



APPENDIX 9-2

**SURFACE WATER LABORATORY
CERTIFICATES**



ALS Life Sciences Ltd
Trading as ALS
Carrigeen Business Park, Clonmel, Co. Tipperary
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www.alsglobal.ie



Report No: HYDR-542230621

Document No: EF0011

CERTIFICATE OF ANALYSIS

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

Date Received 23/06/2021

Date Reported 02/07/2021

Order Number P1508

For the Attention of: Hydro Environmental Services

Sample Reception 5 sample(s) received in good condition.

Comments N/A

Report Authorised by:

Rosemary Thomas
Environmental Chemistry Manager

Conditions:

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3. All queries regarding this report should be addressed to the Technical Manager at the above address
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7. SUBCON^ indicates analysis subcontracted to approved subcontractors who hold accreditation for this test
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CERTIFICATE OF ANALYSIS

Date Received 23/06/2021
Date Reported 02/07/2021
Order Number P1508

Sample Type Surface Water
Client ID Clonbern SW1 Date sampled: 22.06.2021
Date Tested 24/06/2021
ALS ID 4540523

| <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 | <1 | mg/l O2 | P280 |
| Orthophosphate | 0.03 | mg/l P | P281 |
| Chloride | 15.9 | mg/l Cl | P281 |
| Nitrate | 6.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.03 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 1.6 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW2 Date sampled: 22.06.2021
Date Tested 24/06/2021
ALS ID 4540524

| <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 | 1 | mg/l O2 | P280 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Chloride | 15.6 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.04 | mg/l NH3-N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Report Authorised by:

Rosemary Thomas



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CERTIFICATE OF ANALYSIS

Date Received 23/06/2021
Date Reported 02/07/2021
Order Number P1508

Sample Type Surface Water
Client ID Clonbern SW3 Date sampled: 22.06.2021
Date Tested 24/06/2021
ALS ID 4540525

| <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 | 1 | mg/l O2 | P280 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Chloride | 16.2 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.02 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 1.4 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW4 Date sampled: 22.06.2021
Date Tested 24/06/2021
ALS ID 4540526

| <u>Test</u> | <u>Result</u> | <u>Unit</u> | <u>Method</u> |
|--------------------------|---------------|-------------|---------------|
| Suspended Solids | <5 | mg / l | P202 |
| Phosphorus | 0.46 | mg/l P | P207 |
| BOD 5 day Total with ATU | <1 | mg/l O2 | P280 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Chloride | 15.3 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | <0.02 | mg/l NH3-N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Report Authorised by:

Rosemary Thomas

Rosemary Thomas
 Environmental Chemistry Manager



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CERTIFICATE OF ANALYSIS

Date Received 23/06/2021
Date Reported 02/07/2021
Order Number P1508

Sample Type Surface Water
Client ID Clonbern SW5 Date sampled: 22.06.2021
Date Tested 24/06/2021
ALS ID 4540527

| <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 | 1 | mg/l O2 | P280 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Chloride | 14.8 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.05 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 1.2 | mg/L N | P285 |

Report Authorised by:

Rosemary Thomas



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Report No: HYDR-543080422

Document No: EF0011

CERTIFICATE OF ANALYSIS

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

Date Submitted 08/04/2022

Date Reported 20/04/2022

Order Number N/A

For the Attention of: Hydro Environmental Services

Sample Reception 5 sample(s) received in good condition.

Comments N/A

Report Authorised by:

David Kinsella
Deputy Environmental Chemistry Manager

Conditions:

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Report No: HYDR-543080422

Document No: EF0011

CERTIFICATE OF ANALYSIS

Date Submitted 08/04/2022
Date Reported 20/04/2022
Order Number N/A

Sample Type Surface Water
Client ID Clonbern SW1 07.04.2022
Date Tested 08/04/2022
ALS ID 4971720

| <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 | 18.2 | mg/l Cl | P281 |
| Nitrate | 10.3 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.03 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 2.5 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW2 07.04.2022
Date Tested 08/04/2022
ALS ID 4971721

| <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 | 18.4 | mg/l Cl | P281 |
| Nitrate | 5.9 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.07 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 2.1 | mg/L N | P285 |

Report Authorised by: David Kinsella



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CERTIFICATE OF ANALYSIS

Date Submitted 08/04/2022
Date Reported 20/04/2022
Order Number N/A

Sample Type Surface Water
Client ID Clonbern SW3 07.04.2022
Date Tested 08/04/2022
ALS ID 4971722

| <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 | 1 | mg/l O2 | P280 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Chloride | 19.2 | mg/l Cl | P281 |
| Nitrate | 6.9 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.02 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 2.3 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW4 07.04.2022
Date Tested 08/04/2022
ALS ID 4971723

| <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 | 18.1 | mg/l Cl | P281 |
| Nitrate | 7.3 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.02 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 2.0 | mg/L N | P285 |

Report Authorised by: David Kinsella



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CERTIFICATE OF ANALYSIS

Date Submitted 08/04/2022
Date Reported 20/04/2022
Order Number N/A

Sample Type Surface Water
Client ID Clonbern SW5 07.04.2022
Date Tested 08/04/2022
ALS ID 4971724

| <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 | 19.2 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Ammonia | 0.04 | mg/l NH3-N | P281 |
| Nitrogen (Total) | 1.6 | mg/L N | P285 |

