15-74214**

**Project / Site name: Wrexham**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m)     | Sample Description * |
|-------------------|------------------|---------------|---------------|----------------------|
| 458393            | Import 1         | None Supplied | None Supplied | Non Soil **          |

\*\* Unaccredited Matrix.



**Analytical Report Number : 15-74214**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in soil     | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | MCERTS               |
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| Boron, water soluble, in soil           | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                                         | In-house method based on Second Site Properties version 3                                                                                            | L038-PL       | D                  | MCERTS               |
| BTEX and MTBE in soil                   | Determination of BTEX in soil by headspace GC-MS.                                                                                                                              | In-house method based on USEPA8260                                                                                                                   | L073S-PL      | W                  | MCERTS               |
| BTEX and MTBE in water                  | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                      | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Hexavalent chromium in soil             | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                          | In-house method                                                                                                                                      | L080-PL       | W                  | MCERTS               |
| Metals in soil by ICP-OES               | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                                                   | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                                                                 | L038-PL       | D                  | MCERTS               |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Moisture Content                        | Moisture content, determined gravimetrically.                                                                                                                                  | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil              | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | MCERTS               |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Product ID                              | Determination against standard chromatograms.                                                                                                                                  | In-house method                                                                                                                                      |               | W                  | NONE                 |
| Speciated EPA-16 PAHs in soil           | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.                         | In-house method based on USEPA 8270                                                                                                                  | L064-PL       | D                  | MCERTS               |



**Analytical Report Number : 15-74214**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Speciated EPA-16 PAHs in water      | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L070-UK       | W                  | ISO 17025            |
| Stones content of soil              | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.                                                | In-house method based on British Standard Methods and MCERTS requirements.                                      | L019-UK/PL    | D                  | NONE                 |
| Suspended solids in water           | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | NONE                 |
| Total cyanide in soil               | Determination of total cyanide by distillation followed by colorimetry.                                                                                                    | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | MCERTS               |
| Total cyanide in water              | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| TPHCWG (Soil)                       | Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.                                                                                                  | In-house method                                                                                                 | L076-PL       | W                  | MCERTS               |
| TPHCWG (Waters)                     | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                     | In-house method based on USEPA8260                                                                              | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**



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**e:** markdodd@hydrock.com

## **Analytical Report Number : 15-73985**

Replaces Analytical Report Number : 15-73985, issue no. 1

|                             |                                   |                               |            |
|-----------------------------|-----------------------------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham                           | <b>Samples received on:</b>   | 19/06/2015 |
| <b>Your job number:</b>     | HC15016                           | <b>Samples instructed on:</b> | 19/06/2015 |
| <b>Your order number:</b>   |                                   | <b>Analysis completed by:</b> | 01/07/2015 |
| <b>Report Issue Number:</b> | 2                                 | <b>Report issued on:</b>      | 01/07/2015 |
| <b>Samples Analysed:</b>    | 17 soil samples - 3 water samples |                               |            |

**Signed:** 

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

Excel copies of reports are only valid when accompanied by this PDF certificate.



**Signed:** \_\_\_\_\_

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Analytical Report Number: 15-73985

Project / Site name: Wrexham

| Lab Sample Number                       | 457164        | 457165                | 457166                  | 457167        | 457168        |
|-----------------------------------------|---------------|-----------------------|-------------------------|---------------|---------------|
| Sample Reference                        | DIGI EX1 B    | DIGI EX1 E            | DIGI EX1 N              | DIGI EX1 S    | DIGI EX1 W    |
| Sample Number                           | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Depth (m)                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Date Sampled                            | 17/06/2015    | 17/06/2015            | 17/06/2015              | 17/06/2015    | 17/06/2015    |
| Time Taken                              | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |               |
| Stone Content                           | %             | 0.1                   | NONE                    | < 0.1         | < 0.1         |
| Moisture Content                        | %             | N/A                   | NONE                    | 23            | 5.4           |
| Total mass of sample received           | kg            | 0.001                 | NONE                    | 0.53          | 0.63          |

#### General Inorganics

|                                                   |       |      |        |     |       |       |       |       |
|---------------------------------------------------|-------|------|--------|-----|-------|-------|-------|-------|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1 | < 1   | < 1   | < 1   | < 1   |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | 110 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | 55  | < 0.3 | < 0.3 | < 0.3 | < 0.3 |

#### Total Phenols

|                            |       |   |        |       |       |       |       |       |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|

#### Speciated PAHs

|                        |       |      |        |        |      |        |        |      |
|------------------------|-------|------|--------|--------|------|--------|--------|------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | 0.35 | < 0.05 | < 0.05 | 0.42 |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | < 0.10 | 1.4  | 0.45   | 0.39   | 1.2  |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | < 0.10 | 0.34 | < 0.10 | < 0.10 | 0.30 |
| Fluorene               | mg/kg | 0.1  | MCERTS | < 0.10 | 0.52 | < 0.10 | < 0.10 | 0.60 |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | < 0.10 | 2.4  | 0.95   | 0.80   | 3.2  |
| Anthracene             | mg/kg | 0.1  | MCERTS | < 0.10 | 1.2  | 0.41   | 0.46   | 1.3  |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | 0.29   | 6.7  | 2.5    | 2.3    | 10   |
| Pyrene                 | mg/kg | 0.1  | MCERTS | 0.28   | 8.0  | 2.6    | 2.5    | 11   |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | < 0.10 | 4.0  | 1.6    | 1.3    | 4.6  |
| Chrysene               | mg/kg | 0.05 | MCERTS | < 0.05 | 2.7  | 1.1    | 0.87   | 4.0  |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | 2.8  | 1.1    | 0.96   | 3.9  |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | 3.0  | 1.3    | 1.0    | 4.0  |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | < 0.10 | 3.1  | 1.4    | 1.1    | 4.0  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | < 0.10 | 1.8  | 0.84   | 0.66   | 1.9  |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | < 0.10 | 0.45 | < 0.10 | < 0.10 | 0.39 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | 1.9  | 0.84   | 0.61   | 2.0  |

#### Total PAH

|                             |       |     |        |        |      |      |      |      |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | < 1.60 | 40.6 | 15.2 | 13.0 | 52.7 |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 5.0   | 18    | 11    | 14    | 21    |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 1.0   | 0.6   | 0.6   | 0.5   | 0.7   |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 1.6   | 0.6   | 0.4   | 0.5   | 0.7   |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.6   | 0.4   | < 0.2 | 0.2   | 0.6   |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 23    | 22    | 13    | 14    | 14    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 31    | 33    | 26    | 26    | 43    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 87    | 110   | 68    | 63    | 95    |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 300   | 370   | 400   | 350   | 340   |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | 3.3   | < 0.3 | 0.4   | 3.9   |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 20    | 19    | 17    | 16    | 19    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 29    | 20    | 18    | 16    | 18    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 53    | 120   | 84    | 77    | 160   |

Analytical Report Number: 15-73985

Project / Site name: Wrexham

| Lab Sample Number                       | 457164        | 457165                | 457166                  | 457167        | 457168        |
|-----------------------------------------|---------------|-----------------------|-------------------------|---------------|---------------|
| Sample Reference                        | DIGI EX1 B    | DIGI EX1 E            | DIGI EX1 N              | DIGI EX1 S    | DIGI EX1 W    |
| Sample Number                           | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Depth (m)                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Date Sampled                            | 17/06/2015    | 17/06/2015            | 17/06/2015              | 17/06/2015    | 17/06/2015    |
| Time Taken                              | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |               |

#### Monoaromatics

|                                    |       |   |        |       |       |       |       |       |
|------------------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Benzene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |       |       |       |
|-----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 1.9   |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 | 68    | 30    | 21    | 120   |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | < 8.0 | 130   | 53    | 39    | 220   |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | < 8.0 | 430   | 140   | 120   | 480   |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | < 10  | 630   | 230   | 180   | 830   |

|                                        |       |     |        |       |       |       |       |       |
|----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >EC5 - EC7          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC7 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 6.4   |
| TPH-CWG - Aromatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 | 29    | 11    | 9.0   | 58    |
| TPH-CWG - Aromatic >EC16 - EC21        | mg/kg | 10  | MCERTS | < 10  | 150   | 58    | 44    | 260   |
| TPH-CWG - Aromatic >EC21 - EC35        | mg/kg | 10  | MCERTS | < 10  | 560   | 190   | 140   | 780   |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | < 10  | 730   | 260   | 200   | 1100  |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457169        | 457170        | 457171        | 457172        | 457173        |       |       |       |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|-------|-------|-------|
| Sample Reference                        |       |                       |                         | DIGI EX2 B    | DIGI EX2 N    | DIGI EX2 S    | DIGI EX2 W    | DIGI EX2 E    |       |       |       |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |       |       |       |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |       |       |       |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    |       |       |       |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |       |       |       |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |       |       |       |
|                                         |       |                       |                         |               |               |               |               |               |       |       |       |
|                                         |       |                       |                         |               |               |               |               |               |       |       |       |
|                                         |       |                       |                         |               |               |               |               |               |       |       |       |
|                                         |       |                       |                         |               |               |               |               |               |       |       |       |
| Stone Content                           |       |                       |                         | %             | 0.1           | NONE          | < 0.1         | < 0.1         | < 0.1 | < 0.1 | < 0.1 |
| Moisture Content                        |       |                       |                         | %             | N/A           | NONE          | 29            | 11            | 12    | 9.6   | 9.4   |
| Total mass of sample received           |       |                       |                         | kg            | 0.001         | NONE          | 0.60          | 0.62          | 0.63  | 0.58  | 0.57  |

#### General Inorganics

|                                                   |       |      |        |     |       |       |       |       |
|---------------------------------------------------|-------|------|--------|-----|-------|-------|-------|-------|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1 | < 1   | < 1   | < 1   | < 1   |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | 29  | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | 14  | < 0.3 | < 0.3 | < 0.3 | < 0.3 |

#### Total Phenols

|                            |       |   |        |       |       |       |       |       |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | < 0.10 | 0.39   | < 0.10 | 0.60   | 0.23   |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Fluorene               | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | < 0.10 | 1.8    | 0.61   | 2.5    | 1.1    |
| Anthracene             | mg/kg | 0.1  | MCERTS | < 0.10 | 0.61   | 0.30   | 1.3    | 0.41   |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | 0.42   | 3.4    | 2.5    | 7.7    | 3.2    |
| Pyrene                 | mg/kg | 0.1  | MCERTS | 0.37   | 3.4    | 2.6    | 7.3    | 3.4    |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | 0.21   | 2.3    | 1.5    | 4.5    | 1.5    |
| Chrysene               | mg/kg | 0.05 | MCERTS | 0.14   | 1.6    | 1.1    | 4.0    | 1.6    |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | 1.8    | 0.89   | 3.5    | 1.5    |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | 1.6    | 1.0    | 3.3    | 1.4    |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | 0.13   | 1.8    | 1.0    | 3.5    | 1.4    |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | < 0.10 | 0.90   | 0.59   | 1.7    | 0.62   |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | 0.42   | < 0.10 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | 1.1    | 0.64   | 1.6    | 0.65   |

#### Total PAH

|                             |       |     |        |        |      |      |      |      |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | < 1.60 | 20.8 | 12.6 | 41.8 | 16.9 |
|-----------------------------|-------|-----|--------|--------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 4.8   | 9.7   | 13    | 8.6   | 11    |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 1.5   | 0.6   | 0.6   | 0.6   | 0.5   |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 3.4   | 0.6   | 0.4   | 0.4   | 0.5   |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 1.5   | 0.3   | < 0.2 | < 0.2 | < 0.2 |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 28    | 15    | 17    | 21    | 13    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 66    | 27    | 28    | 25    | 24    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 95    | 65    | 76    | 52    | 52    |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 330   | 490   | 380   | 340   | 310   |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | 0.8   | < 0.3 | 1.5   | < 0.3 |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 30    | 16    | 18    | 19    | 15    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 1.8   | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 29    | 17    | 20    | 19    | 17    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 78    | 76    | 85    | 67    | 60    |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457169        | 457170        | 457171        | 457172        | 457173        |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                       |                         | DIGI EX2 B    | DIGI EX2 N    | DIGI EX2 S    | DIGI EX2 W    | DIGI EX2 E    |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |
| <b>Monoaromatics</b>                    |       |                       |                         |               |               |               |               |               |
| Benzene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| Toluene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| Ethylbenzene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| p & m-xylene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| o-xylene                                | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| MTBE (Methyl Tertiary Butyl Ether)      | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |       |       |       |
|-----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | 18    | 6.5   | 2.5   | 7.5   | 5.4   |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | < 8.0 | 30    | 14    | 25    | 24    |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | < 8.0 | 270   | 140   | 160   | 210   |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 18    | 310   | 150   | 200   | 240   |
|                                         |       |     |        |       |       |       |       |       |
| TPH-CWG - Aromatic >EC5 - EC7           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC7 - EC8           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC8 - EC10          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC10 - EC12         | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >EC12 - EC16         | mg/kg | 2   | MCERTS | 7.0   | 8.2   | < 2.0 | 3.1   | < 2.0 |
| TPH-CWG - Aromatic >EC16 - EC21         | mg/kg | 10  | MCERTS | 12    | 41    | 17    | 36    | 20    |
| TPH-CWG - Aromatic >EC21 - EC35         | mg/kg | 10  | MCERTS | < 10  | 240   | 110   | 150   | 130   |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b>  | mg/kg | 10  | MCERTS | 19    | 290   | 130   | 190   | 150   |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457174        | 457175        | 457176        | 457177        | 457178        |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                       |                         | DIGI EX3 B    | DIGI EX4 B    | DIGI EX5 B    | DIGI EX6 B    | DIGI EX7 B    |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |
| Stone Content                           | %     | 0.1                   | NONE                    | < 0.1         | < 0.1         | < 0.1         | < 0.1         | < 0.1         |
| Moisture Content                        | %     | N/A                   | NONE                    | 16            | 17            | 17            | 21            | 18            |
| Total mass of sample received           | kg    | 0.001                 | NONE                    | 0.60          | 0.53          | 0.58          | 0.56          | 0.57          |

#### General Inorganics

|                                                   |       |      |        |     |     |     |     |       |
|---------------------------------------------------|-------|------|--------|-----|-----|-----|-----|-------|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1 | < 1 | < 1 | < 1 | < 1   |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | 7.4 | 5.5 | 21  | 26  | < 0.5 |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | 3.7 | 2.8 | 11  | 13  | < 0.3 |

#### Total Phenols

|                            |       |   |        |       |       |       |       |       |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Fluorene               | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.22   | 0.44   | 0.64   |
| Anthracene             | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | 0.11   | 0.13   |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.59   | 0.82   | 0.40   |
| Pyrene                 | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.58   | 0.73   | 0.32   |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.36   | 0.50   | < 0.10 |
| Chrysene               | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | 0.27   | 0.32   | < 0.05 |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.37   | 0.29   | < 0.10 |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.20   | 0.37   | < 0.10 |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | 0.26   | 0.36   | < 0.10 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | 0.20   | < 0.10 |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | < 0.10 |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | < 0.05 | < 0.05 | < 0.05 | 0.23   | < 0.05 |

#### Total PAH

|                             |       |     |        |        |        |      |      |        |
|-----------------------------|-------|-----|--------|--------|--------|------|------|--------|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | < 1.60 | < 1.60 | 2.85 | 4.37 | < 1.60 |
|-----------------------------|-------|-----|--------|--------|--------|------|------|--------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 4.2   | < 1.0 | 7.2   | 6.3   | 3.8   |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 1.0   | 1.0   | 1.2   | 1.0   | 0.6   |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 0.7   | 1.1   | 3.9   | 5.8   | 0.5   |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.5   | 0.4   | 0.3   | 0.5   | < 0.2 |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 29    | 28    | 27    | 21    | 18    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 29    | 27    | 25    | 24    | 17    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 37    | 54    | 150   | 270   | 14    |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 220   | 240   | 390   | 240   | 200   |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | 0.5   | < 0.3 | < 0.3 | < 0.3 |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 30    | 28    | 27    | 26    | 20    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 29    | 26    | 32    | 25    | 19    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 69    | 73    | 87    | 120   | 40    |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457174        | 457175        | 457176        | 457177        | 457178        |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                        |       |                       |                         | DIGI EX3 B    | DIGI EX4 B    | DIGI EX5 B    | DIGI EX6 B    | DIGI EX7 B    |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    | 17/06/2015    |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |
| <b>Monoaromatics</b>                    |       |                       |                         |               |               |               |               |               |
| Benzene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| Toluene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| Ethylbenzene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| p & m-xylene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| o-xylene                                | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| MTBE (Methyl Tertiary Butyl Ether)      | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         | < 1.0         | < 1.0         | < 1.0         |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |       |       |       |
|-----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 | < 2.0 | < 2.0 | < 2.0 | 6.1   |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | < 8.0 | < 8.0 | < 8.0 | < 8.0 | < 8.0 |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | 8.4   | 25    | 79    | < 8.0 | < 8.0 |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | < 10  | 25    | 79    | < 10  | < 10  |
| TPH-CWG - Aromatic >EC5 - EC7           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC7 - EC8           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC8 - EC10          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC10 - EC12         | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 4.3   |
| TPH-CWG - Aromatic >EC12 - EC16         | mg/kg | 2   | MCERTS | 3.8   | 5.3   | < 2.0 | 5.2   | 13    |
| TPH-CWG - Aromatic >EC16 - EC21         | mg/kg | 10  | MCERTS | < 10  | < 10  | 12    | 15    | 17    |
| TPH-CWG - Aromatic >EC21 - EC35         | mg/kg | 10  | MCERTS | < 10  | 25    | 150   | 46    | < 10  |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b>  | mg/kg | 10  | MCERTS | < 10  | 31    | 160   | 66    | 34    |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457179        | 457180        |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Sample Reference                        |       |                       |                         | CRUSH 3       | CRUSH 4       |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |
| Stone Content                           | %     | 0.1                   | NONE                    | < 0.1         | < 0.1         |  |  |  |
| Moisture Content                        | %     | N/A                   | NONE                    | 0.00          | 7.3           |  |  |  |
| Total mass of sample received           | kg    | 0.001                 | NONE                    | 0.58          | 0.60          |  |  |  |

