

**McQuillan Envirocare Ltd**  
Analytical Services

## Test Certificate

Certificate: ECTC006757

Issue No: 1

Louth County Council  
County Hall  
Millenium Centre  
Dundalk  
Ireland

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New Park Industrial Estate  
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<b>MCQ Job No</b>	ORD-08093
<b>Sample Receipt Date</b>	18/12/2015
<b>Date Analysis Started</b>	03/02/2016
<b>Completion Date</b>	18/02/2016
<b>Turnaround Time</b>	10
<b>No of Samples</b>	2
<b>Purchase Order Number</b>	
<b>McQuillan Quote Number</b>	

Dear Damien Holmes,

Analysis of your sample(s) is now complete and we have pleasure in enclosing the appropriate test report.

All analysis was completed within McQuillan Envirocare Analytical Laboratory (MCQ) unless otherwise specified. Any analysis that was subcontracted to a McQuillan Companies Approved Laboratory is indicated by 'S'. Please refer to the table at the end of your test certificate for explanations of sample deviations.

Results relate only to the items tested. This Test Certificate supersedes any version previously issued by the laboratory. It cannot be reproduced except in full and without written approval from McQuillan Envirocare Ltd.

Should you have any queries regarding this report(s) or any part of our service, please contact Sales on +44(0)28 9446 6708 who will be happy to discuss your requirements.

Thank you for using McQuillan Companies Analytical Services and we look forward to receiving your next samples.

Yours Sincerely



Amy Walker  
Lab Technician

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Lab Ref	Sample Details	Sample Date	Method No.	Test	Result	Units	ACC	Lab	Sample Deviations
MCC027434	SW1	17/12/2015	N/A	Acid Herbicides	See Below	ug/l	N	S	
			N/A	Antimony (tot.unfilt)	4.7	ug/l	Y	S	
			N/A	Arsenic (tot.unfilt)	<2	ug/l	Y	S	
			N/A	Barium (tot.unfilt)	189	ug/l	Y	S	
			N/A	Boron (tot.unfilt)	203	ug/l	Y	S	
			N/A	Cadmium (tot.unfilt)	<0.5	ug/l	Y	S	
			N/A	Chloride	41.9	mg/l	Y	S	
			N/A	Chromium (tot.unfilt)	<3	ug/l	Y	S	
			N/A	Cobalt (tot.unfilt)	0.515	ug/l	Y	S	
			N/A	Copper (tot.unfilt)	<4	ug/l	Y	S	
			N/A	Cyanide, Total	<0.05	mg/l	Y	S	
			N/A	Fluoride	<0.5	mg/l	Y	S	
			N/A	Glyphosate	<0.2	ug/l	N	S	
			N/A	Lead (tot.unfilt)	0.988	ug/l	Y	S	
			N/A	Mercury (tot.unfilt)	<0.02	ug/l	N	S	
			N/A	Molybdenum (tot.unfilt)	<9	ug/l	Y	S	
			N/A	Nickel (tot.unfilt)	2.48	ug/l	Y	S	
			N/A	Organic Carbon, Total	11.4	mg/l	Y	S	
			N/A	Organochlorine Pesticides (aq)	See Below	ug/l	N	S	
			N/A	Phenols, Total Detected monohydric	<0.016	mg/l	Y	S	
			N/A	Selenium (tot.unfilt)	1.29	ug/l	Y	S	
			N/A	Tin (tot.unfilt)	<3	ug/l	Y	S	
			N/A	Urons and Triazines (W)	See Below	-	N	S	
			N/A	Vanadium (tot.unfilt)	<8	ug/l	Y	S	
			N/A	VOC by GCMS Jan 14	See Below	ug/l	N	S	
			N/A	Zinc (tot.unfilt)	20.4	ug/l	Y	S	
			N/A	Acenaphthene (diss.filt)	0.0262	ug/l	N	S	
			N/A	Acenaphthylene (diss.filt)	0.0122	ug/l	N	S	
			N/A	Anthracene (diss.filt)	<0.015	ug/l	N	S	
			N/A	Benzo(a)anthracene (diss.filt)	<0.017	ug/l	N	S	
			N/A	Benzo(a)pyrene (diss.filt)	<0.009	ug/l	N	S	
			N/A	Benzo(b)fluoranthene (diss.filt)	<0.023	ug/l	N	S	
			N/A	Benzo(g,h,i)perylene (diss.filt)	<0.016	ug/l	N	S	
			N/A	Benzo(k)fluoranthene (diss.filt)	<0.027	ug/l	N	S	
			N/A	Chrysene (diss.filt)	<0.013	ug/l	N	S	
			N/A	Dibenzo(a,h)anthracene (diss.filt)	<0.016	ug/l	N	S	
			N/A	Fluoranthene (diss.filt)	<0.017	ug/l	N	S	

