



# CUTHBERT ENVIRONMENTAL

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## ANNUAL ENVIRONMENTAL REPORT

for

**MALLOW CONTRACTS LTD**

**Waste Licence – W0266-01**

**2016**

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APPENDIX I – Environmental Reports

## 1. INTRODUCTION

Mallow Contracts Ltd holds a waste licence (W0266-01) at Lissard/ Ballyhilloge, Mourneabbey, Co. Cork.

The facility is allows for land improvement works and will likely be complete in 2017.

The licence allows for the acceptance of soil & stone and some C&D material.

### 1.1 Facility Details

Licence Registration Number: -	W0266-01
Name: -	Mallow Contracts Ltd.
Location: -	Lissard/ Ballyhilloge, Mourneabbey, Co. Cork.
Reporting Period: -	1 <sup>st</sup> January – 31 <sup>st</sup> December 2016

### 1.2 Licenced Waste Activities

Recovery activities as per the Fourth Schedule of the Waste Management Act 1996	
R10	Land treatment resulting in benefit to agriculture or ecological improvement.

### 1.3 Waste Processing at the Facility

The facility accepted 20,259 tonnes of soil & stone in 2016. This material was utilised for land improvement works in line with the requirements of the waste licence.

## **2. Quantity and Composition of Waste**

The facility accepted 20,259 tonnes of soil & stone in 2016. This material was utilised for land improvement works in line with the requirements of the waste licence.

## **3. Summary Report on Emissions**

Currently noise, dust, surface water and groundwater monitoring has commenced. All monitoring reports are uploaded on to the EDEN system. Please see reports attached with Appendix I.

## **4. Waste Recovery Report**

100% of waste accepted at the site is recovered on site.

## **5. Remaining Void Space – Projected Completion Date**

It is anticipated that the remaining void space will be filled in 2017.

## 6. SCHEDULE OF OBJECTIVES AND TARGETS 2016 (Environmental Management Programme)

Objective No.	Objective	Target	Responsibility	Timeline
1	To control environmental nuisances at the facility	Monitor surface water, noise and dust emissions	Facility Manager	Ongoing
2	Provide facility operators training and awareness	Ensure competence of staff	Facility Manager	Ongoing
3	Maintain and develop Environmental Management System	Maintain documentation onsite; update procedures to reflect operational/control changes.	Facility Manager	Ongoing
4	Minimise receipt of unsuitable waste at the facility	Communicate with customers regarding the types of materials that are acceptable	Facility Manager	Ongoing

The above will be reviewed regularly and notes compiled regularly to identify needs, etc. At the end of the year these reviews will help the compilation of the progress report.

## 7. COMPLAINTS AND INCIDENTS 2016

There were no complaints or incidents reported in 2016.

## 8. FINANCIAL PROVISION

Mallow Contracts Ltd is currently preparing an Environmental Liabilities Risk Assessment (ELRA) and a Closure, Restoration and Aftercare Management Plan (CRAMP) to the Agency.

## **9. PROGRAMME FOR PUBLIC INFORMATION**

Mallow Contracts Ltd is fully-committed to providing the general public, neighbouring residences and businesses with information relating to the Environmental Performance of the facility if requested.

All information in respect to the operation of the facility is maintained onsite and can be viewed upon request. Furthermore, if an individual wishes to see the facility in operation, it operates an open-door policy and endeavours to provide information to the public in both a timely and accurate manner.

A Communications Programme will be outlined in the facility's Environmental Management System.

## **10. DEVELOPMENT/INFRASTRUCTURAL WORKS**

There were no structural or procedural developments in 2016.

## APPENDIX I: Environmental Reports



Environmental Protection Agency

| PRTR# : W0266 | Facility Name : Mallow Contracts Limited | Filename : W0266\_2016  
PRTR.xls | Return Year : 2016 |

Guidance to completing the PRTR workbook

# PRTR Returns Workbook

Version 1.1.19

<b>REFERENCE YEAR</b>	2016
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## 1. FACILITY IDENTIFICATION

Parent Company Name	Mallow Contracts Limited
Facility Name	Mallow Contracts Limited
PRTR Identification Number	W0266
Licence Number	W0266-01

### Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Lissard & Ballyhillloge	
Address 2	Mourneabbey	
Address 3	Co. Cork	
Address 4		
	Cork	
Country	Ireland	
Coordinates of Location	-8.60915378099998 52.0481705060001	
River Basin District	IESW	
NACE Code	3832	
Main Economic Activity	Recovery of sorted materials	
<b>AER Returns Contact Name</b>	Toddy Cuthbert	
<b>AER Returns Contact Email Address</b>	toddy@cuthbertenvironmental.com	
<b>AER Returns Contact Position</b>	Consultant	
<b>AER Returns Contact Telephone Number</b>	021 4975683	
<b>AER Returns Contact Mobile Phone Number</b>	0863864518	
<b>AER Returns Contact Fax Number</b>		
<b>Production Volume</b>		20259.0
<b>Production Volume Units</b>	tonnes	
<b>Number of Installations</b>		1
<b>Number of Operating Hours in Year</b>		2000
<b>Number of Employees</b>		0
<b>User Feedback/Comments</b>		
<b>Web Address</b>		

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

## 3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	no



**4. WASTE IMPORTED/ACCEPTED ONTO SITE**

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	Yes
--	-----

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE | PRTR#: W0286 | Facility Name : Mallow Contracts Limited | Filename : W0266\_2016 PRTR.xls | Return Year : 2016 |  
 Please enter all quantities on this sheet in Tonnes

Transfer Destination Within the Country	European Waste Code	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz.Waste : Name and Licence/Permit No of Next Destination Facility Haz.Waste: Name and Licence/Permit No of Recover/Disposer	Haz.Waste : Address of Next Destination Facility Non-Haz.Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
					M/C/E	Volume Calculation					
17 05 04		20259.0	Soil & stone	Recovery	E		Offsite in Ireland			W0266-01	Mallow Contracts Ltd

\* Select a row by double-clicking the Description of Waste then click the delete button

**MALLOW CONTRATCS LTD  
LISSARD & BALLYHILLOGE  
MOURNEABBEY  
CO. CORK**

**WASTE LICENSE W0266-01**

**SURFACE WATER MONITORING  
Q4 2016**

## **1 INTRODUCTION**

The Environmental Protection Agency (EPA) issued Mallow Contracts Ltd a waste licence (register number W0266-01) at Lissard/ Ballyhillige, Mourneabbey, Co. Cork, on 2<sup>nd</sup> November 2016.

Waste licence Number W0266-01 obliges Mallow Contracts Ltd to facilitate the monitoring of all designated sampling locations at the site. In order to fulfil these environmental compliance commitments in 2016 Mallow Contracts Ltd retained the services of Cuthbert Environmental to complete annual monitoring.

This report represents surface water monitoring report for 2016 and it addresses the water quality results collected in relation to previous monitoring events, EPA established trigger levels and other national and international standards. The report is divided into three sections:

- Section one is a brief introduction;
- Section two analyses and discusses the quality of water at the surface water monitoring locations;
- Section three draws overall conclusions on the quality of water and makes recommendations where necessary.

## 2 SURFACE WATER MONITORING

Surface water monitoring was carried out at one location; SW1 as described in Table 2.1 below.

**Table 2.1: Surface Water Monitoring Locations**

Site	Description
SW1	River Martin

### 2.1 Monitoring Results

Surface water results for each of the sampling location are presented in Table 2.1.1. The full surface water analysis datasets issued are included in Appendix 1.

**TABLE 2.1.1: SW1 Monitoring Results Q4 2016**

Analyte	Unit	Limit	Note	Result
COD	mg/l	NA	No Limit	<2
BOD	mg/l	4		<2
Suspended Solids	mg/l	NA	No Limit	4.9
Total Ammonia	mg/l	NA	Regulations refer to Rivers/lakes	0.05
Total Nitrogen	mg/l	NA	Regulations limits refer to Coastal water bodies only	39
Mineral Oil	mg/l	NA	No Limit	0.031
Sulphate	mg/l	NA	No Limit	15
Electrical Conductivity @25C #	uS/cm	NA	No limit, but important for determining other limits)	222
pH#	pH units	NA	Soft water: 4.5-9.0 Hard Water: 6.0-9.0 Regulations refer to Rivers/lakes	6.26

\*European Communities Environmental Objectives (Surface Waters) Regulations 2009, S.1. No 272 of 2009.

## **2.2 Interpretation of Surface Water Results**

The following is an overview of the surface water monitoring results recorded in 2012 and a discussion of how these results compare to results reported for previous monitoring events:

- pH levels for SW1 is within the range.
- Results show that BOD level at SW1 is low.
- Results show that COD level at SW1 is low.

This is the first set of results for SW1. These results will be compared to future results.

### **3 CONCLUSIONS AND RECOMMENDATIONS**

As there are no surface water discharge trigger levels or emission limit values outlined in the waste license for this facility, the parameters measured were compared to the European Communities (Quality of Surface Water Intended for Abstraction of Drinking Water) Regulations, 1989.