#### General Inorganics

|                                                   |       |      |        |     |     |  |  |  |
|---------------------------------------------------|-------|------|--------|-----|-----|--|--|--|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1 | < 1 |  |  |  |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | 0.9 | 3.2 |  |  |  |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | 0.4 | 1.6 |  |  |  |

#### Total Phenols

|                            |       |   |        |       |       |  |  |  |
|----------------------------|-------|---|--------|-------|-------|--|--|--|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 | < 1.0 |  |  |  |
|----------------------------|-------|---|--------|-------|-------|--|--|--|

#### Speciated PAHs

|                        |       |      |        |      |        |  |  |  |
|------------------------|-------|------|--------|------|--------|--|--|--|
| Naphthalene            | mg/kg | 0.05 | MCERTS | 0.21 | < 0.05 |  |  |  |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | 0.45 | 0.28   |  |  |  |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | 0.41 | 0.12   |  |  |  |
| Fluorene               | mg/kg | 0.1  | MCERTS | 0.65 | 0.24   |  |  |  |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | 8.1  | 1.7    |  |  |  |
| Anthracene             | mg/kg | 0.1  | MCERTS | 2.3  | 0.75   |  |  |  |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | 9.5  | 3.7    |  |  |  |
| Pyrene                 | mg/kg | 0.1  | MCERTS | 8.3  | 3.5    |  |  |  |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | 3.5  | 2.2    |  |  |  |
| Chrysene               | mg/kg | 0.05 | MCERTS | 3.1  | 2.0    |  |  |  |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | 2.3  | 2.1    |  |  |  |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | 2.0  | 1.9    |  |  |  |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | 2.1  | 2.3    |  |  |  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | 0.88 | 1.3    |  |  |  |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | 0.20 | 0.31   |  |  |  |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | 0.95 | 1.4    |  |  |  |

#### Total PAH

|                             |       |     |        |      |      |  |  |  |
|-----------------------------|-------|-----|--------|------|------|--|--|--|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | 44.9 | 23.9 |  |  |  |
|-----------------------------|-------|-----|--------|------|------|--|--|--|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |  |  |  |
|------------------------------------|-------|------|--------|-------|-------|--|--|--|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 14    | 7.1   |  |  |  |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 0.7   | 0.3   |  |  |  |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 2.8   | 2.0   |  |  |  |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | < 0.2 | < 0.2 |  |  |  |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 |  |  |  |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 16    | 15    |  |  |  |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 20    | 12    |  |  |  |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 24    | 22    |  |  |  |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 730   | 180   |  |  |  |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | < 0.3 |  |  |  |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 14    | 8.1   |  |  |  |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 |  |  |  |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 23    | 18    |  |  |  |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 60    | 27    |  |  |  |

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Project / Site name: Wrexham

| Lab Sample Number                       |       |                       |                         | 457179        | 457180        |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Sample Reference                        |       |                       |                         | CRUSH 3       | CRUSH 4       |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                            |       |                       |                         | 17/06/2015    | 17/06/2015    |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |
| <b>Monoaromatics</b>                    |       |                       |                         |               |               |  |  |  |
| Benzene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| Toluene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| Ethylbenzene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| p & m-xylene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| o-xylene                                | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)      | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |  |  |  |
|-----------------------------------------|-------|-----|--------|-------|-------|--|--|--|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 |  |  |  |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | 17    | < 2.0 |  |  |  |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | 82    | 11    |  |  |  |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | 530   | 130   |  |  |  |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 630   | 140   |  |  |  |
| TPH-CWG - Aromatic >EC5 - EC7           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC7 - EC8           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC8 - EC10          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC10 - EC12         | mg/kg | 1   | MCERTS | 5.4   | < 1.0 |  |  |  |
| TPH-CWG - Aromatic >EC12 - EC16         | mg/kg | 2   | MCERTS | 27    | 9.0   |  |  |  |
| TPH-CWG - Aromatic >EC16 - EC21         | mg/kg | 10  | MCERTS | 120   | 40    |  |  |  |
| TPH-CWG - Aromatic >EC21 - EC35         | mg/kg | 10  | MCERTS | 480   | 190   |  |  |  |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b>  | mg/kg | 10  | MCERTS | 630   | 240   |  |  |  |



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Project / Site name: Wrexham

|                                          |               |                       |                         |  |  |
|------------------------------------------|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        | 457181        | 457182                | 457183                  |  |  |
| Sample Reference                         | Downstream 2  | Upstream 2            | DIGI EX 7 GW            |  |  |
| Sample Number                            | None Supplied | None Supplied         | None Supplied           |  |  |
| Depth (m)                                | None Supplied | None Supplied         | None Supplied           |  |  |
| Date Sampled                             | 17/06/2015    | 17/06/2015            | 17/06/2015              |  |  |
| Time Taken                               | None Supplied | None Supplied         | None Supplied           |  |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### General Inorganics

|                                 |          |     |           |       |       |      |  |  |
|---------------------------------|----------|-----|-----------|-------|-------|------|--|--|
| pH                              | pH Units | N/A | ISO 17025 | 7.5   | 7.9   | 7.7  |  |  |
| Total Cyanide                   | µg/l     | 10  | ISO 17025 | < 10  | < 10  | 29   |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | < 15  | < 15  | 2000 |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 8.1   | 4.7   | 45   |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | < 1.0 | < 1.0 | 2.6  |  |  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 2.0   | 4.0   | 90   |  |  |

#### Speciated PAHs

|                        |      |      |           |        |        |        |  |  |
|------------------------|------|------|-----------|--------|--------|--------|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.64   |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.69   |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |

#### Total PAH

|                   |      |     |           |        |        |      |  |  |
|-------------------|------|-----|-----------|--------|--------|------|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 | 1.33 |  |  |
|-------------------|------|-----|-----------|--------|--------|------|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |  |  |
|-----------------------|------|------|-----------|--------|--------|--------|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 0.45   | 0.39   | 2.68   |  |  |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1  | < 0.1  | < 0.1  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 60     | 59     | 140    |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.03   | 0.02   | 0.08   |  |  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.6    | 0.4    | 2.4    |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 6.6    | 7.3    | 7.1    |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 1.0    | 0.8    | 0.7    |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 2.8    | 3.7    | 650    |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 1.6    | 1.4    | 2.1    |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.3    | 1.4    | 2.9    |  |  |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.3    | 0.3    | 4.3    |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 6.1    | 3.7    | 3.2    |  |  |



Analytical Report Number: 15-73985

Project / Site name: Wrexham

|                                          |  |  |  |               |                       |                         |  |  |
|------------------------------------------|--|--|--|---------------|-----------------------|-------------------------|--|--|
| Lab Sample Number                        |  |  |  | 457181        | 457182                | 457183                  |  |  |
| Sample Reference                         |  |  |  | Downstream 2  | Upstream 2            | DIGI EX 7 GW            |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Date Sampled                             |  |  |  | 17/06/2015    | 17/06/2015            | 17/06/2015              |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied         | None Supplied           |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of<br>detection | Accreditation<br>Status |  |  |

#### Monoaromatics

|                                    |      |   |           |       |       |       |  |  |
|------------------------------------|------|---|-----------|-------|-------|-------|--|--|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |

#### Petroleum Hydrocarbons

|                                       |      |    |      |      |      |      |  |  |
|---------------------------------------|------|----|------|------|------|------|--|--|
| TPH-CWG - Aliphatic >C5 - C6          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C6 - C8          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C8 - C10         | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C10 - C12        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C12 - C16        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C16 - C21        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aliphatic >C21 - C35        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| <b>TPH-CWG - Aliphatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |

|                                      |      |    |      |      |      |      |  |  |
|--------------------------------------|------|----|------|------|------|------|--|--|
| TPH-CWG - Aromatic >C5 - C7          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C7 - C8          | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C8 - C10         | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C10 - C12        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C12 - C16        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C16 - C21        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| TPH-CWG - Aromatic >C21 - C35        | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |
| <b>TPH-CWG - Aromatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 | < 10 | < 10 |  |  |



Analytical Report Number: 15-73985

Project / Site name: Wrexham

|                                          |       |                       |                         |               |               |               |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|--|--|
| Lab Sample Number                        |       |                       |                         | 457181        | 457182        | 457183        |  |  |
| Sample Reference                         |       |                       |                         | Downstream 2  | Upstream 2    | DIGI EX 7 GW  |  |  |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Date Sampled                             |       |                       |                         | 17/06/2015    | 17/06/2015    | 17/06/2015    |  |  |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Analytical Parameter<br>(Water Analysis) |       |                       |                         |               |               |               |  |  |
|                                          | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |  |  |

#### VOCs

|                                       |      |   |           |       |       |       |  |  |
|---------------------------------------|------|---|-----------|-------|-------|-------|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample

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The results included within the report are representative of the samples submitted for analysis.

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# **Analytical Report Number : 15-73985**

## **Project / Site name: Wrexham**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m)     | Sample Description *                       |
|-------------------|------------------|---------------|---------------|--------------------------------------------|
| 457164            | DIGI EX1 B       | None Supplied | None Supplied | Grey clay.                                 |
| 457165            | DIGI EX1 E       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457166            | DIGI EX1 N       | None Supplied | None Supplied | Brown loam and sand with rubble and brick. |
| 457167            | DIGI EX1 S       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457168            | DIGI EX1 W       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457169            | DIGI EX2 B       | None Supplied | None Supplied | Black clay.                                |
| 457170            | DIGI EX2 N       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457171            | DIGI EX2 S       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457172            | DIGI EX2 W       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457173            | DIGI EX2 E       | None Supplied | None Supplied | Brown loam and sand with rubble.           |
| 457174            | DIGI EX3 B       | None Supplied | None Supplied | Grey clay.                                 |
| 457175            | DIGI EX4 B       | None Supplied | None Supplied | Grey clay.                                 |
| 457176            | DIGI EX5 B       | None Supplied | None Supplied | Brown clay and sand.                       |
| 457177            | DIGI EX6 B       | None Supplied | None Supplied | Brown clay and sand.                       |
| 457178            | DIGI EX7 B       | None Supplied | None Supplied | Light brown clay and sand.                 |
| 457179            | CRUSH 3          | None Supplied | None Supplied | Light grey rubble. **                      |
| 457180            | CRUSH 4          | None Supplied | None Supplied | Brown loam and sand with brick.            |

\*\* Non MCerts Matrix

**Analytical Report Number : 15-73985**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in soil     | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | MCERTS               |
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| Boron, water soluble, in soil           | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                                         | In-house method based on Second Site Properties version 3                                                                                            | L038-PL       | D                  | MCERTS               |
| BTEX and MTBE in soil                   | Determination of BTEX in soil by headspace GC-MS.                                                                                                                              | In-house method based on USEPA8260                                                                                                                   | L073S-PL      | W                  | MCERTS               |
| BTEX and MTBE in water                  | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                      | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Hexavalent chromium in soil             | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                          | In-house method                                                                                                                                      | L080-PL       | W                  | MCERTS               |
| Hexavalent chromium in water            | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                     | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                                                         | L080-PL       | W                  | ISO 17025            |
| Metals in soil by ICP-OES               | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                                                   | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                                                                 | L038-PL       | D                  | MCERTS               |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Moisture Content                        | Moisture content, determined gravimetrically.                                                                                                                                  | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil              | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | MCERTS               |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in soil           | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.                         | In-house method based on USEPA 8270                                                                                                                  | L064-PL       | D                  | MCERTS               |

**Analytical Report Number : 15-73985**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Speciated EPA-16 PAHs in water      | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L070-UK       | W                  | ISO 17025            |
| Stones content of soil              | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.                                                | In-house method based on British Standard Methods and MCERTS requirements.                                      | L019-UK/PL    | D                  | NONE                 |
| Suspended solids in water           | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | NONE                 |
| Total cyanide in soil               | Determination of total cyanide by distillation followed by colorimetry.                                                                                                    | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | MCERTS               |
| Total cyanide in water              | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| TPHCWG (Soil)                       | Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.                                                                                                  | In-house method                                                                                                 | L076-PL       | W                  | MCERTS               |
| TPHCWG (Waters)                     | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                     | In-house method based on USEPA8260                                                                              | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Mark Dodd**

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## **Analytical Report Number : 15-73622**

|                             |                                 |                               |            |
|-----------------------------|---------------------------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham                         | <b>Samples received on:</b>   | 16/06/2015 |
| <b>Your job number:</b>     | HC15016                         | <b>Samples instructed on:</b> | 16/06/2015 |
| <b>Your order number:</b>   | HC15016-29180                   | <b>Analysis completed by:</b> | 24/06/2015 |
| <b>Report Issue Number:</b> | 1                               | <b>Report issued on:</b>      | 24/06/2015 |
| <b>Samples Analysed:</b>    | 7 soil samples - 1 water sample |                               |            |

**Signed:**

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Rexona Rahman  
Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Analytical Report Number: 15-73622

Project / Site name: Wrexham

Your Order No: HC15016-29180

| Lab Sample Number                       | 455011        | 455012                | 455013                  | 455014        | 455015        |
|-----------------------------------------|---------------|-----------------------|-------------------------|---------------|---------------|
| Sample Reference                        | REUSE 1       | REUSE 2               | REUSE 3                 | REUSE 4       | REUSE 5       |
| Sample Number                           | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Depth (m)                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Date Sampled                            | 11/06/2015    | 11/06/2015            | 11/06/2015              | 11/06/2015    | 11/06/2015    |
| Time Taken                              | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |               |
| Stone Content                           | %             | 0.1                   | NONE                    | < 0.1         | < 0.1         |
| Moisture Content                        | %             | N/A                   | NONE                    | 6.5           | 5.6           |
| Total mass of sample received           | kg            | 0.001                 | NONE                    | 0.62          | 0.58          |

#### General Inorganics

|                                                   |       |      |        |       |       |       |       |       |
|---------------------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | < 1   | < 1   | < 1   | < 1   | < 1   |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | < 0.3 | < 0.3 | < 0.3 | < 0.3 | < 0.3 |

#### Total Phenols

|                            |       |   |        |       |       |       |       |       |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
|----------------------------|-------|---|--------|-------|-------|-------|-------|-------|

#### Speciated PAHs

|                        |       |      |        |        |        |        |        |        |
|------------------------|-------|------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | mg/kg | 0.05 | MCERTS | 0.15   | < 0.05 | < 0.05 | 0.19   | 0.20   |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | 0.25   | 0.26   | 0.28   | 0.43   | 0.40   |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | 0.12   | < 0.10 |
| Fluorene               | mg/kg | 0.1  | MCERTS | < 0.10 | < 0.10 | < 0.10 | < 0.10 | 0.21   |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | 1.2    | 0.82   | 1.0    | 1.3    | 2.1    |
| Anthracene             | mg/kg | 0.1  | MCERTS | 0.48   | 0.37   | 0.43   | 0.60   | 0.77   |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | 3.0    | 2.6    | 3.0    | 4.7    | 5.2    |
| Pyrene                 | mg/kg | 0.1  | MCERTS | 3.0    | 2.7    | 3.0    | 4.5    | 5.0    |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | 2.1    | 1.9    | 1.9    | 3.2    | 3.4    |
| Chrysene               | mg/kg | 0.05 | MCERTS | 1.6    | 1.5    | 1.6    | 3.1    | 2.6    |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | 1.4    | 1.7    | 1.5    | 3.3    | 2.7    |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | 1.3    | 0.94   | 1.2    | 1.9    | 2.0    |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | 1.4    | 1.3    | 1.4    | 3.0    | 2.6    |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | 0.60   | 0.57   | 0.58   | 1.3    | 1.1    |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | < 0.10 | 0.14   | 0.16   | 0.32   | 0.27   |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | 0.63   | 0.71   | 0.72   | 1.5    | 1.2    |

#### Total PAH

|                             |       |     |        |      |      |      |      |      |
|-----------------------------|-------|-----|--------|------|------|------|------|------|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | 17.0 | 15.4 | 16.7 | 29.6 | 29.9 |
|-----------------------------|-------|-----|--------|------|------|------|------|------|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |       |       |       |
|------------------------------------|-------|------|--------|-------|-------|-------|-------|-------|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 8.0   | 7.6   | 7.0   | 8.1   | 7.1   |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 0.5   | 0.4   | 0.5   | 0.7   | 0.5   |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 0.2   | 0.3   | < 0.2 | 0.3   | < 0.2 |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 0.3   | 0.5   | < 0.2 | < 0.2 | 0.2   |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 | < 4.0 | < 4.0 | < 4.0 |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 13    | 17    | 16    | 18    | 13    |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 33    | 32    | 28    | 47    | 24    |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 49    | 58    | 53    | 76    | 49    |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 370   | 360   | 400   | 400   | 330   |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | 1.3   | 2.6   | 3.3   | 3.4   | 1.6   |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 16    | 18    | 17    | 23    | 15    |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 15    | 23    | 24    | 27    | 17    |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 76    | 89    | 77    | 130   | 62    |

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| Lab Sample Number                       | 455011        | 455012                | 455013                  | 455014        | 455015        |
|-----------------------------------------|---------------|-----------------------|-------------------------|---------------|---------------|
| Sample Reference                        | REUSE 1       | REUSE 2               | REUSE 3                 | REUSE 4       | REUSE 5       |
| Sample Number                           | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Depth (m)                               | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Date Sampled                            | 11/06/2015    | 11/06/2015            | 11/06/2015              | 11/06/2015    | 11/06/2015    |
| Time Taken                              | None Supplied | None Supplied         | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Soil Analysis) | Units         | Limit of<br>detection | Accreditation<br>Status |               |               |