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N/A	Fluorene (diss.filt)	0.0241	ug/l	N	S
N/A	Indeno(1,2,3-cd)pyrene (diss.filt)	<0.014	ug/l	N	S
N/A	Naphthalene (aq)	<0.1	ug/l	N	S
N/A	PAH GCMS				
N/A	PAH Sum of EPA 16 detected (Diss.filt)	<0.344	ug/l	N	S
N/A	Phenanthrene (diss.filt)	<0.022	ug/l	N	S
N/A	Pyrene (diss.filt)	<0.015	ug/l	N	S

Sample Matrix: Surface Water

Analyst Comment: Sample Holding Time exceeded for Organic Carbon, Total, Fluoride, Chloride, Boron (tot.unfilt), Cyanide Total, PAH Spec MS, VOC MS, - Late arrival of instructions. Incorrect Container received for Phenol, Cresols, Xylenols, Phenols, Total Detected monohydric

MCQ027435	SW2	17/12/2015	N/A	Acid Herbicides	See Below	ug/l	N	S
			N/A	Antimony (tot.unfilt)	<4	ug/l	Y	S
			N/A	Arsenic (tot.unfilt)	3.05	ug/l	Y	S
			N/A	Barium (tot.unfilt)	125	ug/l	Y	S
			N/A	Boron (tot.unfilt)	<135	ug/l	Y	S
			N/A	Cadmium (tot.unfilt)	<0.5	ug/l	Y	S
			N/A	Chloride	45.3	mg/l	Y	S
			N/A	Chromium (tot.unfilt)	<3	ug/l	Y	S
			N/A	Cobalt (tot.unfilt)	1.55	ug/l	Y	S
			N/A	Copper (tot.unfilt)	6.81	ug/l	Y	S
			N/A	Cyanide, Total	<0.05	mg/l	Y	S
			N/A	Fluoride	<0.5	mg/l	Y	S
			N/A	Glyphosate	<0.2	ug/l	N	S
			N/A	Lead (tot.unfilt)	6.33	ug/l	Y	S
			N/A	Mercury (tot.unfilt)	<0.02	ug/l	N	S
			N/A	Molybdenum (tot.unfilt)	<9	ug/l	Y	S
			N/A	Nickel (tot.unfilt)	5.51	ug/l	Y	S
			N/A	Organic Carbon, Total	7.36	mg/l	Y	S
			N/A	Organochlorine Pesticides (aq)	See Below	ug/l	N	S
			N/A	Phenols, Total Detected monohydric	<0.016	mg/l	Y	S
			N/A	Selenium (tot.unfilt)	1.53	ug/l	Y	S
			N/A	Tin (tot.unfilt)	<3	ug/l	Y	S
			N/A	Urons and Triazines (W)	See Below	-	N	S
			N/A	Vanadium (tot.unfilt)	<8	ug/l	Y	S
			N/A	VOC by GCMS Jan 14	See Below	ug/l	N	S
			N/A	Zinc (tot.unfilt)	15.5	ug/l	Y	S
			N/A	Acenaphthene (diss.filt)	<0.015	ug/l	N	S
			N/A	Acenaphthylene (diss.filt)	<0.011	ug/l	N	S
			N/A	Anthracene (diss.filt)	<0.015	ug/l	N	S
			N/A	Benzo(a)anthracene (diss.filt)	<0.017	ug/l	N	S

