

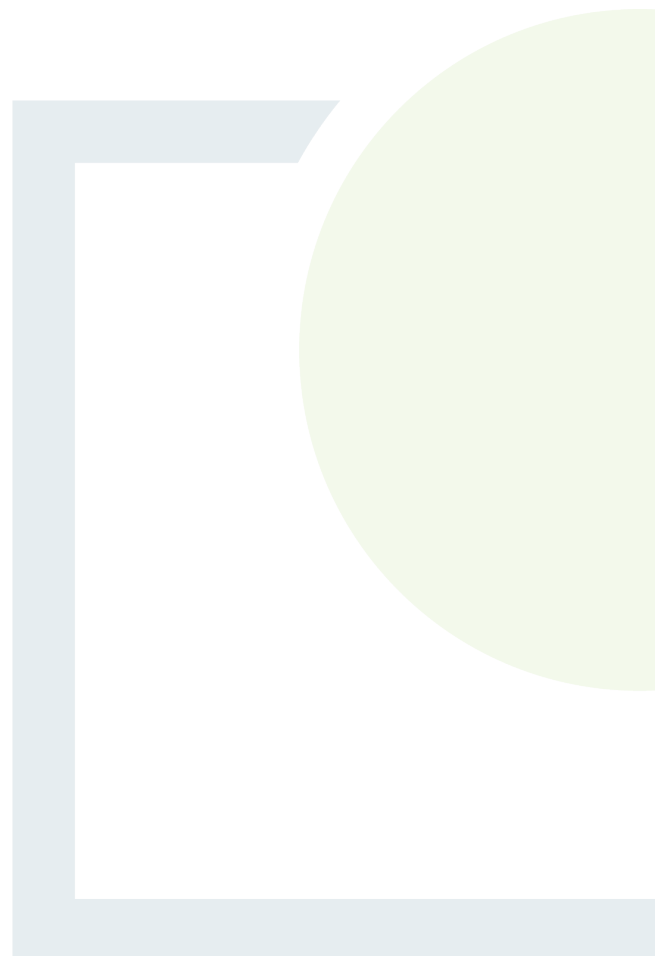


**FEHILY
TIMONEY**

**DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE**

APPENDIX 11.1

Water Quality Monitoring
Data



This appendix contains recorded water quality monitoring data taken on 31st August 2018 for dry weather conditions and on 8th March 2019 for wet weather condition at 16 locations in the vicinity of the site. Additional water sampling was undertaken on 23rd August 2020 (wet weather condition) and 2nd October 2020 (dry weather condition) at 3 locations. Locations of monitoring data is shown on Figure 11-4 in the main EIA document.

The water quality sampling and laboratory testing were undertaken by Environmental Laboratory Service.

The following parameters were measured:

- Biological oxygen demand (BOD)
- Chemical oxygen demand (COD)
- Dissolved oxygen
- Ammonia as N
- Nitrate as N
- Nitrite as N
- Phosphate as P
- Chloride
- Metals Dissolved
- Suspended Solids
- pH
- Conductivity
- Alkalinity Total
- Total Nitrogen
- Total Phosphorus
- Turbidity

Monitoring Recorded Data – Dry Weather Condition



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DETAILED IN SCOPE REG NO.1111

Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/001
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP14	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		15	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.021	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		4.6	mg/l N	INAB	
Nitrate as N			EW175	0.15		4.6	mg/l N	INAB	
Nitrite as N			EW175	0.005		0.014	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.093	mg/l P	INAB	
Chloride mg/L			EW175	1.0		43	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		13	ug/L	INAB	
Iron-Dissolved			EW188	20		51	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.8	pH Units	INAB	
Conductivity @20 DegC			EW153	25		318	uscm-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		80	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		5.1	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.10	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		4.1	NTU	INAB	

Signed :