#### Monoaromatics

|                                    |       |   |        |       |       |       |       |       |
|------------------------------------|-------|---|--------|-------|-------|-------|-------|-------|
| Benzene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/kg | 1 | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |       |       |       |
|-----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 | < 2.0 | < 2.0 | < 2.0 | < 2.0 |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | < 8.0 | < 8.0 | < 8.0 | < 8.0 | < 8.0 |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | 34    | 40    | 78    | 68    | 77    |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 34    | 40    | 78    | 68    | 77    |

|                                        |       |     |        |       |       |       |       |       |
|----------------------------------------|-------|-----|--------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >EC5 - EC7          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC7 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| TPH-CWG - Aromatic >EC10 - EC12        | mg/kg | 1   | MCERTS | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >EC12 - EC16        | mg/kg | 2   | MCERTS | < 2.0 | < 2.0 | < 2.0 | 3.4   | 2.2   |
| TPH-CWG - Aromatic >EC16 - EC21        | mg/kg | 10  | MCERTS | 11    | < 10  | < 10  | 27    | 20    |
| TPH-CWG - Aromatic >EC21 - EC35        | mg/kg | 10  | MCERTS | 55    | 59    | 80    | 140   | 98    |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 66    | 59    | 80    | 170   | 120   |

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Project / Site name: Wrexham

Your Order No: HC15016-29180

| Lab Sample Number                       |       |                       |                         | 455016        | 455017        |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Sample Reference                        |       |                       |                         | CRUSH1        | CRUSH2        |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                            |       |                       |                         | 11/06/2015    | 15/06/2015    |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |
| Stone Content                           | %     | 0.1                   | NONE                    | < 0.1         | < 0.1         |  |  |  |
| Moisture Content                        | %     | N/A                   | NONE                    | 1.4           | 1.5           |  |  |  |
| Total mass of sample received           | kg    | 0.001                 | NONE                    | 0.46          | 0.50          |  |  |  |

#### General Inorganics

|                                                   |       |      |        |     |       |  |  |  |
|---------------------------------------------------|-------|------|--------|-----|-------|--|--|--|
| Total Cyanide                                     | mg/kg | 1    | MCERTS | 8   | < 1   |  |  |  |
| Ammonium as NH <sub>4</sub>                       | mg/kg | 0.5  | MCERTS | 15  | < 0.5 |  |  |  |
| Ammonium as NH <sub>4</sub> (leachate equivalent) | mg/l  | 0.25 | MCERTS | 7.3 | < 0.3 |  |  |  |

#### Total Phenols

|                            |       |   |        |    |       |  |  |  |
|----------------------------|-------|---|--------|----|-------|--|--|--|
| Total Phenols (monohydric) | mg/kg | 1 | MCERTS | 16 | < 1.0 |  |  |  |
|----------------------------|-------|---|--------|----|-------|--|--|--|

#### Speciated PAHs

|                        |       |      |        |     |      |  |  |  |
|------------------------|-------|------|--------|-----|------|--|--|--|
| Naphthalene            | mg/kg | 0.05 | MCERTS | 850 | 0.59 |  |  |  |
| Acenaphthylene         | mg/kg | 0.1  | MCERTS | 150 | 0.38 |  |  |  |
| Acenaphthene           | mg/kg | 0.1  | MCERTS | 40  | 0.20 |  |  |  |
| Fluorene               | mg/kg | 0.1  | MCERTS | 170 | 0.53 |  |  |  |
| Phenanthrene           | mg/kg | 0.1  | MCERTS | 740 | 5.0  |  |  |  |
| Anthracene             | mg/kg | 0.1  | MCERTS | 240 | 1.0  |  |  |  |
| Fluoranthene           | mg/kg | 0.1  | MCERTS | 700 | 5.4  |  |  |  |
| Pyrene                 | mg/kg | 0.1  | MCERTS | 490 | 4.6  |  |  |  |
| Benzo(a)anthracene     | mg/kg | 0.1  | MCERTS | 310 | 2.2  |  |  |  |
| Chrysene               | mg/kg | 0.05 | MCERTS | 240 | 2.2  |  |  |  |
| Benzo(b)fluoranthene   | mg/kg | 0.1  | MCERTS | 270 | 2.1  |  |  |  |
| Benzo(k)fluoranthene   | mg/kg | 0.1  | MCERTS | 140 | 1.3  |  |  |  |
| Benzo(a)pyrene         | mg/kg | 0.1  | MCERTS | 250 | 1.9  |  |  |  |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.1  | MCERTS | 98  | 0.95 |  |  |  |
| Dibenz(a,h)anthracene  | mg/kg | 0.1  | MCERTS | 28  | 0.19 |  |  |  |
| Benzo(ghi)perylene     | mg/kg | 0.05 | MCERTS | 110 | 0.99 |  |  |  |

#### Total PAH

|                             |       |     |        |      |      |  |  |  |
|-----------------------------|-------|-----|--------|------|------|--|--|--|
| Speciated Total EPA-16 PAHs | mg/kg | 1.6 | MCERTS | 4840 | 29.7 |  |  |  |
|-----------------------------|-------|-----|--------|------|------|--|--|--|

#### Heavy Metals / Metalloids

|                                    |       |      |        |       |       |  |  |  |
|------------------------------------|-------|------|--------|-------|-------|--|--|--|
| Arsenic (aqua regia extractable)   | mg/kg | 1    | MCERTS | 12    | 4.1   |  |  |  |
| Beryllium (aqua regia extractable) | mg/kg | 0.06 | MCERTS | 2.8   | 0.3   |  |  |  |
| Boron (water soluble)              | mg/kg | 0.2  | MCERTS | 0.6   | 0.8   |  |  |  |
| Cadmium (aqua regia extractable)   | mg/kg | 0.2  | MCERTS | 1.6   | 0.5   |  |  |  |
| Chromium (hexavalent)              | mg/kg | 4    | MCERTS | < 4.0 | < 4.0 |  |  |  |
| Chromium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 20    | 15    |  |  |  |
| Copper (aqua regia extractable)    | mg/kg | 1    | MCERTS | 300   | 26    |  |  |  |
| Lead (aqua regia extractable)      | mg/kg | 1    | MCERTS | 190   | 64    |  |  |  |
| Manganese (aqua regia extractable) | mg/kg | 1    | MCERTS | 420   | 310   |  |  |  |
| Mercury (aqua regia extractable)   | mg/kg | 0.3  | MCERTS | < 0.3 | 1.6   |  |  |  |
| Nickel (aqua regia extractable)    | mg/kg | 1    | MCERTS | 53    | 12    |  |  |  |
| Selenium (aqua regia extractable)  | mg/kg | 1    | MCERTS | < 1.0 | < 1.0 |  |  |  |
| Vanadium (aqua regia extractable)  | mg/kg | 1    | MCERTS | 18    | 21    |  |  |  |
| Zinc (aqua regia extractable)      | mg/kg | 1    | MCERTS | 790   | 94    |  |  |  |

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| Lab Sample Number                       |       |                       |                         | 455016        | 455017        |  |  |  |
|-----------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|--|--|--|
| Sample Reference                        |       |                       |                         | CRUSH1        | CRUSH2        |  |  |  |
| Sample Number                           |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Depth (m)                               |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Date Sampled                            |       |                       |                         | 11/06/2015    | 15/06/2015    |  |  |  |
| Time Taken                              |       |                       |                         | None Supplied | None Supplied |  |  |  |
| Analytical Parameter<br>(Soil Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |  |  |  |
| <b>Monoaromatics</b>                    |       |                       |                         |               |               |  |  |  |
| Benzene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| Toluene                                 | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| Ethylbenzene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| p & m-xylene                            | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| o-xylene                                | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)      | µg/kg | 1                     | MCERTS                  | < 1.0         | < 1.0         |  |  |  |

#### Petroleum Hydrocarbons

|                                         |       |     |        |       |       |  |  |  |
|-----------------------------------------|-------|-----|--------|-------|-------|--|--|--|
| TPH-CWG - Aliphatic >EC5 - EC6          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC6 - EC8          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC8 - EC10         | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aliphatic >EC10 - EC12        | mg/kg | 1   | MCERTS | 5.3   | < 1.0 |  |  |  |
| TPH-CWG - Aliphatic >EC12 - EC16        | mg/kg | 2   | MCERTS | 35    | 10    |  |  |  |
| TPH-CWG - Aliphatic >EC16 - EC21        | mg/kg | 8   | MCERTS | 42    | 32    |  |  |  |
| TPH-CWG - Aliphatic >EC21 - EC35        | mg/kg | 8   | MCERTS | 150   | 270   |  |  |  |
| <b>TPH-CWG - Aliphatic (EC5 - EC35)</b> | mg/kg | 10  | MCERTS | 230   | 320   |  |  |  |
| TPH-CWG - Aromatic >EC5 - EC7           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC7 - EC8           | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC8 - EC10          | mg/kg | 0.1 | MCERTS | < 0.1 | < 0.1 |  |  |  |
| TPH-CWG - Aromatic >EC10 - EC12         | mg/kg | 1   | MCERTS | 140   | < 1.0 |  |  |  |
| TPH-CWG - Aromatic >EC12 - EC16         | mg/kg | 2   | MCERTS | 260   | 8.5   |  |  |  |
| TPH-CWG - Aromatic >EC16 - EC21         | mg/kg | 10  | MCERTS | 560   | 41    |  |  |  |
| TPH-CWG - Aromatic >EC21 - EC35         | mg/kg | 10  | MCERTS | 810   | 200   |  |  |  |
| <b>TPH-CWG - Aromatic (EC5 - EC35)</b>  | mg/kg | 10  | MCERTS | 1800  | 250   |  |  |  |



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|                                          |       |                       |                         |               |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                        |       |                       |                         | 455018        |  |  |  |  |
| Sample Reference                         |       |                       |                         | BH1           |  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                             |       |                       |                         | 15/06/2015    |  |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### General Inorganics

|                                  |          |     |           |       |  |  |  |  |
|----------------------------------|----------|-----|-----------|-------|--|--|--|--|
| pH                               | pH Units | N/A | ISO 17025 | 7.8   |  |  |  |  |
| Total Cyanide                    | µg/l     | 10  | ISO 17025 | 14    |  |  |  |  |
| Ammonium as NH <sub>4</sub>      | µg/l     | 15  | ISO 17025 | 1800  |  |  |  |  |
| Chemical Oxygen Demand (Settled) | mg/l     | 2   | ISO 17025 | 28    |  |  |  |  |
| BOD (Biochemical Oxygen Demand)  | mg/l     | 1   | ISO 17025 | < 1.0 |  |  |  |  |
| Total Suspended Solids           | mg/l     | 2   | NONE      | 8300  |  |  |  |  |

#### Speciated PAHs

|                        |      |      |           |        |  |  |  |  |
|------------------------|------|------|-----------|--------|--|--|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 0.40   |  |  |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 0.74   |  |  |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |  |  |  |  |

#### Total PAH

|                   |      |     |           |      |  |  |  |  |
|-------------------|------|-----|-----------|------|--|--|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 1.14 |  |  |  |  |
|-------------------|------|-----|-----------|------|--|--|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |  |  |  |  |
|-----------------------|------|------|-----------|--------|--|--|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 1.08   |  |  |  |  |
| Beryllium (dissolved) | µg/l | 0.1  | ISO 17025 | < 0.1  |  |  |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 160    |  |  |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 |  |  |  |  |
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  |  |  |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 1.0    |  |  |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.8    |  |  |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 2.5    |  |  |  |  |
| Manganese (dissolved) | µg/l | 0.05 | ISO 17025 | 670    |  |  |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 |  |  |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 3.2    |  |  |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 12     |  |  |  |  |
| Vanadium (dissolved)  | µg/l | 0.2  | ISO 17025 | 1.8    |  |  |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 2.4    |  |  |  |  |



Analytical Report Number: 15-73622

Project / Site name: Wrexham

Your Order No: HC15016-29180

|                                          |       |                       |                         |               |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                        |       |                       |                         | 455018        |  |  |  |  |
| Sample Reference                         |       |                       |                         | BH1           |  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                             |       |                       |                         | 15/06/2015    |  |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### Monoaromatics

|                                    |      |   |           |       |  |  |  |  |
|------------------------------------|------|---|-----------|-------|--|--|--|--|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |

#### Petroleum Hydrocarbons

|                                       |      |    |      |      |  |  |  |  |
|---------------------------------------|------|----|------|------|--|--|--|--|
| TPH-CWG - Aliphatic >C5 - C6          | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C6 - C8          | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C8 - C10         | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C10 - C12        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C12 - C16        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C16 - C21        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aliphatic >C21 - C35        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| <b>TPH-CWG - Aliphatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 |  |  |  |  |

|                                      |      |    |      |      |  |  |  |  |
|--------------------------------------|------|----|------|------|--|--|--|--|
| TPH-CWG - Aromatic >C5 - C7          | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C7 - C8          | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C8 - C10         | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C10 - C12        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C12 - C16        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C16 - C21        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| TPH-CWG - Aromatic >C21 - C35        | µg/l | 10 | NONE | < 10 |  |  |  |  |
| <b>TPH-CWG - Aromatic (C5 - C35)</b> | µg/l | 10 | NONE | < 10 |  |  |  |  |



Analytical Report Number: 15-73622

Project / Site name: Wrexham

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|                                          |       |                       |                         |               |  |  |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|--|--|--|--|
| Lab Sample Number                        |       |                       |                         | 455018        |  |  |  |  |
| Sample Reference                         |       |                       |                         | BH1           |  |  |  |  |
| Sample Number                            |       |                       |                         | None Supplied |  |  |  |  |
| Depth (m)                                |       |                       |                         | None Supplied |  |  |  |  |
| Date Sampled                             |       |                       |                         | 15/06/2015    |  |  |  |  |
| Time Taken                               |       |                       |                         | None Supplied |  |  |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |  |  |  |  |

#### VOCs

|                                       |      |   |           |       |  |  |  |  |
|---------------------------------------|------|---|-----------|-------|--|--|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 |  |  |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 |  |  |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 |  |  |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 15-73622**

**Project / Site name: Wrexham**

\* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

| Lab Sample Number | Sample Reference | Sample Number | Depth (m)     | Sample Description *                    |
|-------------------|------------------|---------------|---------------|-----------------------------------------|
| 455011            | REUSE 1          | None Supplied | None Supplied | Brown sandy loam with rubble and brick. |
| 455012            | REUSE 2          | None Supplied | None Supplied | Brown sandy loam with rubble and brick. |
| 455013            | REUSE 3          | None Supplied | None Supplied | Brown sandy loam with rubble and brick. |
| 455014            | REUSE 4          | None Supplied | None Supplied | Brown sandy loam with rubble and brick. |
| 455015            | REUSE 5          | None Supplied | None Supplied | Brown sandy loam with rubble and brick. |
| 455016            | CRUSH1           | None Supplied | None Supplied | Grey gravel with rubble.**              |
| 455017            | CRUSH2           | None Supplied | None Supplied | Grey gravel with rubble.**              |

\*\*Non MCERTS Matrix

**Analytical Report Number : 15-73622**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                      | Analytical Method Description                                                                                                                                                    | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in soil       | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.                                                                       | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | MCERTS               |
| Ammonium as NH <sub>4</sub> in water      | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                       | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water         | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                   | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                            | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                       | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| Boron, water soluble, in soil             | Determination of water soluble boron in soil by hot water extract followed by ICP-OES.                                                                                           | In-house method based on Second Site Properties version 3                                                                                            | L038-PL       | D                  | MCERTS               |
| BTEX and MTBE in soil                     | Determination of BTEX in soil by headspace GC-MS.                                                                                                                                | In-house method based on USEPA8260                                                                                                                   | L073S-PL      | W                  | MCERTS               |
| BTEX and MTBE in water                    | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                        | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Settled) | Determination of settled COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Hexavalent chromium in soil               | Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                            | In-house method                                                                                                                                      | L080-PL       | W                  | MCERTS               |
| Hexavalent chromium in water              | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                       | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                                                         | L080-PL       | W                  | ISO 17025            |
| Metals in soil by ICP-OES                 | Determination of metals in soil by aqua-regia digestion followed by ICP-OES.                                                                                                     | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                                                                 | L038-PL       | D                  | MCERTS               |
| Metals in water by ICP-MS (dissolved)     | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                        | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Moisture Content                          | Moisture content, determined gravimetrically.                                                                                                                                    | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L019-UK/PL    | W                  | NONE                 |
| Monohydric phenols in soil                | Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.                                                           | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | MCERTS               |
| Monohydric phenols in water               | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                               | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                         | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in soil             | Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.                           | In-house method based on USEPA 8270                                                                                                                  | L064-PL       | D                  | MCERTS               |

**Analytical Report Number : 15-73622**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Speciated EPA-16 PAHs in water      | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L070-UK       | W                  | ISO 17025            |
| Stones content of soil              | Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.                                                | In-house method based on British Standard Methods and MCERTS requirements.                                      | L019-UK/PL    | D                  | NONE                 |
| Suspended solids in water           | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | NONE                 |
| Total cyanide in soil               | Determination of total cyanide by distillation followed by colorimetry.                                                                                                    | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | MCERTS               |
| Total cyanide in water              | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| TPHCWG (Soil)                       | Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.                                                                                                  | In-house method                                                                                                 | L076-PL       | W                  | MCERTS               |
| TPHCWG (Waters)                     | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                     | In-house method based on USEPA8260                                                                              | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Mark Dodd**

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## **Analytical Report Number : 15-71458**

Replaces Analytical Report Number : 15-71458, issue no. 1

|                             |                 |                               |            |
|-----------------------------|-----------------|-------------------------------|------------|
| <b>Project / Site name:</b> | Wrexham         | <b>Samples received on:</b>   | 12/05/2015 |
| <b>Your job number:</b>     | HC15016         | <b>Samples instructed on:</b> | 12/05/2015 |
| <b>Your order number:</b>   | HC15016/29180   | <b>Analysis completed by:</b> | 28/05/2015 |
| <b>Report Issue Number:</b> | 2               | <b>Report issued on:</b>      | 28/05/2015 |
| <b>Samples Analysed:</b>    | 8 water samples |                               |            |

**Signed:**

Dr Claire Stone  
Quality Manager  
**For & on behalf of i2 Analytical Ltd.**

**Signed:**

Emma Winter  
Assistant Reporting Manager  
**For & on behalf of i2 Analytical Ltd.**

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Sampling date indicates that recommended time for holding samples prior to analysis has been exceeded. The results for pH and ammonium may be invalid and should be interpreted with care.