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N/A	Benzo(a)pyrene (diss.filt)	<0.009	ug/l	N	S
N/A	Benzo(b)fluoranthene (diss.filt)	<0.023	ug/l	N	S
N/A	Benzo(g,h,i)perylene (diss.filt)	<0.016	ug/l	N	S
N/A	Benzo(k)fluoranthene (diss.filt)	<0.027	ug/l	N	S
N/A	Chrysene (diss.filt)	<0.013	ug/l	N	S
N/A	Dibenzo(a,h)anthracene (diss.filt)	<0.016	ug/l	N	S
N/A	Fluoranthene (diss.filt)	<0.017	ug/l	N	S
N/A	Fluorene (diss.filt)	<0.014	ug/l	N	S
N/A	Indeno(1,2,3-cd)pyrene (diss.filt)	<0.014	ug/l	N	S
N/A	Naphthalene (aq)	<0.1	ug/l	N	S
N/A	PAH GCMS				
N/A	PAH Sum of EPA 16 detected (Diss.filt)	<0.344	ug/l	N	S
N/A	Phenanthrene (diss.filt)	<0.022	ug/l	N	S
N/A	Pyrene (diss.filt)	<0.015	ug/l	N	S

Sample Matrix: Surface Water

Analyst: Sample Holding Time exceeded for Organic Carbon, Total, Fluoride, Chloride, Boron (tot.unfilt), Cyanide Total, PAH Spec MS, VOC MS, - Late arrival of instructions. Incorrect Container received for Phenol, Cresols, Xylenols, Phenols, Total Detected monohydric

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Sample Deviations Legend			
Results may be compromised if the following deviations apply			
Comment	C	Incorrect Container	‡
Container with Headspace provided	8	Insufficient sample volume	È
BOD Overdiluted, therefore result indicative only	\$	BOD Underdiluted, therefore result indicative only	#
High Chloride concentration, COD could not be determined	§	Holding time exceeded due to sampled on date	@
Holding time exceeded in Lab	±	Holding time exceeded due to delayed instructions	&

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SW1-LCC	SW2-LCC
Water(GW/SW) 17/12/2015	Water(GW/SW) 17/12/2015
19/12/2015 160203-36 12864349	19/12/2015 160203-36 12864351

Chloridazon (aq)	<0.03 µg/l	TM185	<0.03	<0.03
Carbetamide (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Monuron (aq)	<0.03 µg/l	TM185	<0.03	<0.03
Simazine (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Atrazine (aq)	<0.07 µg/l	TM185	<0.07	<0.07
Chlortoluron (aq)	<0.03 µg/l	TM185	<0.03	<0.03
Diuron (aq)	<0.03 µg/l	TM185	<0.03	<0.03
Isoproturon (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Methabenzthiazuron (aq)	<0.04 µg/l	TM185	<0.04	<0.04

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Propham (aq)	<0.09 µg/l	TM185	<0.09	<0.09
Linuron (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Propazine (aq)	<0.06 µg/l	TM185	<0.06	<0.06
Chlorpropham (aq)	<0.09 µg/l	TM185	<0.09	<0.09
Prometryn (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Tertbutryn (aq)	<0.04 µg/l	TM185	<0.04	<0.04
Phenol	<0.002 mg/l	TM259	<0.002 2 #	<0.002 2 #
Cresols	<0.006 mg/l	TM259	<0.006 2 #	<0.006 2 #
Xylenols	<0.008 mg/l	TM259	<0.008 2 #	<0.008 2 #
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	<0.016 2 #	<0.016 2 #
1,3,5-Trichlorobenzene	<0.02 µg/l	TM314	<0.02	<0.02
1,2,4-Trichlorobenzene	<0.02 µg/l	TM314	<0.02	<0.02
1,2,3-Trichlorobenzene	<0.02 µg/l	TM314	<0.02	<0.02
Hexachlorobutadiene	<0.01 µg/l	TM314	<0.01	<0.01
Dichlobenil	<0.01 µg/l	TM314	<0.01	<0.01
Etridiazole	<0.01 µg/l	TM314	<0.01	<0.01
Chloroneb	<0.01 µg/l	TM314	<0.01	<0.01
Tecnazene	<0.01 µg/l	TM314	<0.01	<0.01