07/09/2018

Domenico Giliberti-Technical Manager

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email: info@elsltd.com



Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/003
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP15	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		13	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.012	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		1.6	mg/l N	INAB	
Nitrate as N			EW175	0.15		1.6	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.016	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		14	ug/L	INAB	
Iron-Dissolved			EW188	20		45	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.9	pH Units	INAB	
Conductivity @20 DegC			EW153	25		156	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		48	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		1.6	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.2	NTU	INAB	

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/004
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP12	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		14	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.038	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		0.66	mg/l N	INAB	
Nitrate as N			EW175	0.15		0.66	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.016	mg/l P	INAB	
Chloride mg/L			EW175	1.0		15	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		17	ug/L	INAB	
Iron-Dissolved			EW188	20		270	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.5	pH Units	INAB	
Conductivity @20 DegC			EW153	25		131	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		47	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		18.8	NTU	INAB	

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email: info@elsltd.com



Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/006
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP10	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		15	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		11	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		<0.005	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.3	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.3	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.021	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		13	ug/L	INAB	
Iron-Dissolved			EW188	20		66	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.5	pH Units	INAB	
Conductivity @20 DegC			EW153	25		162	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		51	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.0	NTU	INAB	

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/007
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP8	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		11	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.016	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.042	mg/l P	INAB	
Chloride mg/L			EW175	1.0		19	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		16	ug/L	INAB	
Iron-Dissolved			EW188	20		<20	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.9	pH Units	INAB	
Conductivity @20 DegC			EW153	25		178	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		51	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.03	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		0.7	NTU	INAB	

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/008
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP9	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		2.1	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		20	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.063	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		0.90	mg/l N	INAB	
Nitrate as N			EW175	0.15		0.89	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.031	mg/l P	INAB	
Chloride mg/L			EW175	1.0		18	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		14	ug/L	INAB	
Iron-Dissolved			EW188	20		120	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		10	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.5	pH Units	INAB	
Conductivity @20 DegC			EW153	25		159	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		54	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.05	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		10.8	NTU	INAB	

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/009
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP7	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		11	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		11	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.012	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.4	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.4	mg/l N	INAB	
Nitrite as N			EW175	0.005		0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.018	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		25	ug/L	INAB	
Iron-Dissolved			EW188	20		70	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.6	pH Units	INAB	
Conductivity @20 DegC			EW153	25		158	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		47	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.1	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.9	NTU	INAB	

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/010
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP6	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		12	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.009	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		0.41	mg/l N	INAB	
Nitrate as N			EW175	0.15		0.41	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.026	mg/l P	INAB	
Chloride mg/L			EW175	1.0		18	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		25	ug/L	INAB	
Iron-Dissolved			EW188	20		20	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.7	pH Units	INAB	
Conductivity @20 DegC			EW153	25		164	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		59	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.0	NTU	INAB	

Signed : 

07/09/2018

Domenico Giliberti-Technical Manager

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Blackrock,
Cork
Ireland
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Fax: +353 21 453 6149
Web: www.elsltd.com
email: info@elsltd.com



Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/011
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP5	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		22	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		9	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.012	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		0.41	mg/l N	INAB	
Nitrate as N			EW175	0.15		0.41	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.030	mg/l P	INAB	
Chloride mg/L			EW175	1.0		18	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		19	ug/L	INAB	
Iron-Dissolved			EW188	20		240	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.2	pH Units	INAB	
Conductivity @20 DegC			EW153	25		171	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		44	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.05	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.8	NTU	INAB	

Signed :

07/09/2018

Domenico Giliberti-Technical Manager

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email: info@elsltd.com



Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/013
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP3	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		120	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.010	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrate as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.018	mg/l P	INAB	
Chloride mg/L			EW175	1.0		14	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		24	ug/L	INAB	
Iron-Dissolved			EW188	20		290	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		566	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.6	pH Units	INAB	
Conductivity @20 DegC			EW153	25		138	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		55	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.38	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		204.0	NTU		