Iss No 15-71458-2



Analytical Report Number: 15-71458

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |       |                       |                         |               |               |               |               |               |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                       |                         | 443198        | 443199        | 443200        | 443201        | 443202        |
| Sample Reference                         |       |                       |                         | BH3           | BH4           | BH5           | BH6           | BH7           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 07/05/2015    | 07/05/2015    | 07/05/2015    | 07/05/2015    | 07/05/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### General Inorganics

|                                 |          |     |           |      |      |       |      |        |
|---------------------------------|----------|-----|-----------|------|------|-------|------|--------|
| pH                              | pH Units | N/A | ISO 17025 | 7.1  | 7.1  | 7.0   | 7.0  | 7.2    |
| Free Cyanide                    | µg/l     | 10  | ISO 17025 | < 10 | < 10 | < 10  | < 10 | < 10   |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 51   | < 15 | 11000 | < 15 | 190000 |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 3100 | 110  | 98    | 170  | 300    |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 54   | 2.5  | 69    | 4.0  | 80     |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 3200 | 1400 | 2900  | 5500 | 1700   |

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |      |
|------------------------|------|------|-----------|--------|--------|--------|--------|------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 4100   | < 0.01 | 5100 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 63     | < 0.01 | 78   |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 200    | < 0.01 | 32   |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 61     | < 0.01 | 75   |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 59     | < 0.01 | 77   |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 16     | < 0.01 | 33   |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 8.3    | < 0.01 | 47   |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 9.5    | < 0.01 | 37   |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 3.1    | < 0.01 | 18   |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 2.3    | < 0.01 | 14   |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.9    | < 0.01 | 17   |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.59   | < 0.01 | 6.2  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.7    | < 0.01 | 14   |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 1.3    | < 0.01 | 6.4  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 2.0  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | 0.56   | < 0.01 | 6.2  |

#### Total PAH

|                   |      |     |           |        |        |      |        |      |
|-------------------|------|-----|-----------|--------|--------|------|--------|------|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | < 0.20 | < 0.20 | 4520 | < 0.20 | 5530 |
|-------------------|------|-----|-----------|--------|--------|------|--------|------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |        |        |
|-----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 16.9   | 0.97   | 5.73   | 0.33   | 4.73   |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 220    | 200    | 260    | 140    | 1200   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.03   | < 0.02 | < 0.02 | 0.11   | 0.04   |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 2.4    | 0.5    | 0.4    | < 0.2  | 0.5    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 5.6    | 2.6    | 4.1    | 3.8    | 3.8    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 10     | 0.4    | 2.8    | 0.5    | 0.7    |
| Manganese (dissolved) | µg/l | 0.06 | ISO 17025 | 130    | 1.5    | 1400   | 400    | 3100   |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.9    | 1.1    | 8.0    | 2.6    | 19     |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 5.4    | 6.7    | 11     | 3.6    | 75     |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 2.7    | < 0.5  | 3.4    | < 0.5  | 4.6    |

#### Monoaromatics

|              |      |   |           |       |       |     |       |       |
|--------------|------|---|-----------|-------|-------|-----|-------|-------|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 244 | < 1.0 | 1350  |
| Toluene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 225 | < 1.0 | 41.6  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 312 | < 1.0 | < 1.0 |
| p & m-xylene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 548 | < 1.0 | 984   |
| o-xylene     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 310 | < 1.0 | 430   |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |      |      |      |
|------------------|------|----|------|------|------|------|------|------|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | < 10 | < 10 | 8300 | < 10 | 7400 |
|------------------|------|----|------|------|------|------|------|------|

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The results included within the report are representative of the samples submitted for analysis.

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Analytical Report Number: 15-71458

Project / Site name: Wrexham

Your Order No: HC15016/29180

| Lab Sample Number                        |       |                       |                         | 443198        | 443199        | 443200        | 443201        | 443202        |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                       |                         | BH3           | BH4           | BH5           | BH6           | BH7           |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                       |                         | 07/05/2015    | 07/05/2015    | 07/05/2015    | 07/05/2015    | 07/05/2015    |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |               |               |

#### VOCs

|                                       |      |   |           |       |       |       |       |       |
|---------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Benzene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 244   | < 1.0 | 1350  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 225   | < 1.0 | 41.6  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 312   | < 1.0 | < 1.0 |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 548   | < 1.0 | 984   |
| Styrene                               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 310   | < 1.0 | 430   |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 29.2  | < 1.0 | < 1.0 |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 5.1   | < 1.0 | < 1.0 |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 125   | < 1.0 | 87.6  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 541   | < 1.0 | 241   |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | 20.0  | < 1.0 | < 1.0 |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 15-71458

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |  |  |  |               |                    |                      |  |  |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|--|--|
| Lab Sample Number                        |  |  |  | 443203        | 443204             | 443205               |  |  |
| Sample Reference                         |  |  |  | BH8           | Upstream           | Downstream           |  |  |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        |  |  |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        |  |  |
| Date Sampled                             |  |  |  | 07/05/2015    | 08/05/2015         | 08/05/2015           |  |  |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        |  |  |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |  |  |

#### General Inorganics

|                                 |          |     |           |        |      |       |  |  |
|---------------------------------|----------|-----|-----------|--------|------|-------|--|--|
| pH                              | pH Units | N/A | ISO 17025 | 7.5    | 7.6  | 7.7   |  |  |
| Free Cyanide                    | µg/l     | 10  | ISO 17025 | < 10   | < 10 | < 10  |  |  |
| Ammonium as NH <sub>4</sub>     | µg/l     | 15  | ISO 17025 | 130000 | < 15 | < 15  |  |  |
| Chemical Oxygen Demand (Total)  | mg/l     | 2   | ISO 17025 | 660    | 15   | 14    |  |  |
| BOD (Biochemical Oxygen Demand) | mg/l     | 1   | ISO 17025 | 140    | 1.3  | 1.3   |  |  |
| Total Suspended Solids          | mg/l     | 2   | NONE      | 4100   | 2.0  | < 2.0 |  |  |

#### Speciated PAHs

|                        |      |      |           |        |        |        |  |  |
|------------------------|------|------|-----------|--------|--------|--------|--|--|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 6000   | < 0.01 | < 0.01 |  |  |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 290    | < 0.01 | < 0.01 |  |  |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 43     | < 0.01 | < 0.01 |  |  |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 81     | < 0.01 | < 0.01 |  |  |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 86     | < 0.01 | < 0.01 |  |  |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 19     | < 0.01 | < 0.01 |  |  |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 14     | < 0.01 | < 0.01 |  |  |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 9.9    | < 0.01 | < 0.01 |  |  |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 2.6    | < 0.01 | < 0.01 |  |  |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 1.6    | < 0.01 | < 0.01 |  |  |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.4    | < 0.01 | < 0.01 |  |  |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 0.56   | < 0.01 | < 0.01 |  |  |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 1.2    | < 0.01 | < 0.01 |  |  |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 1.2    | < 0.01 | < 0.01 |  |  |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |  |  |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 0.46   | < 0.01 | < 0.01 |  |  |

#### Total PAH

|                   |      |     |           |      |        |        |  |  |
|-------------------|------|-----|-----------|------|--------|--------|--|--|
| Total EPA-16 PAHs | µg/l | 0.2 | ISO 17025 | 6560 | < 0.20 | < 0.20 |  |  |
|-------------------|------|-----|-----------|------|--------|--------|--|--|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |  |  |
|-----------------------|------|------|-----------|--------|--------|--------|--|--|
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 5.11   | 0.43   | 0.32   |  |  |
| Boron (dissolved)     | µg/l | 10   | ISO 17025 | 550    | 56     | 56     |  |  |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 | 0.03   |  |  |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 0.8    | 0.4    | 0.4    |  |  |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.7    | 4.7    | 4.6    |  |  |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | 1.2    | 0.6    | 0.5    |  |  |
| Manganese (dissolved) | µg/l | 0.06 | ISO 17025 | 1700   | 4.4    | 6.8    |  |  |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |  |  |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 7.8    | 1.8    | 2.0    |  |  |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 23     | 1.8    | 1.9    |  |  |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 7.6    | 2.4    | 2.5    |  |  |

#### Monoaromatics

|              |      |   |           |      |       |       |  |  |
|--------------|------|---|-----------|------|-------|-------|--|--|
| Benzene      | µg/l | 1 | ISO 17025 | 5270 | < 1.0 | < 1.0 |  |  |
| Toluene      | µg/l | 1 | ISO 17025 | 3060 | < 1.0 | < 1.0 |  |  |
| Ethylbenzene | µg/l | 1 | ISO 17025 | 250  | < 1.0 | < 1.0 |  |  |
| p & m-xylene | µg/l | 1 | ISO 17025 | 1670 | < 1.0 | < 1.0 |  |  |
| o-xylene     | µg/l | 1 | ISO 17025 | 704  | < 1.0 | < 1.0 |  |  |

#### Petroleum Hydrocarbons

|                  |      |    |      |      |      |      |  |  |
|------------------|------|----|------|------|------|------|--|--|
| TPH1 (C10 - C40) | µg/l | 10 | NONE | 7500 | < 10 | < 10 |  |  |
|------------------|------|----|------|------|------|------|--|--|



Analytical Report Number: 15-71458

Project / Site name: Wrexham

Your Order No: HC15016/29180

|                                          |       |                       |                         |               |               |               |  |  |
|------------------------------------------|-------|-----------------------|-------------------------|---------------|---------------|---------------|--|--|
| Lab Sample Number                        |       |                       |                         | 443203        | 443204        | 443205        |  |  |
| Sample Reference                         |       |                       |                         | BH8           | Upstream      | Downstream    |  |  |
| Sample Number                            |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Depth (m)                                |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Date Sampled                             |       |                       |                         | 07/05/2015    | 08/05/2015    | 08/05/2015    |  |  |
| Time Taken                               |       |                       |                         | None Supplied | None Supplied | None Supplied |  |  |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of<br>detection | Accreditation<br>Status |               |               |               |  |  |

#### VOCs

|                                       |      |   |           |       |       |       |  |  |
|---------------------------------------|------|---|-----------|-------|-------|-------|--|--|
| Chloromethane                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chloroethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromomethane                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Vinyl Chloride                        | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichlorofluoromethane                | µg/l | 1 | NONE      | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloro 1,2,2-Trifluoroethane | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,2-dichloroethene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| MTBE (Methyl Tertiary Butyl Ether)    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 2,2-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloromethane                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloroethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1-Dichloropropene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,2-dichloroethene              | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Benzene                               | µg/l | 1 | ISO 17025 | 5270  | < 1.0 | < 1.0 |  |  |
| Tetrachloromethane                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trichloroethene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromomethane                        | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Bromodichloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Cis-1,3-dichloropropene               | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Trans-1,3-dichloropropene             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Toluene                               | µg/l | 1 | ISO 17025 | 3060  | < 1.0 | < 1.0 |  |  |
| 1,1,2-Trichloroethane                 | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-Dichloropropane                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Dibromochloromethane                  | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Tetrachloroethene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromoethane                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Chlorobenzene                         | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,1,1,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Ethylbenzene                          | µg/l | 1 | ISO 17025 | 250   | < 1.0 | < 1.0 |  |  |
| p & m-xylene                          | µg/l | 1 | ISO 17025 | 1670  | < 1.0 | < 1.0 |  |  |
| Styrene                               | µg/l | 1 | ISO 17025 | 647   | < 1.0 | < 1.0 |  |  |
| Tribromomethane                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| o-xylene                              | µg/l | 1 | ISO 17025 | 704   | < 1.0 | < 1.0 |  |  |
| 1,1,2,2-Tetrachloroethane             | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Isopropylbenzene                      | µg/l | 1 | ISO 17025 | 10.5  | < 1.0 | < 1.0 |  |  |
| Bromobenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| N-Propylbenzene                       | µg/l | 1 | ISO 17025 | 11.7  | < 1.0 | < 1.0 |  |  |
| 2-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 4-Chlorotoluene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3,5-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 179   | < 1.0 | < 1.0 |  |  |
| Tert-Butylbenzene                     | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trimethylbenzene                | µg/l | 1 | ISO 17025 | 540   | < 1.0 | < 1.0 |  |  |
| Sec-Butylbenzene                      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,3-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| P-Isopropyltoluene                    | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,4-dichlorobenzene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Butylbenzene                          | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2-Dibromo-3-chloropropane           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,4-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| Hexachlorobutadiene                   | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |
| 1,2,3-Trichlorobenzene                | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |  |  |

U/S = Unsuitable Sample I/S = Insufficient Sample

Iss No 15-71458-2

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The results included within the report are representative of the samples submitted for analysis.

Page 5 of 6



**Analytical Report Number : 15-71458**

**Project / Site name: Wrexham**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                    | Analytical Method Description                                                                                                                                                  | Analytical Method Reference                                                                                                                          | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Ammonium as NH <sub>4</sub> in water    | Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L082-PL       | W                  | ISO 17025            |
| Biological oxygen demand of water       | Determination of biochemical oxygen demand in water (5 days). Accredited matrices: SW, PW, GW.                                                                                 | In-house method based on standard method 5210B. Samples received > 24 hrs after sampling, data may not be valid and should be interpreted with care. | L086-PL       | W                  | ISO 17025            |
| Boron in water                          | Determination of boron by acidification followed by ICP-OES. Accredited matrices: SW PW GW                                                                                     | In-house method based on MEWAM                                                                                                                       | L039-PL       | W                  | ISO 17025            |
| BTEX in water                           | Determination of BTEX in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                               | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |
| Chemical Oxygen Demand in Water (Total) | Determination of total COD in water by reflux oxidation with acidified K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> followed by colorimetry. Accredited matrices: SW, PW, GW. | HACH DR/890 Colorimeter Procedures Manual (48470-22) (Ref 0170.2)                                                                                    | L065-PL       | W                  | ISO 17025            |
| Free cyanide in water                   | Determination of free cyanide by distillation followed by colorimetry.                                                                                                         | In-house method                                                                                                                                      | L080-PL       | W                  | ISO 17025            |
| Metals in water by ICP-MS (dissolved)   | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                      | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.                                      | L012-PL       | W                  | ISO 17025            |
| Metals in water by ICP-OES (dissolved)  | Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                                         | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                                                                 | L039-PL       | W                  | ISO 17025            |
| Monohydric phenols in water             | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                                   | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)                                      | L080-PL       | W                  | ISO 17025            |
| pH in water                             | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                       | In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests                                                                     | L005-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water          | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW     | In-house method based on USEPA 8270                                                                                                                  | L070-UK       | W                  | ISO 17025            |
| Suspended solids in water               | Determined gravimetrically with GFC filtration papers.                                                                                                                         | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton                                               | L004-PL       | W                  | NONE                 |
| TPH1 (Waters)                           | Determination of dichloromethane extractable hydrocarbons in water by GC-MS.                                                                                                   | In-house method                                                                                                                                      | L070-UK       | W                  | NONE                 |
| Volatile organic compounds in water     | Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                         | In-house method based on USEPA8260                                                                                                                   | L073W-PL      | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

## **Appendix E**

### **Environmental Monitoring**

**Stansted**

**East Kilbride**

**Manchester**

**Port Talbot**

**Omagh**

**Plymouth**

Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414

16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF  
T. 01355 573360 F. 01355 573351

Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE  
T. 0161 868 1300 F. 0161 868 1301

Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE  
T. 01656 749823 F. 01656 740824

Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU  
T. 028 8225 3378

Unit 13, Barn Close, Langan Business Park, Plymouth, PL7 5HQ  
T. 01752 347789 F. 01752 347749



2520

## Hygiene Unit Air Monitoring Certificate

Unique ID of Hygiene Unit: 151 RT 1628

15-MAN-A-4002

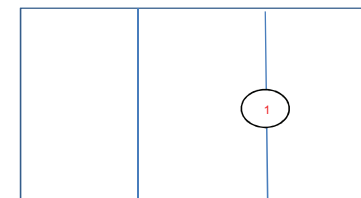
All tests conducted in accordance with  
documented in house procedures and HSE  
guidance HSG248

Customer Order 0

Issue Date 22/07/2015

|                             |                                                    |                         |                 |
|-----------------------------|----------------------------------------------------|-------------------------|-----------------|
| Site Address                | Old Gasworks site, Rivulet Road, Wrexham, LL13 8DT |                         |                 |
| Asbestos Removal Contractor | NA                                                 |                         |                 |
| Client Name and Address     | Hydrock                                            |                         |                 |
| Date sampled                | 22/07/2015                                         | Date counted            | 22/07/2015      |
| Samplers Signature          |                                                    | Counters Signature      |                 |
| Sampled by                  | Phil Jesney                                        | Slides Counted by       | Phil Jesney     |
| Issuing REC Lab             | Manchester                                         | Location Slides Counted | Van, Mobile lab |

Clean End



Dirty End

## Visual Inspection of Hygiene Unit

|                                              |     |                                     |     |                                 |       |                            |
|----------------------------------------------|-----|-------------------------------------|-----|---------------------------------|-------|----------------------------|
| Visual Inspection of Hygiene Unit completed? | Yes | Unit free from waste and equipment? | Yes | Method of Dust Disturbance      | Brush | Visual Inspection Comments |
| Visual examination time (mins)               | 5   | Interior of Hygiene Unit dry?       | Yes | Time of Dust Disturbance (mins) | 1.5   |                            |
| Unit free of visible dust /debris?           | Yes | Air mover off and sealed?           | Yes | Floor Area of Hygiene Unit (m2) | 6     |                            |

## Air Monitoring and Fibre Count Details

| Sample No. | Sample Type/Location | Pump EID | Cowl EID | Time  |        |              | Flow Rate (l/min) |     |        | Volume Sampled (l) | Graticule Areas Examined | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm3) | Limit Of Quantification (fibres / cm3) |
|------------|----------------------|----------|----------|-------|--------|--------------|-------------------|-----|--------|--------------------|--------------------------|-----------------------|------------------------------------|----------------------------------------|
|            |                      |          |          | Start | Finish | Total (mins) | Start             | Mid | Finish |                    |                          |                       |                                    |                                        |
| HU1        | Shower/Dirty End     | 261      | 1128     | 14:25 | 14:55  | 30           | 16.0              | --- | 16.0   | 480.0              | 200                      | 1.0                   | ≤0.009999                          | 0.01                                   |
| HU2        | Sample No. Not Used  |          |          |       |        |              |                   |     |        |                    |                          |                       |                                    |                                        |

