



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

## CERTIFICATE OF ANALYSIS

**Client** Hydro Environmental Services  
22 Lower Main Street  
Dungarvan  
Co. Waterford

**Date Received** 03/04/2019

**Date Reported** 12/04/2019

**Order Number** N/A

**For the Attention of:** Hydro Environmental Services

**Sample Reception** 10 sample(s) received in good condition.

**Comments** Clongawny

Report Authorised by:

Rosemary Thomas  
Environmental Chemistry Manager

**Conditions:**

1. Results in this report relate only to the items tested
2. Reports may not be reproduced except in full without the approval of ALS Life Sciences Ltd
3. All queries regarding this report should be addressed to the Technical Manager at the above address
4. A \* next to a method reference signifies that ALS Life Sciences Ltd is NOT INAB accredited for this method
5. Results reported as CFU/cm<sup>2</sup> are calculated based on information supplied by customer regarding area swabbed
6. SUBCON\* indicates analysis subcontracted to approved subcontractors who do not hold accreditation for this test
7. SUBCON^ indicates analysis subcontracted to approved subcontractors who hold accreditation for this test
8. Where sampling is undertaken by ALS personnel, sampling activities are outside the scope of INAB accreditation
9. Dil next to a method reference indicates that a dilution of the water sample was undertaken during testing



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 03/04/2019  
**Date Reported** 12/04/2019  
**Order Number** N/A

**Sample Type** Surface Water  
**Client ID** SW1 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461112

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Ammonia	0.39	mg/l NH3-N	P281
Chloride	20.6	mg/l CL	P281
Nitrate	14.5	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Orthophosphate	<0.02	mg/l P	P281
Nitrogen (Total)	6.8	mg/L N	P285

**Sample Type** Surface Water  
**Client ID** SW2 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461113

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	21.3	mg/l CL	P281
Nitrate	<5.0	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.53	mg/l NH3-N	P281
Nitrogen (Total)	2.6	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 03/04/2019  
**Date Reported** 12/04/2019  
**Order Number** N/A

**Sample Type** Surface Water  
**Client ID** SW3 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461114

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	35.3	mg/l CL	P281
Nitrate	12.8	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.02	mg/l NH3-N	P281
Nitrogen (Total)	3.0	mg/L N	P285

**Sample Type** Surface Water  
**Client ID** SW4 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461115

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	29.0	mg/l CL	P281
Nitrate	14.3	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.03	mg/l NH3-N	P281
Nitrogen (Total)	3.7	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 03/04/2019  
**Date Reported** 12/04/2019  
**Order Number** N/A

**Sample Type** Surface Water  
**Client ID** SW5 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461116

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	30.0	mg/l CL	P281
Nitrate	20.2	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.14	mg/l NH3-N	P281
Nitrogen (Total)	5.3	mg/L N	P285

**Sample Type** Surface Water  
**Client ID** SW6 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461117

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	6	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	21.6	mg/l CL	P281
Nitrate	20.8	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.04	mg/l NH3-N	P281
Nitrogen (Total)	13.3	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 03/04/2019  
**Date Reported** 12/04/2019  
**Order Number** N/A

**Sample Type** Surface Water  
**Client ID** SW7 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461118

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	21.3	mg/l CL	P281
Nitrate	31.8	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.02	mg/l NH3-N	P281
Nitrogen (Total)	8.4	mg/L N	P285

**Sample Type** Surface Water  
**Client ID** SW9 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461119

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	30.3	mg/l CL	P281
Nitrate	12.9	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.25	mg/l NH3-N	P281
Nitrogen (Total)	5.3	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-625030419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 03/04/2019  
**Date Reported** 12/04/2019  
**Order Number** N/A

**Sample Type** Surface Water  
**Client ID** SW10 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461120

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	37.5	mg/l CL	P281
Nitrate	17.6	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.03	mg/l NH3-N	P281
Nitrogen (Total)	4.7	mg/L N	P285

**Sample Type** Surface Water  
**Client ID** SW11 Clongawny  
**Date Tested** 04/04/2019  
**ALS ID** 3461121

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	12	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	21.1	mg/l CL	P281
Nitrate	20.4	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.03	mg/l NH3-N	P281
Nitrogen (Total)	4.8	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

## CERTIFICATE OF ANALYSIS

**Client** Hydro Environmental Services  
22 Lower Main Street  
Dungarvan  
Co. Waterford

**Date Received** 10/04/2019

**Date Reported** 24/04/2019

**Order Number** Clongawny

**For the Attention of:** Hydro Environmental Services

**Sample Reception** 10 sample(s) received in good condition.

**Comments** N/A

Report Authorised by:

Rosemary Thomas  
Environmental Chemistry Manager

**Conditions:**

1. Results in this report relate only to the items tested
2. Reports may not be reproduced except in full without the approval of ALS Life Sciences Ltd
3. All queries regarding this report should be addressed to the Technical Manager at the above address
4. A \* next to a method reference signifies that ALS Life Sciences Ltd is NOT INAB accredited for this method
5. Results reported as CFU/cm<sup>2</sup> are calculated based on information supplied by customer regarding area swabbed
6. SUBCON\* indicates analysis subcontracted to approved subcontractors who do not hold accreditation for this test
7. SUBCON^ indicates analysis subcontracted to approved subcontractors who hold accreditation for this test
8. Where sampling is undertaken by ALS personnel, sampling activities are outside the scope of INAB accreditation
9. Dil next to a method reference indicates that a dilution of the water sample was undertaken during testing



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 10/04/2019  
**Date Reported** 24/04/2019  
**Order Number** Clongawny

**Sample Type** Effluent  
**Client ID** Clongawny SW1  
**Date Tested** 10/04/2019  
**ALS ID** 3470103

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	22.0	mg/l CL	P281
Nitrate	12.8	mg/l NO3	P281
Nitrite	0.12	mg/l NO2	P281
Ammonia	0.38	mg/l NH3-N	P281
Nitrogen (Total)	4.0	mg/L N	P285

**Sample Type** Effluent  
**Client ID** Clongawny SW2  
**Date Tested** 10/04/2019  
**ALS ID** 3470104

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	22.3	mg/l CL	P281
Nitrate	10.0	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.33	mg/l NH3-N	P281
Nitrogen (Total)	2.3	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*





ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 10/04/2019  
**Date Reported** 24/04/2019  
**Order Number** Clongawny

**Sample Type** Effluent  
**Client ID** Clongawny SW3  
**Date Tested** 10/04/2019  
**ALS ID** 3470106

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	37.9	mg/l CL	P281
Nitrate	13.1	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.03	mg/l NH3-N	P281
Nitrogen (Total)	3.8	mg/L N	P285

**Sample Type** Effluent  
**Client ID** Clongawny SW4  
**Date Tested** 10/04/2019  
**ALS ID** 3470108

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	35.5	mg/l CL	P281
Nitrate	17.1	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.13	mg/l NH3-N	P281
Nitrogen (Total)	3.9	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 10/04/2019  
**Date Reported** 24/04/2019  
**Order Number** Clongawny

**Sample Type** Effluent  
**Client ID** Clongawny SW5  
**Date Tested** 10/04/2019  
**ALS ID** 3470109

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	30.1	mg/l CL	P281
Nitrate	11.9	mg/l NO3	P281
Nitrite	0.10	mg/l NO2	P281
Ammonia	0.14	mg/l NH3-N	P281
Nitrogen (Total)	3.2	mg/L N	P285

**Sample Type** Effluent  
**Client ID** Clongawny SW6  
**Date Tested** 10/04/2019  
**ALS ID** 3470111

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	22.4	mg/l CL	P281
Nitrate	20.8	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.03	mg/l NH3-N	P281
Nitrogen (Total)	5.9	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 10/04/2019  
**Date Reported** 24/04/2019  
**Order Number** Clongawny

**Sample Type** Effluent  
**Client ID** Clongawny SW7  
**Date Tested** 10/04/2019  
**ALS ID** 3470112

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	22.1	mg/l CL	P281
Nitrate	22.6	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.04	mg/l NH3-N	P281
Nitrogen (Total)	5.2	mg/L N	P285

**Sample Type** Effluent  
**Client ID** Clongawny SW9  
**Date Tested** 10/04/2019  
**ALS ID** 3470114

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	6	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	33.0	mg/l CL	P281
Nitrate	13.1	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.21	mg/l NH3-N	P281
Nitrogen (Total)	3.6	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*



ALS Life Sciences Ltd  
Trading as ALS  
Carrigeen Business Park, Clonmel, Co. Tipperary  
Tel: +353 (0) 52 617 8100  
Fax: +353 (0) 52 617 8103  
www.alsglobal.ie



Report No: HYDR-509100419

Document No: EF0011

### CERTIFICATE OF ANALYSIS

**Date Received** 10/04/2019  
**Date Reported** 24/04/2019  
**Order Number** Clongawny

**Sample Type** Effluent  
**Client ID** Clongawny SW10  
**Date Tested** 10/04/2019  
**ALS ID** 3470116

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	39.6	mg/l CL	P281
Nitrate	16.3	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.04	mg/l NH3-N	P281
Nitrogen (Total)	3.8	mg/L N	P285

**Sample Type** Effluent  
**Client ID** Clongawny SW11  
**Date Tested** 10/04/2019  
**ALS ID** 3470119

<u>Test</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>
Suspended Solids	<5	mg / l	P202
Phosphorus	<0.10	mg/l P	P207
BOD 5 day Total with ATU	<2	mg/l O2	P280
Orthophosphate	<0.02	mg/l P	P281
Chloride	22.2	mg/l CL	P281
Nitrate	11.1	mg/l NO3	P281
Nitrite	<0.05	mg/l NO2	P281
Ammonia	0.04	mg/l NH3-N	P281
Nitrogen (Total)	3.1	mg/L N	P285

Report Authorised by:

*Rosemary Thomas*