Signed :  _____ 07/09/2018
Domenico Giliberti-Technical Manager

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Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/015
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP2	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.1	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		30	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.015	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.3	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.3	mg/l N	INAB	
Nitrite as N			EW175	0.005		0.007	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.049	mg/l P	INAB	
Chloride mg/L			EW175	1.0		18	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		20	ug/L	INAB	
Iron-Dissolved			EW188	20		50	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		31	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.8	pH Units	INAB	
Conductivity @20 DegC			EW153	25		177	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		55	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.1	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.11	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		16.9	NTU	INAB	

Signed :

07/09/2018

Domenico Giliberti-Technical Manager

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email: info@elsltd.com



Contact Name	Conor Hughes	Report Number	136118 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	136118/016
Tel No	01 658 3500	Date of Receipt	31/08/2018
Customer PO	Per Batch	Date Started	31/08/2018
Quotation No	QN008295	Received or Collected	ELS-Sampled
Customer Ref	WQ_SP16	Date of Report	07/09/2018
		Sample Type	Surface Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		19	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.008	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrate as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		<0.005	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		54	ug/L	INAB	
Iron-Dissolved			EW188	20		180	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		47	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.1	pH Units	INAB	
Conductivity @20 DegC			EW153	25		89	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		27	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		<1.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.1	NTU	INAB	

Signed :

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Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Certificate Of Analysis

Job Number: 20-85289
Issue Number: 2
Report Date: 12 October 2020

Reason for re-issuing report: Client Request.

Site: Loom
PO Number: Z2247
Date Samples Received: 02/10/2020

Please find attached the results for the samples received at our laboratory on 02/10/2020.

Should you have any queries regarding the report or require any further services, we would be happy to discuss your requirements. For additional information about the company please log-on to our website at the above address.

Thank you for choosing City Analysts Limited. We look forward to assisting you again.

Authorised By:



Louise Morrow

Authorised Date: 12 October 2020

Notes are not INAB accredited

Results relate only to the items tested.
Information on methods of analysis and uncertainty of measurement is available on request.
Any opinions or interpretations indicated are outside the scope of our INAB accreditation.
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Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 1-2
Sample Type: Surface
Lab Reference Number: 537608

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	07/10/2020	Aluminium, Soluble	334.70	ug/l	-
D/D3000#	07/10/2020	Alkalinity CaCO3	< 30.000	mg/l	-
D/D3000#	07/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	03/10/2020	BOD5	< 2	mg/l O2	-
D/D3000#	07/10/2020	Chloride	15.447	mg/l	-
S/S1009#	03/10/2020	COD	55	mg/l O2	-
S/S3011#	05/10/2020	Conductivity @ 20°C	< 132.0	uS/cm @20°C	-
S/S1003#	03/10/2020	Dissolved Oxygen	8.84	mg/l O2	-
D/D3001#	07/10/2020	Iron, Soluble	549.0	ug/l	-
S/	09/10/2020	Sampling Charge	02/10/20	N/A	-
S/S3228#	09/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	07/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	07/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	08/10/2020	Orthophosphate as P	0.035	mg/l	-
S/S1041#	05/10/2020	PH	6.51	pH Unit	-
S/D3000#	06/10/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	07/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	05/10/2020	Total Suspended Solids	2	mg/l	-

= INAB Accredited, U = UKAS Accredited, * = Subcontracted

Note:

PV Value is the parametric value, taken from European Communities, (Drinking Water) Regulations, 2014. S.I. No. 122 of 2014 and relates only to drinking water samples.

For queries on results, please contact us within two weeks of the report date to ensure that we can accommodate your query as samples cannot be stored indefinitely.