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

|                             |      |       |  |                                |           |
|-----------------------------|------|-------|--|--------------------------------|-----------|
| Result of Visual Inspection | PASS | Sign: |  | Removal Contractors Signature: | Comments: |
| Results of Air Monitoring   | PASS | Sign: |  |                                |           |



**Stansted** Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414  
**East Kilbride** 16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF T. 01355 573360 F. 01355 573351  
**Manchester** Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T. 0161 868 1300 F. 0161 868 1301  
**Port Talbot** Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE T. 01656 749823 F. 01656 740824  
**Omagh** Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU T. 028 8225 3378  
**Plymouth** Unit 13, Barn Close, Langage Business Park, Plymouth, PL7 5HQ T. 01752 347789 F. 01752 347749



**Personal Air Monitoring Certificate** Name of Person Tested: Richard Mabley 15/MAN/A/3662

All tests conducted in accordance with documented in house procedures and HSE guidance HSG248

Customer Order  Issue Date

|                                    |                                                                                                |                         |                         |
|------------------------------------|------------------------------------------------------------------------------------------------|-------------------------|-------------------------|
| Site Address                       | Former Gas Works, Rivulet Road, Wrexham, LL13 8DT                                              |                         |                         |
| Areas and Description of Work      | Background and personal air monitoring whilst loading asbestos containing materials into skip. |                         |                         |
| Asbestos Removal Contractor        | N/A                                                                                            |                         |                         |
| Client Name and Address            | Hydrock, Over Court Barns, Over Lane, Almondsbury, BS32 4DF                                    |                         |                         |
| Tasks Undertaken During Monitoring | Digger driver loading asbestos containing materials into skip.                                 |                         |                         |
| Mask Brand                         | N/A                                                                                            | Mask Model              | N/A                     |
| Date sampled                       | 07/07/2015                                                                                     | Date counted            | 07/07/2015              |
| Samplers Signature                 |                                                                                                | Counters Signature      |                         |
| Sampled by                         | James Pool                                                                                     | Slides Counted by       | James Pool              |
| Issuing REC Lab                    | Manchester                                                                                     | Location Slides Counted | Back Of REC Van BJ63YGT |

**Air Monitoring and Fibre Count Details**

| Personal Sample No. | Location / Name / Activity | Sample Type         | Pump EID | Cowl EID | Time  |        |              | Flow Rate (l/min) |     |        | Volume Sampled (l) | Graticule Areas Examined | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm3) | Limit Of Quantification (fibres / cm3) |
|---------------------|----------------------------|---------------------|----------|----------|-------|--------|--------------|-------------------|-----|--------|--------------------|--------------------------|-----------------------|------------------------------------|----------------------------------------|
|                     |                            |                     |          |          | Start | Finish | Total (mins) | Start             | Mid | Finish |                    |                          |                       |                                    |                                        |
| P1                  | Excavation Area            | Personal            | 115      | 58       | 09:28 | 10:30  | 62           | 4.0               | --- | 4.0    | 248.0              | 100                      | 1.0                   | 20.000709<br>677410254             | 0.04                                   |
|                     |                            | Sample No. Not Used |          |          |       |        |              |                   | --- |        |                    |                          |                       |                                    |                                        |
|                     |                            | Sample No. Not Used |          |          |       |        |              |                   | --- |        |                    |                          |                       |                                    |                                        |
|                     |                            | Sample No. Not Used |          |          |       |        |              |                   | --- |        |                    |                          |                       |                                    |                                        |

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

**Comments**

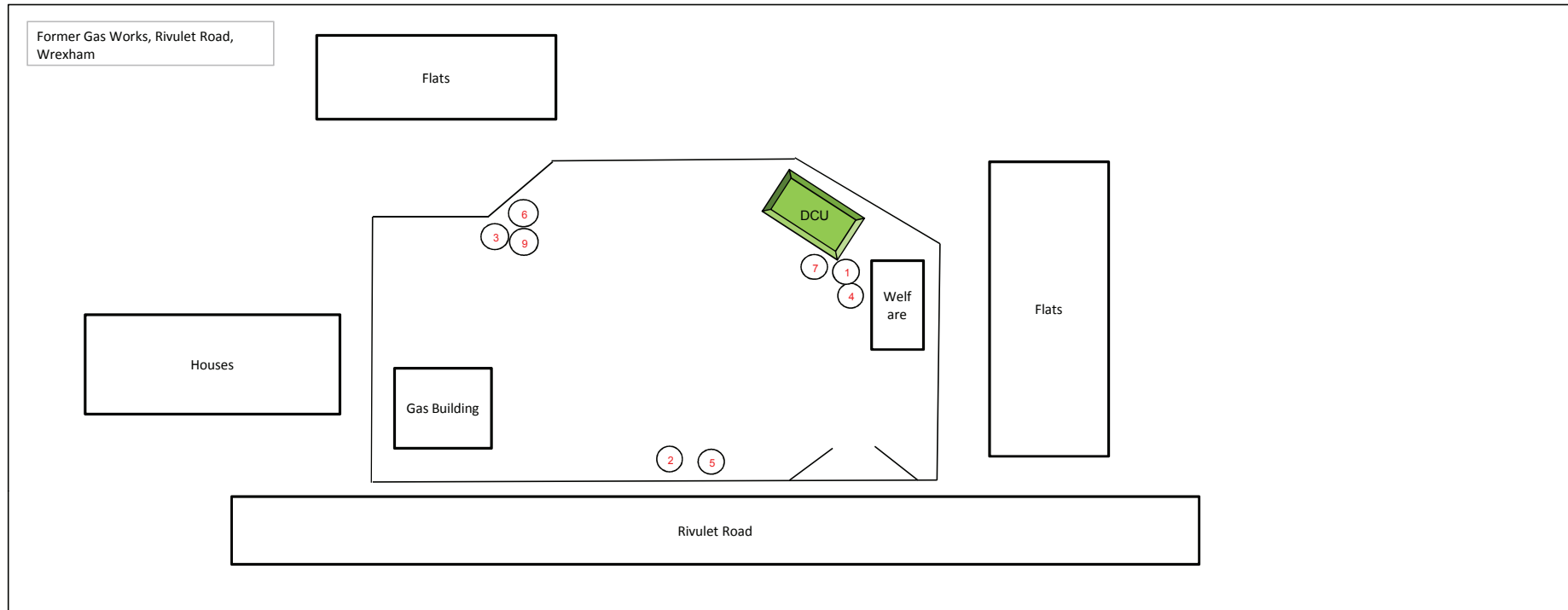


| <br><b>REC Asbestos, a division of Resource and Environmental Consultants Ltd</b><br> |                            | <b>Stansted</b><br>Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414<br><b>East Kilbride</b><br>16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF T. 01355 573360 F. 01355 573351<br><b>Manchester</b><br>Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T. 0161 868 1300 F. 0161 868 1301<br><b>Port Talbot</b><br>Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE T. 01656 749823 F. 01656 740824<br><b>Omagh</b><br>Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU T. 028 8225 3378<br><b>Plymouth</b><br>Unit 13, Barn Close, Langage Business Park, Plymouth, PL7 5HQ T. 01752 347789 F. 01752 347749 | <br><br><br>2520 |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-------------|-------------------------------------------------------------------------------------|-----|-------------------------|--------------------|-------------------------------------------------------------------------------------|-----------------------|------------------------------------|----------------------------------------|----------------------------|--|
| <b>Air Monitoring &amp; Visual Assessment Certificate</b>                                                                                                                                                                                               |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    | <b>15/MAN/A/3265</b>                                                                |                       |                                    |                                        |                            |  |
| All tests conducted in accordance with documented in house procedures and HSE guidance HSG248                                                                                                                                                           |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| Customer Order                                                                                                                                                                                                                                          |                            | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           | Issue Date                                                                                                                                                                                        |       | 16/06/2015         |             | Date sampled                                                                        |     | 16/06/2015              |                    | Date counted                                                                        |                       | 16/06/2015                         |                                        |                            |  |
| Site Address                                                                                                                                                                                                                                            |                            | Former Gas works, Rivulet Road, Wrexham, LL13 8DT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       | Samplers Signature |             |  |     | Counters Signature      |                    |  |                       |                                    |                                        |                            |  |
| Areas and Description of Work                                                                                                                                                                                                                           |                            | Reassurance boundary monitoring During excavating of site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| Asbestos Removal Contractor                                                                                                                                                                                                                             |                            | Hydrock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       | Sampled by         |             | K Hickin                                                                            |     | Slides Counted by       |                    | K Hickin                                                                            |                       |                                    |                                        |                            |  |
| Client Name and Address                                                                                                                                                                                                                                 |                            | Hydrock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       | Issuing REC Lab    |             | Manchester                                                                          |     | Location Slides Counted |                    | BL14 CVR                                                                            |                       |                                    |                                        |                            |  |
| <b>Visual Inspection of Work Area (where conducted)</b>                                                                                                                                                                                                 |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| Visual Inspection of work area completed?                                                                                                                                                                                                               |                            | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                           | Enclosure Present?                                                                                                                                                                                |       | Not Applicable     |             | Air mover off and sealed?                                                           |     | Not Applicable          |                    | Enclosure volume (m³)                                                               |                       | na                                 |                                        | Visual Inspection Comments |  |
| Visual examination time (mins)                                                                                                                                                                                                                          |                            | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                           | Exterior of enclosure intact?                                                                                                                                                                     |       | Not Applicable     |             | Area free of visible dust /debris?                                                  |     | Not Applicable          |                    | Enclosure area (m²)                                                                 |                       | na                                 |                                        |                            |  |
| Dust Disturbance Conducted?                                                                                                                                                                                                                             |                            | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                           | Interior of enclosure intact?                                                                                                                                                                     |       | Not Applicable     |             | Interior of enclosure dry?                                                          |     | Not Applicable          |                    | Suggested No. air tests based on enc vol                                            |                       | #VALUE!                            |                                        |                            |  |
| Time of Dust Disturbance (mins)                                                                                                                                                                                                                         |                            | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                           | Visual assessment was only conducted in the work area(s) described on this certificate. Please see the associated Hygiene Unit Inspection Certificate for details of the Hygiene Unit Inspection. |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| <b>Air Monitoring and Fibre Count Details</b>                                                                                                                                                                                                           |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     |     |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| Sample No.                                                                                                                                                                                                                                              | Location / Name / Activity | Sample Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Pump EID                                                                                                                                                                                                                                                                  | Cowl EID                                                                                                                                                                                          | Time  |                    |             | Flow Rate (l/min)                                                                   |     |                         | Volume Sampled (l) | Graticule Areas Examined                                                            | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm³) | Limit Of Quantification (fibres / cm³) |                            |  |
|                                                                                                                                                                                                                                                         |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   | Start | Finish             | Total (min) | Start                                                                               | Mid | Finish                  |                    |                                                                                     |                       |                                    |                                        |                            |  |
| 1                                                                                                                                                                                                                                                       | Adj DCU                    | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 373                                                                                                                                                                                                                                                                       | 336                                                                                                                                                                                               | 11:07 | 12:07              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 1.5                   | <0.01                              | 0.01                                   |                            |  |
| 2                                                                                                                                                                                                                                                       | Centre Boundary Adj Road   | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 339                                                                                                                                                                                               | 11:07 | 12:07              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 1.0                   | <0.01                              | 0.01                                   |                            |  |
| 3                                                                                                                                                                                                                                                       | Rear LHS Boundary          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 340                                                                                                                                                                                               | 11:07 | 12:07              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 1.0                   | <0.01                              | 0.01                                   |                            |  |
| 4                                                                                                                                                                                                                                                       | Adj Welfare                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 373                                                                                                                                                                                                                                                                       | 340                                                                                                                                                                                               | 13:18 | 14:18              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 0.5                   | <0.01                              | 0.01                                   |                            |  |
| 5                                                                                                                                                                                                                                                       | Centre Boundary Adj        | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 336                                                                                                                                                                                               | 13:18 | 14:18              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 0.5                   | <0.01                              | 0.01                                   |                            |  |
| 6                                                                                                                                                                                                                                                       | Rear LHS Boundary          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 339                                                                                                                                                                                               | 13:19 | 14:19              | 60          | 8.0                                                                                 | --- | 8.0                     | 480.0              | 200                                                                                 | 1.0                   | <0.01                              | 0.01                                   |                            |  |
| 7                                                                                                                                                                                                                                                       | Adj Welfare                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 373                                                                                                                                                                                                                                                                       | 337                                                                                                                                                                                               | 14:27 | 14:57              | 30          | 8.0                                                                                 | --- | 8.0                     | 240.0              | 200                                                                                 | 0.5                   | <0.01                              | 0.02                                   |                            |  |
| 8                                                                                                                                                                                                                                                       | Rear LHS Boundary          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 335                                                                                                                                                                                               | 14:28 | 14:58              | 30          | 8.0                                                                                 | --- | 8.0                     | 240.0              | 200                                                                                 | 1.0                   | <0.01                              | 0.02                                   |                            |  |
| 9                                                                                                                                                                                                                                                       |                            | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     | --- |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| 10                                                                                                                                                                                                                                                      |                            | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     | --- |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |
| 11                                                                                                                                                                                                                                                      |                            | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                   |       |                    |             |                                                                                     | --- |                         |                    |                                                                                     |                       |                                    |                                        |                            |  |

|    |  |                     |  |  |  |  |  |  |     |  |  |  |  |  |
|----|--|---------------------|--|--|--|--|--|--|-----|--|--|--|--|--|
| 12 |  | Sample No. Not Used |  |  |  |  |  |  | --- |  |  |  |  |  |
|----|--|---------------------|--|--|--|--|--|--|-----|--|--|--|--|--|

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

## Diagram



### Comments

### Removal Contractors Acknowledgement

(only required when a visual assessment has been conducted)