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Propachlor	<0.01 µg/l	TM314	<0.01	<0.01
Trifluralin	<0.01 µg/l	TM314	<0.01	<0.01
alpha-HCH	<0.01 µg/l	TM314	<0.01	<0.01
Hexachlorobenzene	<0.01 µg/l	TM314	<0.01	<0.01
beta-HCH	<0.01 µg/l	TM314	<0.01	<0.01
gamma-HCH	<0.01 µg/l	TM314	<0.01	<0.01
delta-HCH	<0.01 µg/l	TM314	<0.01	<0.01
Triallate	<0.01 µg/l	TM314	<0.01	<0.01
Chlorothalonil	<0.01 µg/l	TM314	<0.03	<0.03
Heptachlor	<0.01 µg/l	TM314	<0.01	<0.01
Aldrin	<0.01 µg/l	TM314	<0.01	<0.01

Isodrin	<0.01 µg/l	TM314	<0.01	<0.01
Dacthal	<0.01 µg/l	TM314	<0.01	<0.01
Heptachlor-exo-epoxide	<0.01 µg/l	TM314	<0.01	<0.01
alpha-Chlordane	<0.01 µg/l	TM314	<0.01	<0.01
2,4-DDE	<0.01 µg/l	TM314	<0.01	<0.01

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alpha-Endosulphan	<0.01 µg/l	TM314	<0.01	<0.01
gamma-Chlordane	<0.01 µg/l	TM314	<0.01	<0.01
4,4-DDE	<0.01 µg/l	TM314	<0.01	<0.01
Dieldrin	<0.01 µg/l	TM314	<0.01	<0.01
2,4-DDD	<0.01 µg/l	TM314	<0.01	<0.01
Endrin	<0.01 µg/l	TM314	<0.01	<0.01
Chlorobenzilate	<0.01 µg/l	TM314	<0.01	<0.01
beta-Endosulfan	<0.01 µg/l	TM314	<0.01	<0.01
4,4-DDD	<0.01 µg/l	TM314	<0.01	<0.01
2,4-DDT	<0.01 µg/l	TM314	<0.01	<0.01
Endrin-Aldehyde	<0.01 µg/l	TM314	<0.01	<0.01

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4,4-DDT	<0.01 µg/l	TM314	<0.01	<0.01
Endosulfan-sulfate	<0.01 µg/l	TM314	<0.01	<0.01
Methoxychlor	<0.01 µg/l	TM314	<0.01	<0.01
cis-Permethrin	<0.01 µg/l	TM314	<0.01	<0.01
trans-Permethrin	<0.01 µg/l	TM314	<0.01	<0.01
Cypermethrin	<0.02 µg/l	TM314	<0.02	<0.02
Drins	<0.04 µg/l	TM314	<0.04	<0.04
DDT	<0.02 µg/l	TM314	<0.02	<0.02

**Acid Herbicides (W)**

Mecoprop (MCP)	<0.04 µg/l	TM186	0.198	0.084
2,4,5-T	<0.05 µg/l	TM186	<0.05	<0.05
2,4-D (non ester)	<0.05 µg/l	TM186	<0.05	<0.05
2,4-DB	<0.05 µg/l	TM186	<0.05	<0.05
Dichlorprop DCP	<0.05 µg/l	TM186	<0.05	<0.05
MCPA	<0.05 µg/l	TM186	<0.05	<0.05
Fenoprop (Silvex)	<0.05 µg/l	TM186	<0.05	<0.05
Fluroxypyr	<0.05 µg/l	TM186	<0.05	<0.05
Triclopyr	<0.05 µg/l	TM186	<0.05	<0.05

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### VOC MS (W)

Dibromofluoromethane**	%	TM208	121	121
Toluene-d8**	%	TM208	110	110
4-Bromofluorobenzene**	%	TM208	111	112
Dichlorodifluoromethane	<1 µg/l	TM208	<1	<1
Chloromethane	<1 µg/l	TM208	<1	<1
Vinyl chloride	<1 µg/l	TM208	<1	<1
Bromomethane	<1 µg/l	TM208	<1	<1
Chloroethane	<1 µg/l	TM208	<1	<1
Trichlorofluoromethane	<1 µg/l	TM208	<1	<1
1,1-Dichloroethene	<1 µg/l	TM208	<1	<1
Carbon disulphide	<1 µg/l	TM208	<1	<1