Report Authorised by:

David Kinsella



ALS Life Sciences Ltd trading as ALS
Carrigeen Business Park, Clonmel, Co. Tipperary
Telephone: +353 (0) 52 617 8100



Report No: HYDR-560090623

Document No: EF0011

CERTIFICATE OF ANALYSIS

| | | | |
|------------------------------|---|-----------------------|------------|
| Client | Hydro Environmental Services 22 Lower Main Street Dungarvan Co. Waterford | Date Submitted | 09/06/2023 |
| | | Date Reported | 20/06/2023 |
| | | Order Number | 1508 |
| For the Attention of: | Hydro Environmental Services | | |
| Sample Reception | 6 sample(s) received in good condition. | | |
| Comments | N/A | | |

Report Authorised by:

David Kinsella
Deputy Environmental Chemistry Manager

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10. Statement of conformity made against the result does not take into account the uncertainty of measurement associated with the method



Report No: HYDR-560090623

Document No: EF0011

CERTIFICATE OF ANALYSIS

Date Submitted 09/06/2023
Date Reported 20/06/2023
Order Number 1508

Sample Type Surface Water
Client ID Clonbern SW1 08/06/2023
Date Tested 09/06/2023
ALS ID 5606959

| <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 | 3 | mg/l O2 | P280* |
| Ammonia | 0.06 | mg/l NH3-N | P281 |
| Chloride | 15.0 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | 0.94 | mg/L N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW2 08/06/2023
Date Tested 09/06/2023
ALS ID 5606960

| <u>Test</u> | <u>Result</u> | <u>Unit</u> | <u>Method</u> |
|-------------------------|---------------|-------------|---------------|
| Suspended Solids | 3 | mg / l | P202 |
| Phosphorus | <0.10 | mg/l P | P207 |
| BOD 5 day Total | 3 | mg/l O2 | P280 |
| Ammonia | 0.06 | mg/l NH3-N | P281 |
| Chloride | 19.6 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | 0.91 | mg/L N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Report Authorised by: David Kinsella



Report No: HYDR-560090623

Document No: EF0011

CERTIFICATE OF ANALYSIS

Date Submitted 09/06/2023
Date Reported 20/06/2023
Order Number 1508

Sample Type Surface Water
Client ID Clonbern SW3 08/06/2023
Date Tested 09/06/2023
ALS ID 5606961

| <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 | 2 | mg/l O2 | P280 |
| Ammonia | 0.02 | mg/l NH3-N | P281 |
| Chloride | 18.3 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | 1.05 | mg/L N | P281 |
| Nitrogen (Total) | 1.2 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW4 08/06/2023
Date Tested 09/06/2023
ALS ID 5606962

| <u>Test</u> | <u>Result</u> | <u>Unit</u> | <u>Method</u> |
|-------------------------|---------------|-------------|---------------|
| Suspended Solids | <5 | mg / l | P202 |
| Phosphorus | 0.11 | mg/l P | P207 |
| BOD 5 day Total | 2 | mg/l O2 | P280 |
| Ammonia | <0.02 | mg/l NH3-N | P281 |
| Chloride | 13.8 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | <0.25 | mg/L N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Report Authorised by: David Kinsella



Report No: HYDR-560090623

Document No: EF0011

CERTIFICATE OF ANALYSIS

Date Submitted 09/06/2023
Date Reported 20/06/2023
Order Number 1508

Sample Type Surface Water
Client ID Clonbern SW5 08/06/2023
Date Tested 09/06/2023
ALS ID 5606963

| <u>Test</u> | <u>Result</u> | <u>Unit</u> | <u>Method</u> |
|-------------------------|---------------|-------------|---------------|
| Suspended Solids | 9 | mg / l | P202 |
| Phosphorus | <0.10 | mg/l P | P207 |
| BOD 5 day Total | 2 | mg/l O2 | P280 |
| Ammonia | <0.02 | mg/l NH3-N | P281 |
| Chloride | 13.3 | mg/l Cl | P281 |
| Nitrate | <5.0 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | <0.25 | mg/L N | P281 |
| Nitrogen (Total) | <1.0 | mg/L N | P285 |

Sample Type Surface Water
Client ID Clonbern SW6 08/06/2023
Date Tested 09/06/2023
ALS ID 5606964

| <u>Test</u> | <u>Result</u> | <u>Unit</u> | <u>Method</u> |
|-------------------------|---------------|-------------|---------------|
| Suspended Solids | 7 | mg / l | P202 |
| Phosphorus | <0.10 | mg/l P | P207 |
| BOD 5 day Total | 2 | mg/l O2 | P280 |
| Ammonia | 0.02 | mg/l NH3-N | P281 |
| Chloride | 17.8 | mg/l Cl | P281 |
| Nitrate | 5.3 | mg/l NO3 | P281 |
| Nitrite | <0.05 | mg/l NO2 | P281 |
| Orthophosphate | <0.02 | mg/l P | P281 |
| Total Oxidised Nitrogen | 1.21 | mg/L N | P281 |
| Nitrogen (Total) | 1.3 | mg/L N | P285 |

Report Authorised by: David Kinsella