I acknowledge that the above diagram is a true representation of the site layout

Signed

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Date

16/06/2015

Print Name

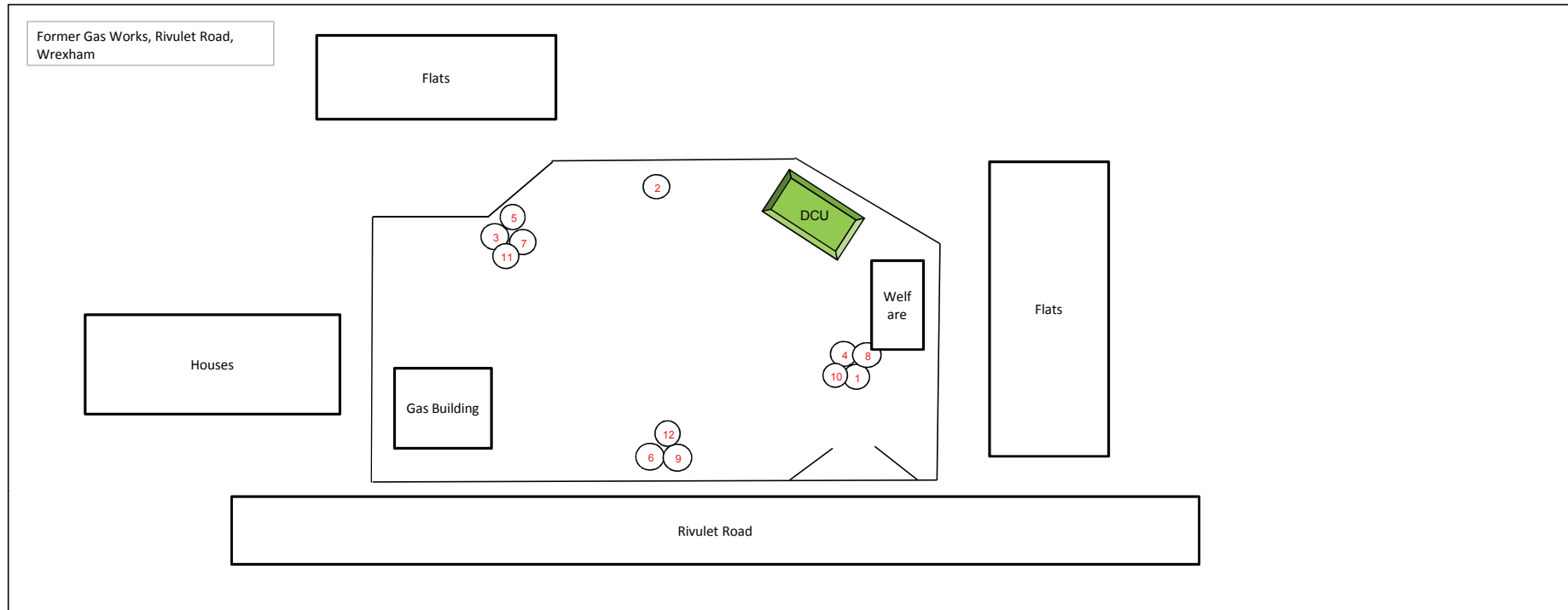
Mark Dodd

| <br><b>REC Asbestos, a division of Resource and Environmental Consultants Ltd</b><br> |                                                            | <b>Stansted</b><br>Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414<br><b>East Kilbride</b><br>16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF T. 01355 573360 F. 01355 573351<br><b>Manchester</b><br>Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T. 0161 868 1300 F. 0161 868 1301<br><b>Port Talbot</b><br>Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE T. 01656 749823 F. 01656 740824<br><b>Omagh</b><br>Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU T. 028 8225 3378<br><b>Plymouth</b><br>Unit 13, Barn Close, Langage Business Park, Plymouth, PL7 5HQ T. 01752 347789 F. 01752 347749 | <br><br><br>2520 |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    |                          |                       |                                    |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|--------|--------------------|--------------------------|-----------------------|------------------------------------|----------------------------------------|
| <b>Air Monitoring &amp; Visual Assessment Certificate</b>                                                                                                                                                                                               |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    | <b>15/MAN/A/3204</b>     |                       |                                    |                                        |
| All tests conducted in accordance with documented in house procedures and HSE guidance HSG248                                                                                                                                                           |                                                            | <b>Customer Order</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                                                                                                                                                                                                                         | <b>Issue Date</b>                         | 11/06/2015     | <b>Date sampled</b>                                                                                           | 11/06/2015                                                                                                    | <b>Date counted</b>               | 11/06/2015 |        |                    |                          |                       |                                    |                                        |
| <b>Site Address</b>                                                                                                                                                                                                                                     | Former Gas works, Rivulet Road, Wrexham, LL13 8DT          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                | <b>Samplers Signature</b>  | <b>Counters Signature</b>  |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Areas and Description of Work</b>                                                                                                                                                                                                                    | Reassurance boundary monitoring During excavating of site. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Asbestos Removal Contractor</b>                                                                                                                                                                                                                      | Hydrock                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                | <b>Sampled by</b>                                                                                             | K Hickin                                                                                                      | <b>Slides Counted by</b>          | K Hickin   |        |                    |                          |                       |                                    |                                        |
| <b>Client Name and Address</b>                                                                                                                                                                                                                          | Hydrock                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                | <b>Issuing REC Lab</b>                                                                                        | Manchester                                                                                                    | <b>Location Slides Counted</b>    | BL14 CVR   |        |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of Work Area (where conducted)</b>                                                                                                                                                                                                 |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of work area completed?</b>                                                                                                                                                                                                        | No                                                         | <b>Enclosure Present?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Not Applicable                                                                                                                                                                                                                                                            | <b>Air mover off and sealed?</b>          | Not Applicable | <b>Enclosure volume (m³)</b>                                                                                  | na                                                                                                            | <b>Visual Inspection Comments</b> |            |        |                    |                          |                       |                                    |                                        |
| <b>Visual examination time (mins)</b>                                                                                                                                                                                                                   | Not Applicable                                             | <b>Exterior of enclosure intact?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Not Applicable                                                                                                                                                                                                                                                            | <b>Area free of visible dust /debris?</b> | Not Applicable | <b>Enclosure area (m²)</b>                                                                                    | na                                                                                                            |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Dust Disturbance Conducted?</b>                                                                                                                                                                                                                      | Not Applicable                                             | <b>Interior of enclosure intact?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Not Applicable                                                                                                                                                                                                                                                            | <b>Interior of enclosure dry?</b>         | Not Applicable | <b>Suggested No. air tests based on enc vol</b>                                                               | #VALUE!                                                                                                       |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Time of Dust Disturbance (mins)</b>                                                                                                                                                                                                                  | Not Applicable                                             | Visual assessment was only conducted in the work area(s) described on this certificate. Please see the associated Hygiene Unit Inspection Certificate for details of the Hygiene Unit Inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    |                          |                       |                                    |                                        |
| <b>Air Monitoring and Fibre Count Details</b>                                                                                                                                                                                                           |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                |                                                                                                               |                                                                                                               |                                   |            |        |                    |                          |                       |                                    |                                        |
| Sample No.                                                                                                                                                                                                                                              | Location / Name / Activity                                 | Sample Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Pump EID                                                                                                                                                                                                                                                                  | Cowl EID                                  | Time           |                                                                                                               |                                                                                                               | Flow Rate (l/min)                 |            |        | Volume Sampled (l) | Graticule Areas Examined | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm³) | Limit Of Quantification (fibres / cm³) |
|                                                                                                                                                                                                                                                         |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           | Start          | Finish                                                                                                        | Total (min)                                                                                                   | Start                             | Mid        | Finish |                    |                          |                       |                                    |                                        |
| 1                                                                                                                                                                                                                                                       | Adj Welfare                                                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 340                                       | 09:44          | 10:44                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 2                                                                                                                                                                                                                                                       | Rear Centre Boundary                                       | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 338                                       | 09:44          | 10:44                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 3                                                                                                                                                                                                                                                       | Rear LHS Boundary                                          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 372                                                                                                                                                                                                                                                                       | 339                                       | 09:44          | 10:44                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 4                                                                                                                                                                                                                                                       | Adj Welfare                                                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 339                                       | 11:11          | 12:11                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 5                                                                                                                                                                                                                                                       | Rear LHS Boundary                                          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 338                                       | 11:11          | 12:11                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.5                   | <0.01                              | 0.01                                   |
| 6                                                                                                                                                                                                                                                       | Centre Boundary Adj Road                                   | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 372                                                                                                                                                                                                                                                                       | 340                                       | 11:11          | 12:11                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 2.0                   | <0.01                              | 0.01                                   |
| 7                                                                                                                                                                                                                                                       | Adj Welfare                                                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 70                                                                                                                                                                                                                                                                        | 336                                       | 12:18          | 13:18                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 2.0                   | <0.01                              | 0.01                                   |
| 8                                                                                                                                                                                                                                                       | Rear LHS Boundary                                          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 335                                       | 12:18          | 13:18                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 9                                                                                                                                                                                                                                                       | Centre Boundary Adj Road                                   | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 372                                                                                                                                                                                                                                                                       | 337                                       | 12:18          | 13:18                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.5                   | <0.01                              | 0.01                                   |
| 10                                                                                                                                                                                                                                                      | Adj Welfare                                                | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 373                                                                                                                                                                                                                                                                       | 338                                       | 13:38          | 14:38                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.5                   | <0.01                              | 0.01                                   |
| 11                                                                                                                                                                                                                                                      | Rear LHS Boundary                                          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 258                                                                                                                                                                                                                                                                       | 339                                       | 13:38          | 14:38                                                                                                         | 60                                                                                                            | 8.0                               | ---        | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |

|    |                 |             |     |     |       |       |    |     |     |     |       |     |     |       |      |
|----|-----------------|-------------|-----|-----|-------|-------|----|-----|-----|-----|-------|-----|-----|-------|------|
| 12 | Centre Adj Road | Reassurance | 372 | 340 | 13:39 | 14:39 | 60 | 8.0 | --- | 8.0 | 480.0 | 200 | 1.5 | <0.01 | 0.01 |
|----|-----------------|-------------|-----|-----|-------|-------|----|-----|-----|-----|-------|-----|-----|-------|------|

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

## Diagram



### Comments

### Removal Contractors Acknowledgement

(only required when a visual assessment has been conducted)

I acknowledge that the above diagram is a true representation of the site layout

Signed

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Date

11/06/2015

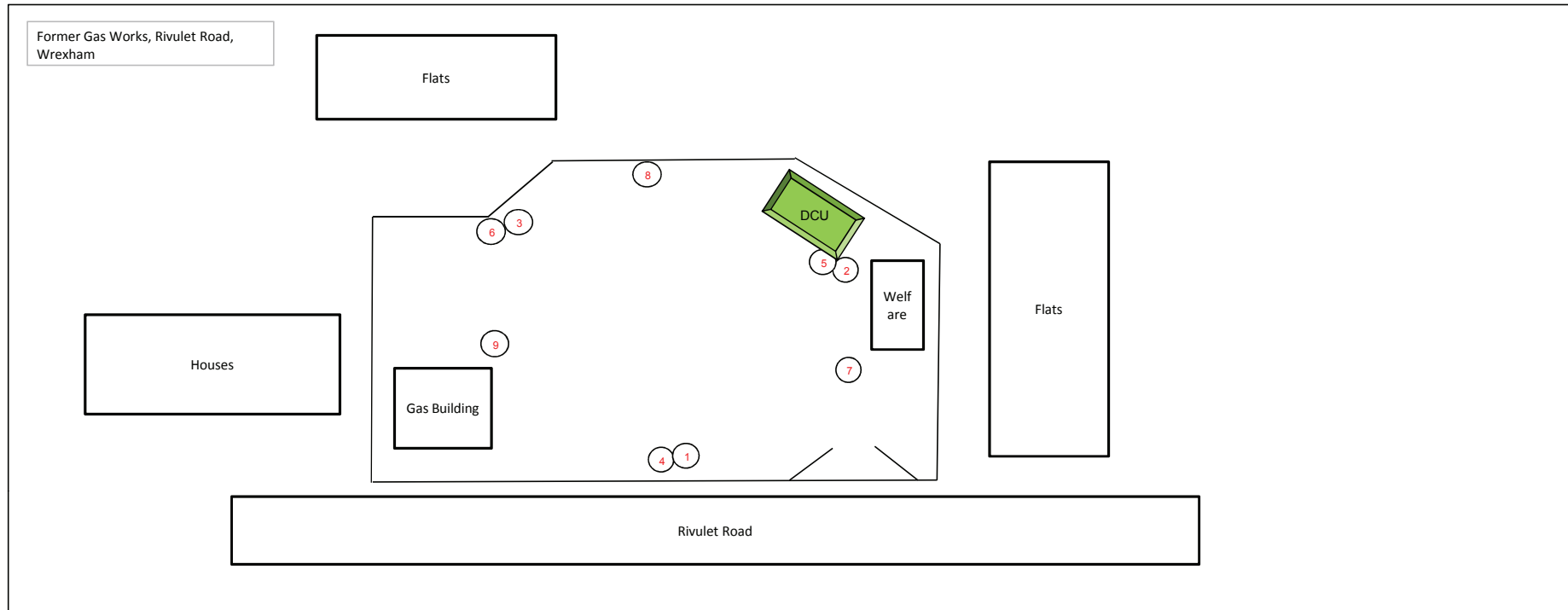
Print Name

Mark Dodd

| <br><b>REC Asbestos, a division of Resource and Environmental Consultants Ltd</b><br> |                                                                                                      | <b>Stansted</b><br>Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414<br><b>East Kilbride</b><br>16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF T. 01355 573360 F. 01355 573351<br><b>Manchester</b><br>Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T. 0161 868 1300 F. 0161 868 1301<br><b>Port Talbot</b><br>Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE T. 01656 749823 F. 01656 740824<br><b>Omagh</b><br>Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU T. 028 8225 3378<br><b>Plymouth</b><br>Unit 13, Barn Close, Langleigh Business Park, Plymouth, PL7 5HQ T. 01752 347789 F. 01752 347749 | <br><br><br>2520 |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------|-------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|---------------------------|-------------------------------------------------------------------------------------|--------------------|--------------------------|-----------------------|------------------------------------|----------------------------------------|
| <b>Air Monitoring &amp; Visual Assessment Certificate</b>                                                                                                                                                                                               |                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    | <b>15/MAN/A/3173</b>     |                       |                                    |                                        |
| All tests conducted in accordance with documented in house procedures and HSE guidance HSG248                                                                                                                                                           |                                                                                                      | <b>Customer Order</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0                                                                                                                                                                                                                                                                         | <b>Issue Date</b>                         | 10/06/2015     | <b>Date sampled</b>                             | 10/06/2015                                                                          | <b>Date counted</b>               | 10/06/2015                |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Site Address</b>                                                                                                                                                                                                                                     | Former Gas works, Rivulet Road, Wrexham, LL13 8DT                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                | <b>Samplers Signature</b>                       |  |                                   | <b>Counters Signature</b> |  |                    |                          |                       |                                    |                                        |
| <b>Areas and Description of Work</b>                                                                                                                                                                                                                    | Reassurance boundary monitoring During hand picking Asbestos cement debris and excavating from site. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                | <b>Sampled by</b>                               | K Hickin                                                                            | <b>Slides Counted by</b>          | K Hickin                  |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Asbestos Removal Contractor</b>                                                                                                                                                                                                                      | Hydrock                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                | <b>Issuing REC Lab</b>                          | Manchester                                                                          | <b>Location Slides Counted</b>    | BL14 CVR                  |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Client Name and Address</b>                                                                                                                                                                                                                          | Hydrock                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of Work Area (where conducted)</b>                                                                                                                                                                                                 |                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of work area completed?</b>                                                                                                                                                                                                        | No                                                                                                   | <b>Enclosure Present?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Not Applicable                                                                                                                                                                                                                                                            | <b>Air mover off and sealed?</b>          | Not Applicable | <b>Enclosure volume (m³)</b>                    | na                                                                                  | <b>Visual Inspection Comments</b> |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Visual examination time (mins)</b>                                                                                                                                                                                                                   | Not Applicable                                                                                       | <b>Exterior of enclosure intact?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Not Applicable                                                                                                                                                                                                                                                            | <b>Area free of visible dust /debris?</b> | Not Applicable | <b>Enclosure area (m²)</b>                      | na                                                                                  |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Dust Disturbance Conducted?</b>                                                                                                                                                                                                                      | Not Applicable                                                                                       | <b>Interior of enclosure intact?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Not Applicable                                                                                                                                                                                                                                                            | <b>Interior of enclosure dry?</b>         | Not Applicable | <b>Suggested No. air tests based on enc vol</b> | #VALUE!                                                                             |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Time of Dust Disturbance (mins)</b>                                                                                                                                                                                                                  | Not Applicable                                                                                       | Visual assessment was only conducted in the work area(s) described on this certificate. Please see the associated Hygiene Unit Inspection Certificate for details of the Hygiene Unit Inspection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| <b>Air Monitoring and Fibre Count Details</b>                                                                                                                                                                                                           |                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   |                           |                                                                                     |                    |                          |                       |                                    |                                        |
| Sample No.                                                                                                                                                                                                                                              | Location / Name / Activity                                                                           | Sample Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pump EID                                                                                                                                                                                                                                                                  | Cowl EID                                  | Time           |                                                 |                                                                                     | Flow Rate (l/min)                 |                           |                                                                                     | Volume Sampled (l) | Graticule Areas Examined | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm³) | Limit Of Quantification (fibres / cm³) |
|                                                                                                                                                                                                                                                         |                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                           |                                           | Start          | Finish                                          | Total (min)                                                                         | Start                             | Mid                       | Finish                                                                              |                    |                          |                       |                                    |                                        |
| 1                                                                                                                                                                                                                                                       | Boundary fence adj road                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 70                                                                                                                                                                                                                                                                        | 340                                       | 09:44          | 10:44                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 2                                                                                                                                                                                                                                                       | Adj DCU                                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 258                                                                                                                                                                                                                                                                       | 338                                       | 09:44          | 10:44                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 0.0                   | <0.01                              | 0.01                                   |
| 3                                                                                                                                                                                                                                                       | Rear LHS Boundary                                                                                    | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 372                                                                                                                                                                                                                                                                       | 339                                       | 09:44          | 10:44                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 4                                                                                                                                                                                                                                                       | Boundary fence adj road                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 70                                                                                                                                                                                                                                                                        | 339                                       | 10:58          | 11:58                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 5                                                                                                                                                                                                                                                       | Adj DCU                                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 258                                                                                                                                                                                                                                                                       | 338                                       | 10:58          | 11:58                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 6                                                                                                                                                                                                                                                       | Rear LHS Boundary                                                                                    | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 372                                                                                                                                                                                                                                                                       | 340                                       | 10:58          | 11:58                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 7                                                                                                                                                                                                                                                       | Adj Welfare                                                                                          | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 70                                                                                                                                                                                                                                                                        | 338                                       | 12:27          | 13:27                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 8                                                                                                                                                                                                                                                       | Rear Centre Boundary                                                                                 | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 258                                                                                                                                                                                                                                                                       | 339                                       | 12:27          | 13:27                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 9                                                                                                                                                                                                                                                       | Adj Gas Building                                                                                     | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 372                                                                                                                                                                                                                                                                       | 340                                       | 12:27          | 13:27                                           | 60                                                                                  | 8.0                               | ---                       | 8.0                                                                                 | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 10                                                                                                                                                                                                                                                      |                                                                                                      | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   | ---                       |                                                                                     |                    |                          |                       |                                    |                                        |
| 11                                                                                                                                                                                                                                                      |                                                                                                      | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   | ---                       |                                                                                     |                    |                          |                       |                                    |                                        |
| 12                                                                                                                                                                                                                                                      |                                                                                                      | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                           |                                           |                |                                                 |                                                                                     |                                   | ---                       |                                                                                     |                    |                          |                       |                                    |                                        |

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

## Diagram



### Comments

### Removal Contractors Acknowledgement

(only required when a visual assessment has been conducted)