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total viable count

Site D = Analysed at City Analysts Dublin. Site S = Analysed at City Analysts Shannon

Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 1-2
Sample Type: Surface
Lab Reference Number: 537608

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
S/S3054#	03/10/2020	Turbidity	1.04	NTU	-

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Customer

Leigh Doyle
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Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 2-2
Sample Type: Surface
Lab Reference Number: 537609

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	07/10/2020	Aluminium, Soluble	185.10	ug/l	-
D/D3000#	07/10/2020	Alkalinity CaCO3	< 30.000	mg/l	-
D/D3000#	07/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	03/10/2020	BOD5	2	mg/l O2	-
D/D3000#	07/10/2020	Chloride	12.317	mg/l	-
S/S1009#	03/10/2020	COD	38	mg/l O2	-
S/S3011#	05/10/2020	Conductivity @ 20°C	150.0	uS/cm @20°C	-
S/S1003#	03/10/2020	Dissolved Oxygen	9.17	mg/l O2	-
D/D3001#	07/10/2020	Iron, Soluble	886.0	ug/l	-
S/	09/10/2020	Sampling Charge	02/10/20	N/A	-
S/S3228#	09/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	07/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	07/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	08/10/2020	Orthophosphate as P	< 0.025	mg/l	-
S/S1041#	05/10/2020	PH	7.33	pH Unit	-
S/D3000#	06/10/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	07/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	05/10/2020	Total Suspended Solids	2	mg/l	-

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Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 2-2
Sample Type: Surface
Lab Reference Number: 537609

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
S/S3054#	03/10/2020	Turbidity	2.45	NTU	-

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Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 3-2
Sample Type: Surface
Lab Reference Number: 537610

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	07/10/2020	Aluminium, Soluble	55.15	ug/l	-
D/D3000#	07/10/2020	Alkalinity CaCO3	30.178	mg/l	-
D/D3000#	07/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	03/10/2020	BOD5	< 2	mg/l O2	-
D/D3000#	07/10/2020	Chloride	15.587	mg/l	-
S/S1009#	03/10/2020	COD	36	mg/l O2	-
S/S3011#	05/10/2020	Conductivity @ 20°C	< 132.0	uS/cm @20°C	-
S/S1003#	03/10/2020	Dissolved Oxygen	8.96	mg/l O2	-
D/D3001#	07/10/2020	Iron, Soluble	531.9	ug/l	-
S/	09/10/2020	Sampling Charge	02/10/20	N/A	-
S/S3228#	08/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	07/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	07/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	08/10/2020	Orthophosphate as P	< 0.025	mg/l	-
S/S1041#	05/10/2020	PH	7.23	pH Unit	-
S/D3000#	06/10/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	07/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	05/10/2020	Total Suspended Solids	3	mg/l	-

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Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-85289

Report Version: 2

Site: Loom
Sample Description: 3-2
Sample Type: Surface
Lab Reference Number: 537610

Date of Sampling: 02/10/2020

Date Sample Received: 02/10/2020

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
S/S3054#	03/10/2020	Turbidity	1.88	NTU	-

= INAB Accredited, U = UKAS Accredited, * = Subcontracted

Note:

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Monitoring Recorded Data – Wet Weather Condition



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DETAILED IN SCOPE REG NO. 1111

Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/001
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP1	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.7	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		11	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		9	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.008	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		4.3	mg/l N	INAB	
Nitrate as N			EW175	0.15		4.3	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.010	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		25	ug/L	INAB	
Iron-Dissolved			EW188	20		31	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.7	pH Units	INAB	
Conductivity @20 DegC			EW153	25		202	uscm-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		63	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		5.0	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.5	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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- 6."*" Indicates sub-contract test
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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/002
		Date of Receipt	08/03/2019
		Date Started	08/03/2019
Tel No	01 658 3500	Received or Collected	ELS-Sampled
Customer PO	Z1483	Date of Report	19/03/2019
Quotation No	QN008851	Sample Type	Surface Waters
Customer Ref	WQ - SP2	Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		2.2	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		23	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		11	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.063	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrate as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrite as N			EW175	0.005		0.011	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.025	mg/l P	INAB	
Chloride mg/L			EW175	1.0		21	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		42	ug/L	INAB	
Iron-Dissolved			EW188	20		95	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		8	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.7	pH Units	INAB	
Conductivity @20 DegC			EW153	25		186	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		51	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		5.2	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.03	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		5.0	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/003
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP3	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		40	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.011	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		0.43	mg/l N	INAB	
Nitrate as N			EW175	0.15		0.44	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.010	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		270	ug/L	INAB	
Iron-Dissolved			EW188	20		250	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.7	pH Units	INAB	
Conductivity @20 DegC			EW153	25		79	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		18	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		1.8	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.0	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/004
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP4	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		3.1	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		27	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		7	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.020	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		1.5	mg/l N	INAB	
Nitrate as N			EW175	0.15		1.5	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.006	mg/l P	INAB	
Chloride mg/L			EW175	1.0		19	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		290	ug/L	INAB	
Iron-Dissolved			EW188	20		66	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		6	mg/L	INAB	
Titralab									
pH			EW153	0.0		5.9	pH Units	INAB	
Conductivity @20 DegC			EW153	25		111	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		22	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.8	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.9	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/005
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP5	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		40	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.008	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		1.8	mg/l N	INAB	
Nitrate as N			EW175	0.15		1.8	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.012	mg/l P	INAB	
Chloride mg/L			EW175	1.0		13	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		150	ug/L	INAB	
Iron-Dissolved			EW188	20		460	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.0	pH Units	INAB	
Conductivity @20 DegC			EW153	25		106	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		33	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.2	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.5	NTU	INAB	

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19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/006
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP6	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		2.7	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		12	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.007	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.9	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.9	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.008	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		33	ug/L	INAB	
Iron-Dissolved			EW188	20		54	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.0	pH Units	INAB	
Conductivity @20 DegC			EW153	25		129	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		36	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		3.8	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.8	NTU	INAB	

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19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/007
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP7	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.1	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		19	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		11	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.019	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.031	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		120	ug/L	INAB	
Iron-Dissolved			EW188	20		210	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.3	pH Units	INAB	
Conductivity @20 DegC			EW153	25		127	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		35	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		3.9	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.04	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		6.3	NTU	INAB	

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/008
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP8	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		25	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.025	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrate as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.017	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		150	ug/L	INAB	
Iron-Dissolved			EW188	20		170	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.9	pH Units	INAB	
Conductivity @20 DegC			EW153	25		133	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		36	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		4.9	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		2.6	NTU	INAB	

Signed :

19/03/2019

Tunde Gaspar-Technical Manager

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email: info@elsltd.com



Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/009
		Date of Receipt	08/03/2019
		Date Started	08/03/2019
Tel No	01 658 3500	Received or Collected	ELS-Sampled
Customer PO	Z1483	Date of Report	19/03/2019
Quotation No	QN008851	Sample Type	Surface Waters
Customer Ref	WQ - SP9	Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		21	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		11	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.021	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		1.8	mg/l N	INAB	
Nitrate as N			EW175	0.15		1.8	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.025	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		97	ug/L	INAB	
Iron-Dissolved			EW188	20		190	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.0	pH Units	INAB	
Conductivity @20 DegC			EW153	25		115	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		38	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		2.7	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		4.0	NTU	INAB	

Signed :

19/03/2019

Tunde Gaspar-Technical Manager

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email: info@elsltd.com



Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/010
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP10	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.7	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		18	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.013	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.8	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.014	mg/l P	INAB	
Chloride mg/L			EW175	1.0		15	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		86	ug/L	INAB	
Iron-Dissolved			EW188	20		150	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.4	pH Units	INAB	
Conductivity @20 DegC			EW153	25		124	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		37	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		4.5	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		4.0	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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email: info@elsltd.com



Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/011
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP11	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.4	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		24	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.010	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.2	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.2	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.011	mg/l P	INAB	
Chloride mg/L			EW175	1.0		14	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		77	ug/L	INAB	
Iron-Dissolved			EW188	20		97	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.4	pH Units	INAB	
Conductivity @20 DegC			EW153	25		119	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		34	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		3.3	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.5	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/012
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP12	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		71	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.013	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrate as N			EW175	0.15		<0.15	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.007	mg/l P	INAB	
Chloride mg/L			EW175	1.0		16	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		510	ug/L		
Iron-Dissolved			EW188	20		650	ug/L		
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		4.4	pH Units	INAB	
Conductivity @20 DegC			EW153	25		74	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		<10	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		1.4	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		30.1	NTU	INAB	

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/013
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP13	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		1.7	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		17	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.014	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		5.1	mg/l N	INAB	
Nitrate as N			EW175	0.15		5.1	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.009	mg/l P	INAB	
Chloride mg/L			EW175	1.0		17	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		66	ug/L	INAB	
Iron-Dissolved			EW188	20		57	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.0	pH Units	INAB	
Conductivity @20 DegC			EW153	25		146	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		38	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		6.3	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.5	NTU	INAB	

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/014
Tel No	01 658 3500	Date of Receipt	08/03/2019
Customer PO	Z1483	Date Started	08/03/2019
Quotation No	QN008851	Received or Collected	ELS-Sampled
Customer Ref	WQ - SP14	Date of Report	19/03/2019
		Sample Type	Surface Waters
		Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		3.2	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		11	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.034	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		5.4	mg/l N	INAB	
Nitrate as N			EW175	0.15		5.3	mg/l N	INAB	
Nitrite as N			EW175	0.005		0.007	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.046	mg/l P	INAB	
Chloride mg/L			EW175	1.0		19	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		24	ug/L	INAB	
Iron-Dissolved			EW188	20		38	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		7.8	pH Units	INAB	
Conductivity @20 DegC			EW153	25		213	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		59	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		6.5	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.04	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		7.0	NTU	INAB	

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Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/015
		Date of Receipt	08/03/2019
		Date Started	08/03/2019
Tel No	01 658 3500	Received or Collected	ELS-Sampled
Customer PO	Z1483	Date of Report	19/03/2019
Quotation No	QN008851	Sample Type	Surface Waters
Customer Ref	WQ - SP15	Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		2.1	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		24	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		9	mg/L	INAB	
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.006	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrate as N			EW175	0.15		3.7	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.021	mg/l P	INAB	
Chloride mg/L			EW175	1.0		15	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		100	ug/L	INAB	
Iron-Dissolved			EW188	20		87	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		14	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.6	pH Units	INAB	
Conductivity @20 DegC			EW153	25		132	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		28	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		4.9	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		0.02	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		11.7	NTU	INAB	

Signed :

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email: info@elsltd.com



Contact Name	Trevor Byrne	Report Number	149724 - 1
Address	Fehily Timoney & Company (Cork) 3rd Floor, J5 Plaza,	Sample Number	149724/016
		Date of Receipt	08/03/2019
		Date Started	08/03/2019
Tel No	01 658 3500	Received or Collected	ELS-Sampled
Customer PO	Z1483	Date of Report	19/03/2019
Quotation No	QN008851	Sample Type	Surface Waters
Customer Ref	WQ - SP16	Condition on receipt	Satisfactory