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Dichloromethane	<3 µg/l	TM208	<3 & #	<3 & #
Methyl tertiary butyl ether (MTBE)	<1 µg/l	TM208	<1 & #	<1 & #
trans-1,2-Dichloroethene	<1 µg/l	TM208	<1 & #	<1 & #
1,1-Dichloroethane	<1 µg/l	TM208	<1 & #	<1 & #
cis-1,2-Dichloroethene	<1 µg/l	TM208	<1 & #	<1 & #
2,2-Dichloropropane	<1 µg/l	TM208	<1	<1
Bromochloromethane	<1 µg/l	TM208	<1 & #	<1 & #
Chloroform	<1 µg/l	TM208	<1 & #	<1 & #
1,1,1-Trichloroethane	<1 µg/l	TM208	<1 & #	<1 & #
1,1-Dichloropropene	<1 µg/l	TM208	<1 & #	<1 & #
Carbontetrachloride	<1 µg/l	TM208	<1 & #	<1 & #
1,2-Dichloroethane	<1 µg/l	TM208	<1 &	<1 &

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Benzene	<1 µg/l	TM208	<1 & #	<1 & #
Trichloroethene	<1 µg/l	TM208	<1 & #	<1 & #
1,2-Dichloropropane	<1 µg/l	TM208	<1 & #	<1 & #
Dibromomethane	<1 µg/l	TM208	<1 & #	<1 & #
Bromodichloromethane	<1 µg/l	TM208	<1 & #	<1 & #
cis-1,3-Dichloropropene	<1 µg/l	TM208	<1 & #	<1 & #
Toluene	<1 µg/l	TM208	<1 & #	<1 & #
trans-1,3-Dichloropropene	<1 µg/l	TM208	<1 & #	<1 & #
1,1,2-Trichloroethane	<1 µg/l	TM208	<1 & #	<1 & #

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1,3-Dichloropropane	<1 µg/l	TM208	<1 & #	<1 & #
Tetrachloroethene	<1 µg/l	TM208	<1 & #	<1 & #
Dibromochloromethane	<1 µg/l	TM208	<1 & #	<1 & #
1,2-Dibromoethane	<1 µg/l	TM208	<1 & #	<1 & #
Chlorobenzene	<1 µg/l	TM208	<1 & #	<1 & #
1,1,1,2-Tetrachloroethane	<1 µg/l	TM208	<1 & #	<1 & #
Ethylbenzene	<1 µg/l	TM208	<1 & #	<1 & #
m,p-Xylene	<1 µg/l	TM208	<1 & #	<1 & #
o-Xylene	<1 µg/l	TM208	<1 & #	<1 & #
Styrene	<1 µg/l	TM208	<1 & #	<1 & #
Bromoform	<1 µg/l	TM208	<1 & #	<1 & #
Isopropylbenzene	<1 µg/l	TM208	<1 & #	<1 & #

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1,1,2,2-Tetrachloroethane	<1 µg/l	TM208	<1	<1
			&	&
1,2,3-Trichloropropane	<1 µg/l	TM208	<1	<1
			& #	& #
Bromobenzene	<1 µg/l	TM208	<1	<1
			& #	& #
Propylbenzene	<1 µg/l	TM208	<1	<1
			& #	& #
2-Chlorotoluene	<1 µg/l	TM208	<1	<1
			& #	& #
1,3,5-Trimethylbenzene	<1 µg/l	TM208	<1	<1
			& #	& #
4-Chlorotoluene	<1 µg/l	TM208	<1	<1
			& #	& #
tert-Butylbenzene	<1 µg/l	TM208	<1	<1
			& #	& #
1,2,4-Trimethylbenzene	<1 µg/l	TM208	<1	<1
			& #	& #
sec-Butylbenzene	<1 µg/l	TM208	<1	<1
			& #	& #
4-iso-Propyltoluene	<1 µg/l	TM208	<1	<1
			& #	& #

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