I acknowledge that the above diagram is a true representation of the site layout

Signed

Date

10/06/2015

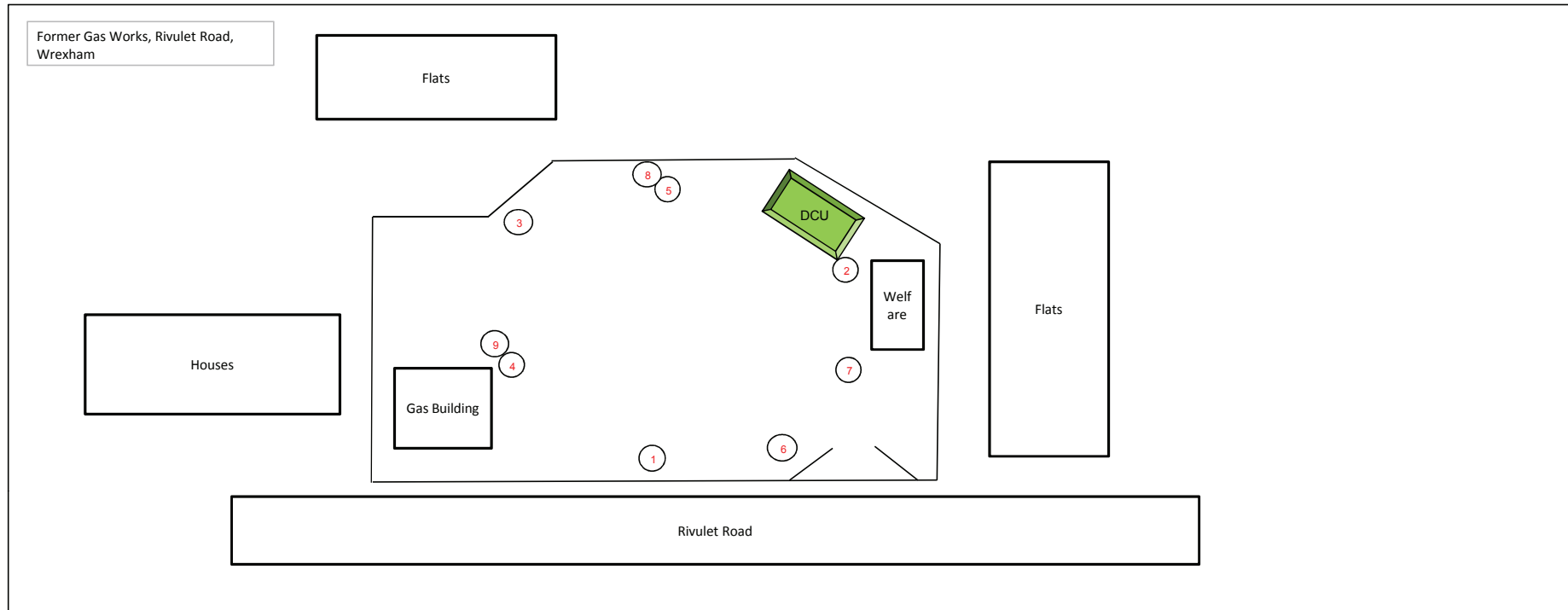
Print Name

Mark Dodd

| <br><b>REC Asbestos, a division of Resource and Environmental Consultants Ltd</b><br> |                                                                                                                                                                                                   | <b>Stansted</b> Environment House, Bullocks Lane, Takeley, Bishop's Stortford Herts, CM22 6TA T. 01279 879 416 F. 01279 879 414<br><b>East Kilbride</b> 16 Langlands Place, Kelvin South Business Park, East Kilbride, Glasgow, G75 0YF T. 01355 573360 F. 01355 573351<br><b>Manchester</b> Osprey House, Pacific Quay, Broadway, Manchester, M50 2UE T. 0161 868 1300 F. 0161 868 1301<br><b>Port Talbot</b> Unit 19, Kenfig Industrial Estate, Margam, Port Talbot, SA13 2PE T. 01656 749823 F. 01656 740824<br><b>Omagh</b> Unit A5, Omagh Business Complex, 41 Gortrush Ind Estate, Omagh, BT78 5LU T. 028 8225 3378<br><b>Plymouth</b> Unit 13, Barn Close, Langage Business Park, Plymouth, PL7 5HQ T. 01752 347789 F. 01752 347749 | <br><br><br><b>2520</b> |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|--------|-------------|-------------------|-----|--------|--------------------|--------------------------|-----------------------|------------------------------------|----------------------------------------|
| <b>Air Monitoring &amp; Visual Assessment Certificate</b>                                                                                                                                                                                               |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    | <b>15/MAN/A/3162</b>     |                       |                                    |                                        |
| All tests conducted in accordance with documented in house procedures and HSE guidance HSG248                                                                                                                                                           |                                                                                                                                                                                                   | <b>Customer Order</b> 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Issue Date</b> 09/06/2015                                                                                                                                                                                                                                                     | <b>Date sampled</b> 09/06/2015    | <b>Date counted</b> 09/06/2015 |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Site Address</b> Former Gas works, Rivulet Road, Wrexham, LL13 8DT                                                                                                                                                                                   | <b>Samplers Signature</b>                                                                                      | <b>Counters Signature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Areas and Description of Work</b> Reassurance boundary monitoring prior to hand picking Asbestos cement debris and excavating from site.                                                                                                             | <b>Sampled by</b> K Hickin                                                                                                                                                                        | <b>Slides Counted by</b> K Hickin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Asbestos Removal Contractor</b> Hydrock                                                                                                                                                                                                              | <b>Issuing REC Lab</b> Manchester                                                                                                                                                                 | <b>Location Slides Counted</b> BL14 CVR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Client Name and Address</b> Hydrock                                                                                                                                                                                                                  |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of Work Area (where conducted)</b>                                                                                                                                                                                                 |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Visual Inspection of work area completed?</b> No                                                                                                                                                                                                     | <b>Enclosure Present?</b> Not Applicable                                                                                                                                                          | <b>Air mover off and sealed?</b> Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Enclosure volume (m³)</b> na                                                                                                                                                                                                                                                  | <b>Visual Inspection Comments</b> |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Visual examination time (mins)</b> Not Applicable                                                                                                                                                                                                    | <b>Exterior of enclosure intact?</b> Not Applicable                                                                                                                                               | <b>Area free of visible dust /debris?</b> Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Enclosure area (m²)</b> na                                                                                                                                                                                                                                                    |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Dust Disturbance Conducted?</b> Not Applicable                                                                                                                                                                                                       | <b>Interior of enclosure intact?</b> Not Applicable                                                                                                                                               | <b>Interior of enclosure dry?</b> Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Suggested No. air tests based on enc vol</b> #VALUE!                                                                                                                                                                                                                          |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Time of Dust Disturbance (mins)</b> Not Applicable                                                                                                                                                                                                   | Visual assessment was only conducted in the work area(s) described on this certificate. Please see the associated Hygiene Unit Inspection Certificate for details of the Hygiene Unit Inspection. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| <b>Air Monitoring and Fibre Count Details</b>                                                                                                                                                                                                           |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   |     |        |                    |                          |                       |                                    |                                        |
| Sample No.                                                                                                                                                                                                                                              | Location / Name / Activity                                                                                                                                                                        | Sample Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pump EID                                                                                                                                                                                                                                                                         | Cowl EID                          | Time                           |        |             | Flow Rate (l/min) |     |        | Volume Sampled (l) | Graticule Areas Examined | No. Of Fibres Counted | Reported Fibre Conc (fibres / cm³) | Limit Of Quantification (fibres / cm³) |
|                                                                                                                                                                                                                                                         |                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                  |                                   | Start                          | Finish | Total (min) | Start             | Mid | Finish |                    |                          |                       |                                    |                                        |
| 1                                                                                                                                                                                                                                                       | Boundary fence adj road                                                                                                                                                                           | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 258                                                                                                                                                                                                                                                                              | 335                               | 11:06                          | 12:06  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 2                                                                                                                                                                                                                                                       | Adj DCU                                                                                                                                                                                           | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 372                                                                                                                                                                                                                                                                              | 336                               | 11:06                          | 12:06  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 3                                                                                                                                                                                                                                                       | Rear LHS Boundary                                                                                                                                                                                 | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 373                                                                                                                                                                                                                                                                              | 339                               | 11:07                          | 12:07  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 4                                                                                                                                                                                                                                                       | Adj Gas Building                                                                                                                                                                                  | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 258                                                                                                                                                                                                                                                                              | 339                               | 12:26                          | 13:26  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 5                                                                                                                                                                                                                                                       | Rear Centre Boundary                                                                                                                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 372                                                                                                                                                                                                                                                                              | 336                               | 12:26                          | 13:26  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 6                                                                                                                                                                                                                                                       | Adj Entrance                                                                                                                                                                                      | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 373                                                                                                                                                                                                                                                                              | 335                               | 12:26                          | 13:26  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 7                                                                                                                                                                                                                                                       | Adj Welfare                                                                                                                                                                                       | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 373                                                                                                                                                                                                                                                                              | 336                               | 13:53                          | 14:53  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 0.5                   | <0.01                              | 0.01                                   |
| 8                                                                                                                                                                                                                                                       | Rear Centre Boundary                                                                                                                                                                              | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 372                                                                                                                                                                                                                                                                              | 339                               | 13:53                          | 14:53  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 9                                                                                                                                                                                                                                                       | Adj Gas Building                                                                                                                                                                                  | Reassurance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 258                                                                                                                                                                                                                                                                              | 335                               | 13:53                          | 14:53  | 60          | 8.0               | --- | 8.0    | 480.0              | 200                      | 1.0                   | <0.01                              | 0.01                                   |
| 10                                                                                                                                                                                                                                                      |                                                                                                                                                                                                   | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   | --- |        |                    |                          |                       |                                    |                                        |
| 11                                                                                                                                                                                                                                                      |                                                                                                                                                                                                   | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   | --- |        |                    |                          |                       |                                    |                                        |
| 12                                                                                                                                                                                                                                                      |                                                                                                                                                                                                   | Sample No. Not Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                  |                                   |                                |        |             |                   | --- |        |                    |                          |                       |                                    |                                        |

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

## Diagram



### Comments

### Removal Contractors Acknowledgement

(only required when a visual assessment has been conducted)

I acknowledge that the above diagram is a true representation of the site layout

Signed

|  |
|--|
|  |
|--|

Date

09/06/2015

Print Name

Mark Dodd

**GRAVIMETRIC ANALYSIS REPORT**

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

**DUSTDISC DEPOSITIONAL DATA**

| <b>Our Reference</b>      | <b>Date Out:</b> | <b>Date In:</b> | <b>Interval (days)</b> | <b>Mass of dust (mg) as released solids</b> | <b>Inferred deposition rate as released solids (mg m<sup>-2</sup> day<sup>-1</sup>)</b> |
|---------------------------|------------------|-----------------|------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------|
| 59368 / FMP1D / ZHYDRWREX | 06-Jul-15        | 20-Jul-15       | 14                     | 46.9                                        | 563.6                                                                                   |
| 59369 / FMP2D / ZHYDRWREX | 06-Jul-15        | 20-Jul-15       | 14                     | 69.9                                        | 838.9                                                                                   |

Some sites use 'Frisbee-type' deposition gauges and apply a 'custom and practice' threshold of 200 mg/m<sup>2</sup>/day as a means of assessing performance, in the absence of any recognised limit values for visible / nuisance dust (see Environment Agency M17).

Our testing has shown that deposition rates of <5 mg/m<sup>2</sup>/day do not provide enough accumulated dust for quantification and are therefore reported as BDL.

The table above shows that the calculated deposition rates of the above DustDisc samples collected from the Wrexham exceeded 200mg/m<sup>2</sup>/day at FMP1D, FMP2D.

Please note that we are continuing to evaluate our DustDisc deposition gauge alongside a Frisbee type sampler as collection efficiencies between the instruments will vary.

If you have any questions regarding the above results or any other matters please don't hesitate to get in touch.

**GRAVIMETRIC ANALYSIS REPORT**

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

**DUSTDISC DEPOSITIONAL DATA**

| <b>Our Reference</b>      | <b>Date Out:</b> | <b>Date In:</b> | <b>Interval (days)</b> | <b>Mass of dust (mg) as released solids</b> | <b>Inferred deposition rate as released solids (mg m<sup>-2</sup> day<sup>-1</sup>)</b> |
|---------------------------|------------------|-----------------|------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------|
| 58854 / FMP1D / ZHYDRWREX | 22-Jun-15        | 06-Jul-15       | 14                     | 47.5                                        | 569.7                                                                                   |
| 58855 / FMP2D / ZHYDRWREX | 22-Jun-15        | 06-Jul-15       | 14                     | 37.4                                        | 449.1                                                                                   |

Some sites use 'Frisbee-type' deposition gauges and apply a 'custom and practice' threshold of 200 mg/m<sup>2</sup>/day as a means of assessing performance, in the absence of any recognised limit values for visible / nuisance dust (see Environment Agency M17).

Our testing has shown that deposition rates of <5 mg/m<sup>2</sup>/day do not provide enough accumulated dust for quantification and are therefore reported as BDL.

The table above shows that the calculated deposition rates of the above DustDisc samples collected from the Wrexham between 22/06/2015 – 06/07/2015 exceeded 200mg/m<sup>2</sup>/day at FMP1D, FMP2D.

Please note that we are continuing to evaluate our DustDisc deposition gauge alongside a Frisbee type sampler as collection efficiencies between the instruments will vary.

If you have any questions regarding the above results or any other matters please don't hesitate to get in touch.

**GRAVIMETRIC ANALYSIS REPORT**

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

**DUSTDISC DEPOSITIONAL DATA**

| <b>Our Reference</b>      | <b>Date Out:</b> | <b>Date In:</b> | <b>Interval (days)</b> | <b>Mass of dust (mg) as released solids</b> | <b>Inferred deposition rate as released solids (mg m<sup>-2</sup> day<sup>-1</sup>)</b> |
|---------------------------|------------------|-----------------|------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------|
| 58539 / FMP1D / ZHYDRWREX | 08-Jun-15        | 22-Jun-15       | 14                     | 20.9                                        | 251.0                                                                                   |
| 58540 / FMP2D / ZHYDRWREX | 08-Jun-15        | 22-Jun-15       | 14                     | 32.1                                        | 384.9                                                                                   |

Some sites use 'Frisbee-type' deposition gauges and apply a 'custom and practice' threshold of 200 mg/m<sup>2</sup>/day as a means of assessing performance, in the absence of any recognised limit values for visible / nuisance dust (see Environment Agency M17).

Our testing has shown that deposition rates of <5 mg/m<sup>2</sup>/day do not provide enough accumulated dust for quantification and are therefore reported as BDL.

The table above shows that the calculated deposition rates of the above DustDisc samples collected from the Wrexham exceeded 200mg/m<sup>2</sup>/day at FMP1D, FMP2D.

Please note that we are continuing to evaluate our DustDisc deposition gauge alongside a Frisbee type sampler as collection efficiencies between the instruments will vary.

If you have any questions regarding the above results or any other matters please don't hesitate to get in touch.

### DUSTDISC DEPOSITION REPORT

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

#### DUSTDISC SETTLEMENT AAC% & EAC% DATA

| Our reference:               | Date Out: | Date In:  | Interval*<br>(days) | AAC% /<br>interval | EAC% /<br>interval | AAC% /<br>day | EAC% /<br>day | Dust Impact<br>Risk |
|------------------------------|-----------|-----------|---------------------|--------------------|--------------------|---------------|---------------|---------------------|
| 59368 / FMP1D /<br>ZHYDRWREX | 06-Jul-15 | 20-Jul-15 | 14                  | 100.0              | 25.0               | 7.1           | 1.8           | High                |
| 59369 / FMP2D /<br>ZHYDRWREX | 06-Jul-15 | 20-Jul-15 | 14                  | 100.0              | 30.8               | 7.1           | 2.2           | Very High           |

#### Deposited dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                     |                           |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|-------------------------------------|---------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br><100%/interval | Level 4:<br>100%/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                 | Medium                    |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                              | High                      |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                                | High                      |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                                | Very High                 |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                           | Very High                 |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustDisc Reporting' for more information on our assessment matrix and criteria

### DUSTDISC DEPOSITION REPORT

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

#### DUSTDISC SETTLEMENT AAC% & EAC% DATA

| Our reference:            | Date Out: | Date In:  | Interval* (days) | AAC% / interval | EAC% / interval | AAC% / day | EAC% / day | Dust Impact Risk |
|---------------------------|-----------|-----------|------------------|-----------------|-----------------|------------|------------|------------------|
| 58854 / FMP1D / ZHYDRWREX | 22-Jun-15 | 06-Jul-15 | 14               | 100.0           | 26.4            | 7.1        | 1.9        | High             |
| 58855 / FMP2D / ZHYDRWREX | 22-Jun-15 | 06-Jul-15 | 14               | 100.0           | 20.8            | 7.1        | 1.5        | High             |

#### Deposited dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                     |                           |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|-------------------------------------|---------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br><100%/interval | Level 4:<br>100%/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                 | Medium                    |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                              | High                      |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                                | High                      |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                                | Very High                 |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                           | Very High                 |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustDisc Reporting' for more information on our assessment matrix and criteria

### DUSTDISC DEPOSITION REPORT

|                |                         |              |         |
|----------------|-------------------------|--------------|---------|
| <b>Client:</b> | Hydrock Contracting Ltd | <b>Site:</b> | Wrexham |
|----------------|-------------------------|--------------|---------|

#### DUSTDISC SETTLEMENT AAC% & EAC% DATA

| Our reference:            | Date Out: | Date In:  | Interval* (days) | AAC% / interval | EAC% / interval | AAC% / day | EAC% / day | Dust Impact Risk |
|---------------------------|-----------|-----------|------------------|-----------------|-----------------|------------|------------|------------------|
| 58539 / FMP1D / ZHYDRWREX | 08-Jun-15 | 22-Jun-15 | 14               | 100.0           | 14.5            | 7.1        | 1.0        | High             |
| 58540 / FMP2D / ZHYDRWREX | 08-Jun-15 | 22-Jun-15 | 14               | 100.0           | 20.9            | 7.1        | 1.5        | High             |

#### Deposited dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                     |                           |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|-------------------------------------|---------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br><100%/interval | Level 4:<br>100%/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                 | Medium                    |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                              | High                      |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                                | High                      |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                                | Very High                 |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                           | Very High                 |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustDisc Reporting' for more information on our assessment matrix and criteria

## DS100 DIRECTIONAL DUST FLUX REPORT

|                   |                                   |                 |                          |
|-------------------|-----------------------------------|-----------------|--------------------------|
| <b>Client:</b>    | Hydrock Contracting Ltd           | <b>Site:</b>    | Wrexham                  |
| <b>Point:</b>     | FMP1 (No point description given) |                 |                          |
| <b>Date Out:</b>  | 06-Jul-15                         | <b>Date In:</b> | 20-Jul-15                |
| <b>Interval*:</b> | 14 days                           | <b>Our Ref:</b> | 59366 / FMP1 / ZHYDRWREX |

### DIRECTIONAL DUST FLUX DATA

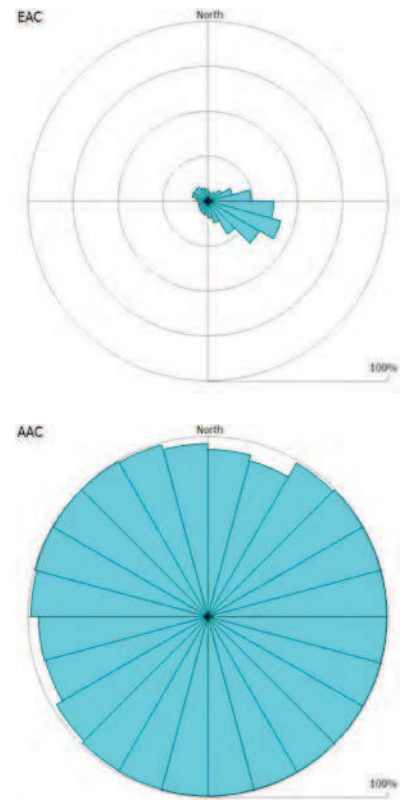
Effective Area Coverage (EAC%) / interval = 12.9

Absolute Area Coverage (AAC%) / interval = 98.3

Effective Area Coverage (EAC%) / day = 0.9

Absolute Area Coverage (AAC%) / day = 7.0

| Segment   | EAC% /Interval | AAC% /Interval | EAC% /Day | AAC% /Day | Dust Impact Risk |
|-----------|----------------|----------------|-----------|-----------|------------------|
| 00°-15°   | 5.6            | 93.0           | 0.4       | 6.6       | Very Low         |
| 15°-30°   | 4.4            | 89.7           | 0.3       | 6.4       | Very Low         |
| 30°-45°   | 6.2            | 98.6           | 0.4       | 7.0       | Very Low         |
| 45°-60°   | 9.0            | 100.0          | 0.6       | 7.1       | Medium           |
| 60°-75°   | 14.5           | 100.0          | 1.0       | 7.1       | High             |
| 75°-90°   | 24.4           | 100.0          | 1.7       | 7.1       | High             |
| 90°-105°  | 36.8           | 100.0          | 2.6       | 7.1       | Very High        |
| 105°-120° | 42.3           | 100.0          | 3.0       | 7.1       | Very High        |
| 120°-135° | 33.5           | 100.0          | 2.4       | 7.1       | Very High        |
| 135°-150° | 21.7           | 100.0          | 1.6       | 7.1       | High             |
| 150°-165° | 12.8           | 100.0          | 0.9       | 7.1       | High             |
| 165°-180° | 9.4            | 100.0          | 0.7       | 7.1       | High             |
| 180°-195° | 8.1            | 100.0          | 0.6       | 7.1       | Medium           |
| 195°-210° | 7.5            | 99.6           | 0.5       | 7.1       | Medium           |
| 210°-225° | 7.0            | 99.3           | 0.5       | 7.1       | Medium           |
| 225°-240° | 6.3            | 97.7           | 0.4       | 7.0       | Very Low         |
| 240°-255° | 5.6            | 93.8           | 0.4       | 6.7       | Very Low         |
| 255°-270° | 5.7            | 94.4           | 0.4       | 6.7       | Very Low         |
| 270°-285° | 7.0            | 98.8           | 0.5       | 7.1       | Low              |
| 285°-300° | 8.9            | 100.0          | 0.6       | 7.1       | Medium           |
| 300°-315° | 9.5            | 100.0          | 0.7       | 7.1       | High             |
| 315°-330° | 9.4            | 100.0          | 0.7       | 7.1       | High             |
| 330°-345° | 8.1            | 99.1           | 0.6       | 7.1       | Medium           |
| 345°-360° | 6.9            | 96.1           | 0.5       | 6.9       | Low              |



The rose diagrams represent the soiling (EAC) and presence (AAC) of dust for each 15 degree arc per sampling interval.