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
BOD									
BOD			EW001	1.0		<1.0	mg/L	INAB	
COD-Chemical Oxygen Demand									
COD			EW184	8		22	mg/L	INAB	
Dissolved Oxygen									
Dissolved Oxygen			EW043	1		10	mg/L		
Gallery Plus-Suite A									
Ammonia as N			EW175	0.005		0.008	mg/l N	INAB	
Total Oxidised Nitrogen (TON) as N			EW175	0.15		2.2	mg/l N	INAB	
Nitrate as N			EW175	0.15		2.2	mg/l N	INAB	
Nitrite as N			EW175	0.005		<0.005	mg/l N	INAB	
Phosphate (Ortho/MRP) as P			EW175	0.005		0.010	mg/l P	INAB	
Chloride mg/L			EW175	1.0		13	mg/L	INAB	
Metals-Dissolved									
Aluminium-Dissolved			EW188	5.0		87	ug/L	INAB	
Iron-Dissolved			EW188	20		150	ug/L	INAB	
Suspended Solids									
Suspended Solids			EW013	5		<5	mg/L	INAB	
Titralab									
pH			EW153	0.0		6.8	pH Units	INAB	
Conductivity @20 DegC			EW153	25		111	uscM-1@20	INAB	
Alkalinity Total (R2 pH4.5)			EW153	10		28	mg/L CaCO3	INAB	
Total Nitrogen									
Total Nitrogen			EW140	1.0		3.3	mg/L	INAB	
Total Phosphorus & Orthophosphate-TP/OP									
Total Phosphorus-TP			EW146	0.01		<0.01	mg/l P	INAB	
Turbidity									
Turbidity			EW136	0.1		1.6	NTU	INAB	

Signed :

Tunde Gaspar-Technical Manager

19/03/2019

NOTES

- 1.This Report shall not be Reproduced except in full, without the permission of the laboratory and only relates to the items tested.
- 2.SPEC= Allowable limit or parametric value
- 3.OOS=Result which is outside specification highlighted as OOS-A
- 4.LOQ=Limit of Quantification or lowest value that can be reported
- 5.ACCRED=Indicates matrix accreditation for the test,a blank field indicates not accredited
- 6.**** Indicates sub-contract test
- 7.Where the date of sampling has not been provided,sample stability times cannot be assessed. It is therefore possible that the results provided may be compromised

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Certificate Of Analysis

Job Number: 20-84798
Issue Number: 2
Report Date: 9 December 2020

Reason for re-issuing report: Client Request.

Site: Not Applicable
PO Number: Z2247
Date Samples Received: 25/09/2020

Please find attached the results for the samples received at our laboratory on 25/09/2020.

Should you have any queries regarding the report or require any further services, we would be happy to discuss your requirements. For additional information about the company please log-on to our website at the above address.

Thank you for choosing City Analysts Limited. We look forward to assisting you again.

Authorised By:



Louise Morrow

Authorised Date: 7 October 2020

Notes are not INAB accredited

Results relate only to the items tested.
Information on methods of analysis and uncertainty of measurement is available on request.
Any opinions or interpretations indicated are outside the scope of our INAB accreditation.
This test report shall not be reproduced except in full or with written approval of City Analysts Limited.

Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-84798

Report Version: 2

Site: Not Applicable

Sample Description: 1-1

Date of Sampling: 23/09/2020

Sample Type: Surface

Date Sample Received: 25/09/2020

Lab Reference Number: 535830

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	29/09/2020	Aluminium, Soluble	147.45	ug/l	-
D/D3000#	02/10/2020	Alkalinity CaCO3	< 30.000	mg/l	-
D/D3000#	01/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	28/09/2020	BOD5	< 2	mg/l O2	-
D/D3000#	01/10/2020	Chloride	32.844	mg/l	-
S/S1009#	28/09/2020	COD	57	mg/l O2	-
S/S3011#	28/09/2020	Conductivity @ 20°C	< 132.0	uS/cm @20°C	-
S/S1003#	25/09/2020	Dissolved Oxygen	8.26	mg/l O2	-
D/D3001#	30/09/2020	Iron, Soluble	1197.9	ug/l	-
S/S3228#	02/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	01/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	01/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	01/10/2020	Orthophosphate as P	< 0.025	mg/l	-
S/S1041#	28/09/2020	PH	6.45	pH Unit	-
S/D3000#	29/09/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	01/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	02/10/2020	Total Suspended Solids	59	mg/l	-
S/S3054#	29/09/2020	Turbidity	111.00	NTU	-

= INAB Accredited, U = UKAS Accredited, * = Subcontracted

Note:

PV Value is the parametric value, taken from European Communities, (Drinking Water) Regulations, 2014. S.I. No. 122 of 2014 and relates only to drinking water samples.

For queries on results, please contact us within two weeks of the report date to ensure that we can accommodate your query as samples cannot be stored indefinitely.

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total viable count

Site D = Analysed at City Analysts Dublin. Site S = Analysed at City Analysts Shannon

Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-84798

Report Version: 2

Site: Not Applicable

Sample Description: 2-1

Date of Sampling: 23/09/2020

Sample Type: Surface

Date Sample Received: 25/09/2020

Lab Reference Number: 535832

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	29/09/2020	Aluminium, Soluble	80.83	ug/l	-
D/D3000#	06/10/2020	Alkalinity CaCO3	< 30.000	mg/l	-
D/D3000#	06/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	28/09/2020	BOD5	< 2	mg/l O2	-
D/D3000#	06/10/2020	Chloride	13.206	mg/l	-
S/S1009#	28/09/2020	COD	20	mg/l O2	-
S/S3011#	28/09/2020	Conductivity @ 20°C	< 132.0	uS/cm @20°C	-
S/S1003#	25/09/2020	Dissolved Oxygen	9.29	mg/l O2	-
D/D3001#	30/09/2020	Iron, Soluble	962.8	ug/l	-
S/S3228#	02/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	06/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	06/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	06/10/2020	Orthophosphate as P	< 0.025	mg/l	-
S/S1041#	28/09/2020	PH	7.23	pH Unit	-
S/D3000#	29/09/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	06/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	02/10/2020	Total Suspended Solids	2	mg/l	-
S/S3054#	29/09/2020	Turbidity	4.74	NTU	-

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Certificate Of Analysis

Customer

Leigh Doyle
Fehily Timoney & Company
Core House
Pouladuff Road
Ballyphehane
Cork

Report Reference: 20-84798

Report Version: 2

Site: Not Applicable

Sample Description: 3-1

Date of Sampling: 23/09/2020

Sample Type: Surface

Date Sample Received: 25/09/2020

Lab Reference Number: 535834

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
D/D3001#	30/09/2020	Aluminium, Soluble	< 5.00	ug/l	-
D/D3000#	06/10/2020	Alkalinity CaCO3	35.028	mg/l	-
D/D3000#	06/10/2020	Ammonia as N	< 0.010	mg/l	-
S/S1003#	28/09/2020	BOD5	< 2	mg/l O2	-
D/D3000#	06/10/2020	Chloride	16.650	mg/l	-
S/S1009#	28/09/2020	COD	18	mg/l O2	-
S/S3011#	28/09/2020	Conductivity @ 20°C	143.0	uS/cm @20°C	-
S/S1003#	25/09/2020	Dissolved Oxygen	9.49	mg/l O2	-
D/D3001#	30/09/2020	Iron, Soluble	< 7.2	ug/l	-
S/S3228#	02/10/2020	Total Nitrogen	< 2.500	mg/l	-
D/D3000#	06/10/2020	Nitrite as N	< 0.005	mg/l	-
D/D3000#	06/10/2020	Nitrate as N	< 2.000	mg/l	-
D/D3000#	06/10/2020	Orthophosphate as P	< 0.025	mg/l	-
S/S1041#	28/09/2020	PH	7.18	pH Unit	-
S/D3000#	29/09/2020	Phosphorus, Total as P	< 0.200	mg/l	-
D/D3000#	06/10/2020	TON as N	< 2.000	mg/l	-
S/S1049#	02/10/2020	Total Suspended Solids	2	mg/l	-
S/S3054#	29/09/2020	Turbidity	2.48	NTU	-

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