### Directional dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                    |                                       |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br>100%/interval | Level 4:<br>100% over<br>45°/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                | Medium                                |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                             | High                                  |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                               | High                                  |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                               | Very High                             |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                          | Very High                             |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustScan DS100 Reporting' for more information on our assessment matrix and criteria

## DS100 DIRECTIONAL DUST FLUX REPORT

|                   |                                   |                 |                          |
|-------------------|-----------------------------------|-----------------|--------------------------|
| <b>Client:</b>    | Hydrock Contracting Ltd           | <b>Site:</b>    | Wrexham                  |
| <b>Point:</b>     | FMP2 (No point description given) |                 |                          |
| <b>Date Out:</b>  | 06-Jul-15                         | <b>Date In:</b> | 20-Jul-15                |
| <b>Interval*:</b> | 14 days                           | <b>Our Ref:</b> | 59367 / FMP2 / ZHYDRWREX |

### DIRECTIONAL DUST FLUX DATA

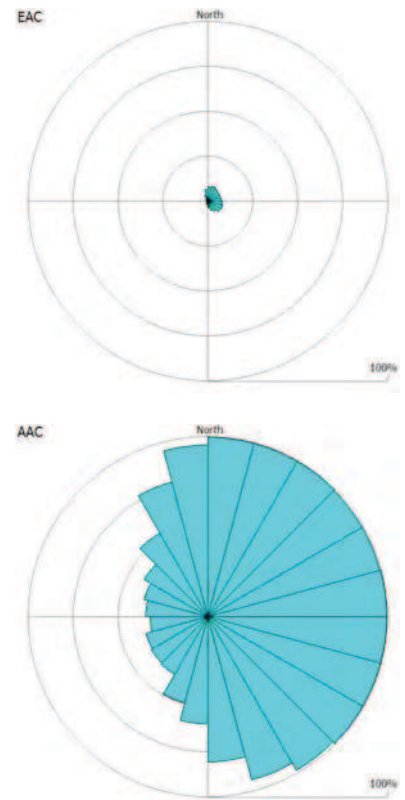
Effective Area Coverage (EAC%) / interval = 4.7

Absolute Area Coverage (AAC%) / interval = 73.5

Effective Area Coverage (EAC%) / day = 0.3

Absolute Area Coverage (AAC%) / day = 5.3

| Segment   | EAC% /Interval | AAC% /Interval | EAC% /Day | AAC% /Day | Dust Impact Risk |
|-----------|----------------|----------------|-----------|-----------|------------------|
| 00°-15°   | 8.2            | 100.0          | 0.6       | 7.1       | Medium           |
| 15°-30°   | 8.6            | 100.0          | 0.6       | 7.1       | High             |
| 30°-45°   | 8.3            | 100.0          | 0.6       | 7.1       | Medium           |
| 45°-60°   | 7.8            | 99.6           | 0.6       | 7.1       | Medium           |
| 60°-75°   | 7.5            | 99.6           | 0.5       | 7.1       | Medium           |
| 75°-90°   | 7.7            | 99.7           | 0.5       | 7.1       | Medium           |
| 90°-105°  | 8.2            | 99.9           | 0.6       | 7.1       | Medium           |
| 105°-120° | 8.6            | 99.9           | 0.6       | 7.1       | Medium           |
| 120°-135° | 8.2            | 99.9           | 0.6       | 7.1       | Medium           |
| 135°-150° | 6.9            | 98.8           | 0.5       | 7.1       | Low              |
| 150°-165° | 5.6            | 94.1           | 0.4       | 6.7       | Very Low         |
| 165°-180° | 3.7            | 80.9           | 0.3       | 5.8       | Very Low         |
| 180°-195° | 2.2            | 59.9           | 0.2       | 4.3       | Very Low         |
| 195°-210° | 1.6            | 49.7           | 0.1       | 3.5       | Very Low         |
| 210°-225° | 1.0            | 37.5           | <0.1      | 2.7       | Very Low         |
| 225°-240° | 1.0            | 36.4           | <0.1      | 2.6       | Very Low         |
| 240°-255° | 1.1            | 35.9           | <0.1      | 2.6       | Very Low         |
| 255°-270° | 0.9            | 32.4           | <0.1      | 2.3       | Very Low         |
| 270°-285° | 1.1            | 34.9           | <0.1      | 2.5       | Very Low         |
| 285°-300° | 1.2            | 37.1           | <0.1      | 2.6       | Very Low         |
| 300°-315° | 1.4            | 41.2           | 0.1       | 2.9       | Very Low         |
| 315°-330° | 2.0            | 53.7           | 0.1       | 3.8       | Very Low         |
| 330°-345° | 3.6            | 77.8           | 0.3       | 5.6       | Very Low         |
| 345°-360° | 6.6            | 95.7           | 0.5       | 6.8       | Low              |



The rose diagrams represent the soiling (EAC) and presence (AAC) of dust for each 15 degree arc per sampling interval.

### Directional dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                    |                                       |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br>100%/interval | Level 4:<br>100% over<br>45°/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                | Medium                                |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                             | High                                  |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                               | High                                  |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                               | Very High                             |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                          | Very High                             |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustScan DS100 Reporting' for more information on our assessment matrix and criteria

## DS100 DIRECTIONAL DUST FLUX REPORT

|                   |                                   |                 |                          |
|-------------------|-----------------------------------|-----------------|--------------------------|
| <b>Client:</b>    | Hydrock Contracting Ltd           | <b>Site:</b>    | Wrexham                  |
| <b>Point:</b>     | FMP1 (No point description given) |                 |                          |
| <b>Date Out:</b>  | 22-Jun-15                         | <b>Date In:</b> | 06-Jul-15                |
| <b>Interval*:</b> | 14 days                           | <b>Our Ref:</b> | 58852 / FMP1 / ZHYDRWREX |

### DIRECTIONAL DUST FLUX DATA

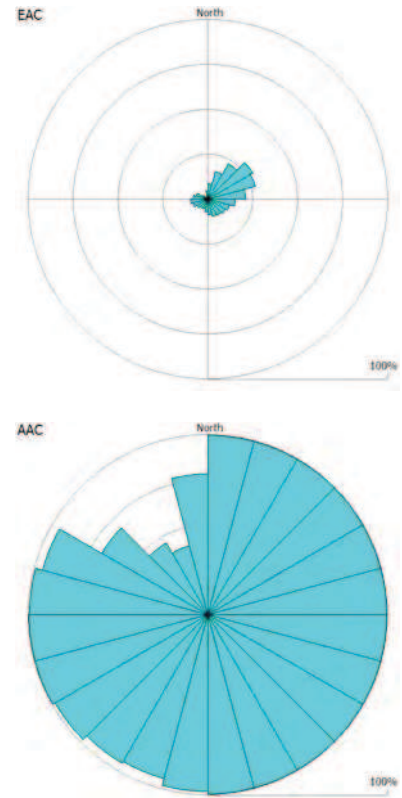
Effective Area Coverage (EAC%) / interval = 11.1

Absolute Area Coverage (AAC%) / interval = 92.3

Effective Area Coverage (EAC%) / day = 0.8

Absolute Area Coverage (AAC%) / day = 6.6

| Segment   | EAC% /Interval | AAC% /Interval | EAC% /Day | AAC% /Day | Dust Impact Risk |
|-----------|----------------|----------------|-----------|-----------|------------------|
| 00°-15°   | 8.6            | 100.0          | 0.6       | 7.1       | Medium           |
| 15°-30°   | 16.3           | 100.0          | 1.2       | 7.1       | High             |
| 30°-45°   | 23.2           | 100.0          | 1.7       | 7.1       | High             |
| 45°-60°   | 29.2           | 100.0          | 2.1       | 7.1       | Very High        |
| 60°-75°   | 27.7           | 100.0          | 2.0       | 7.1       | Very High        |
| 75°-90°   | 21.3           | 100.0          | 1.5       | 7.1       | High             |
| 90°-105°  | 15.6           | 100.0          | 1.1       | 7.1       | High             |
| 105°-120° | 12.6           | 100.0          | 0.9       | 7.1       | High             |
| 120°-135° | 11.7           | 100.0          | 0.8       | 7.1       | High             |
| 135°-150° | 10.7           | 100.0          | 0.8       | 7.1       | High             |
| 150°-165° | 10.0           | 100.0          | 0.7       | 7.1       | High             |
| 165°-180° | 8.9            | 100.0          | 0.6       | 7.1       | Medium           |
| 180°-195° | 7.3            | 98.3           | 0.5       | 7.0       | Low              |
| 195°-210° | 5.9            | 94.4           | 0.4       | 6.7       | Very Low         |
| 210°-225° | 6.2            | 95.6           | 0.4       | 6.8       | Very Low         |
| 225°-240° | 7.3            | 98.2           | 0.5       | 7.0       | Low              |
| 240°-255° | 8.9            | 99.8           | 0.6       | 7.1       | Medium           |
| 255°-270° | 9.7            | 100.0          | 0.7       | 7.1       | High             |
| 270°-285° | 8.4            | 99.4           | 0.6       | 7.1       | Medium           |
| 285°-300° | 6.8            | 95.5           | 0.5       | 6.8       | Low              |
| 300°-315° | 3.3            | 68.4           | 0.2       | 4.9       | Very Low         |
| 315°-330° | 1.6            | 46.2           | 0.1       | 3.3       | Very Low         |
| 330°-345° | 1.3            | 39.9           | <0.1      | 2.9       | Very Low         |
| 345°-360° | 4.8            | 78.5           | 0.3       | 5.6       | Very Low         |



The rose diagrams represent the soiling (EAC) and presence (AAC) of dust for each 15 degree arc per sampling interval.

### Directional dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                    |                                       |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br>100%/interval | Level 4:<br>100% over<br>45°/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                | Medium                                |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                             | High                                  |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                               | High                                  |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                               | Very High                             |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                          | Very High                             |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustScan DS100 Reporting' for more information on our assessment matrix and criteria

## DS100 DIRECTIONAL DUST FLUX REPORT

|                   |                                   |                 |                          |
|-------------------|-----------------------------------|-----------------|--------------------------|
| <b>Client:</b>    | Hydrock Contracting Ltd           | <b>Site:</b>    | Wrexham                  |
| <b>Point:</b>     | FMP2 (No point description given) |                 |                          |
| <b>Date Out:</b>  | 22-Jun-15                         | <b>Date In:</b> | 06-Jul-15                |
| <b>Interval*:</b> | 14 days                           | <b>Our Ref:</b> | 58853 / FMP2 / ZHYDRWREX |

### DIRECTIONAL DUST FLUX DATA

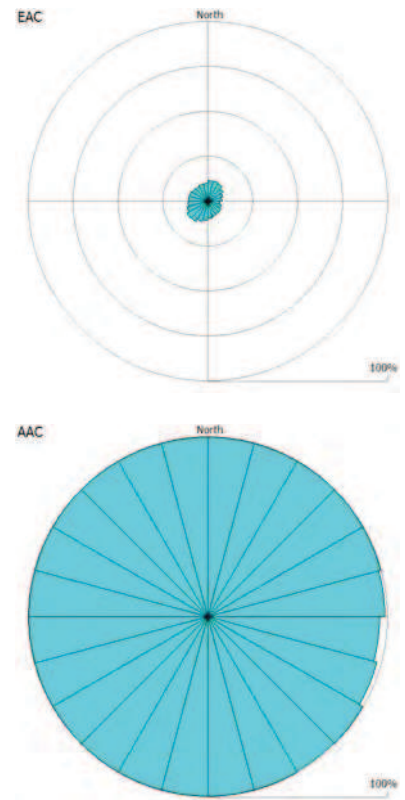
Effective Area Coverage (EAC%) / interval = 10.4

Absolute Area Coverage (AAC%) / interval = 99.6

Effective Area Coverage (EAC%) / day = 0.7

Absolute Area Coverage (AAC%) / day = 7.1

| Segment   | EAC% /Interval | AAC% /Interval | EAC% /Day | AAC% /Day | Dust Impact Risk |
|-----------|----------------|----------------|-----------|-----------|------------------|
| 00°-15°   | 11.5           | 99.9           | 0.8       | 7.1       | High             |
| 15°-30°   | 12.1           | 100.0          | 0.9       | 7.1       | High             |
| 30°-45°   | 11.4           | 100.0          | 0.8       | 7.1       | High             |
| 45°-60°   | 10.3           | 100.0          | 0.7       | 7.1       | High             |
| 60°-75°   | 8.9            | 99.8           | 0.6       | 7.1       | Medium           |
| 75°-90°   | 8.1            | 98.6           | 0.6       | 7.0       | Low              |
| 90°-105°  | 7.1            | 95.9           | 0.5       | 6.9       | Low              |
| 105°-120° | 8.0            | 97.8           | 0.6       | 7.0       | Low              |
| 120°-135° | 8.7            | 99.7           | 0.6       | 7.1       | Medium           |
| 135°-150° | 8.8            | 99.6           | 0.6       | 7.1       | Medium           |
| 150°-165° | 8.9            | 99.7           | 0.6       | 7.1       | Medium           |
| 165°-180° | 9.9            | 99.9           | 0.7       | 7.1       | High             |
| 180°-195° | 10.7           | 100.0          | 0.8       | 7.1       | High             |
| 195°-210° | 11.9           | 100.0          | 0.8       | 7.1       | High             |
| 210°-225° | 13.3           | 100.0          | 1.0       | 7.1       | High             |
| 225°-240° | 13.8           | 100.0          | 1.0       | 7.1       | High             |
| 240°-255° | 12.5           | 100.0          | 0.9       | 7.1       | High             |
| 255°-270° | 11.4           | 100.0          | 0.8       | 7.1       | High             |
| 270°-285° | 10.9           | 100.0          | 0.8       | 7.1       | High             |
| 285°-300° | 10.8           | 99.9           | 0.8       | 7.1       | High             |
| 300°-315° | 10.0           | 99.9           | 0.7       | 7.1       | High             |
| 315°-330° | 9.9            | 99.8           | 0.7       | 7.1       | High             |
| 330°-345° | 10.2           | 100.0          | 0.7       | 7.1       | High             |
| 345°-360° | 10.3           | 100.0          | 0.7       | 7.1       | High             |



The rose diagrams represent the soiling (EAC) and presence (AAC) of dust for each 15 degree arc per sampling interval.

### Directional dust assessment matrix

|                   |                              | AAC: dust coverage        |                                    |                                    |                                    |                                       |
|-------------------|------------------------------|---------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------------|
|                   |                              | Level 0:<br><80%/interval | Level 1:<br>80 to<br><95%/interval | Level 2:<br>95 to<br><99%/interval | Level 3:<br>99 to<br>100%/interval | Level 4:<br>100% over<br>45°/interval |
| EAC: dust soiling | Level 0:<br><0.5%/day        | Very Low                  | Very Low                           | Very Low                           | Low                                | Medium                                |
|                   | Level 1:<br>0.5 to <0.7%/day | Low                       | Low                                | Low                                | Medium                             | High                                  |
|                   | Level 2:<br>0.7 to <2.0%/day | Medium                    | Medium                             | Medium                             | High                               | High                                  |
|                   | Level 3:<br>2.0 to <5.0%/day | High                      | High                               | High                               | High                               | Very High                             |
|                   | Level 4:<br>≥5%/day          | Very High                 | Very High                          | Very High                          | Very High                          | Very High                             |

\*We recommend 1-14 day sampling intervals

Please see our 'Quick Guide to DustScan DS100 Reporting' for more information on our assessment matrix and criteria