Surface water monitoring results indicated that no parameter exceeded the trigger levels set in the European Communities (Quality of Surface Water Intended for Abstraction of Drinking Water) Regulations, 1989.

Therefore, the Mallow Contracts Ltd facility has not adversely affected surface water quality at SW1. These results will be compared with future results when they are obtained.

## **APPENDIX 1**

**Water Quality Datasheets for Q4 2016 at Mallow Contracts Ltd Site:**





**Chemical Analysis Results Sheet**

Customer: Cuthbert Environmental  
Ref: Mallow  
Laboratory Reference No: WT53205  
Date of testing: 25/11/2016  
Sample details:  
1. GW1  
2. GW 2  
3. Storm water

**Note: Results reflect conditions at time of sampling only**

<i>Chemical Analysis</i>	<b>Test results Sample 1</b>	<b>Units</b>
pH	5.97	pH
Conductivity	284	us/cm
COD(Total)	<2	mg/l
BOD	2.6	mg/l
Ammonia	<0.01	mg/l
Total Phosphorus	0.04	mg/l
Orthophosphate as P	0.02	mg/l
TOC	5.0	mg/l
TDS	170.4	mg/l
Sulphate	13	mg/l
Chloride	42.6	mg/l
Fluoride	0.13	mg/l
Total Cyanide	<0.7	-
Total Aluminium	<0.1	mg/l
Total Boran	<0.23	mg/l
Potassium	1.91	mg/l
Sodium	14.9	mg/l
Phenol	<5.00	ug/l

<i>Chemical Analysis</i>	<b>Test results Sample 2</b>	<b>Units</b>
pH	5.92	pH
Conductivity	288	us/cm
COD(Total)	<2	mg/l
BOD	<2	mg/l
Ammonia	<0.01	mg/l
TOC	3.7	mg/l
Total Phosphorus	0.05	mg/l
Orthophosphate as P	0.05	mg/l
TDS	172.8	mg/l
Sulphate	8	mg/l
Chloride	42.6	mg/l
Fluoride	0.01	mg/l
Total Cyanide	<0.7	-
Total Aluminium	<0.1	mg/l
Total Boran	<0.23	mg/l
Potassium	0.47	mg/l
Sodium	9.13	mg/l
Phenol	<5.00	ug/l

<i>Chemical Analysis</i>	<b>Test results Sample 3</b>	<b>Units</b>
pH	6.26	pH
Conductivity	222	us/cm
COD(Total)	<2	mg/l
BOD	<2	mg/l
Ammonia	0.05	mg/l
Total Nitrogen	39	mg/l
Sulfate	15	mg/l
Suspended solids	4.9	mg/l
Temperature	Ambient	mg/l
Sulphate	15	mg/l
Mineral oil	0.031	mg/l

**Chemical results** are expressed as mg/l (milligrams per litre), this measure is the same as ppm (parts per million) where indicated; or as µg/l (micrograms per litre) where indicated.

**Legends:** *N/D* – Non Detect, *TNTC* – Too Numerous to Count, *N/A* – Not Applicable, > - greater than, < - less than



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Page: 1 of 1

**MALLOW CONTRATCS LTD  
LISSARD & BALLYHILLOGE  
MOURNEABBEY  
CO. CORK**

**WASTE LICENSE W0266-01**

**GROUNDWATER MONITORING  
Q4 2016**

## **1 INTRODUCTION**

The Environmental Protection Agency (EPA) issued Mallow Contracts Ltd a waste licence (register number W0266-01) at Lissard/ Ballyhilloge, Mourneabbey, Co. Cork, on 2<sup>nd</sup> November 2016.

Waste licence Number W0266-01 obliges Mallow Contracts Ltd to facilitate the monitoring of all designated sampling locations at the site. In order to fulfil these environmental compliance commitments in 2016 Mallow Contracts Ltd retained the services of Cuthbert Environmental to complete annual monitoring.

This report represents groundwater monitoring report for 2016 and it addresses the water quality results collected in relation to previous monitoring events, EPA established trigger levels and other national and international standards. The report is divided into three sections:

- Section one is a brief introduction;
- Section two analyses and discusses the quality of water at the groundwater water monitoring locations;
- Section three draws overall conclusions on the quality of water and makes recommendations where necessary.



## 2 GROUNDWATER WATER MONITORING

Groundwater monitoring was carried out at three locations; GW1, GW2 & GW3 as described in Table 2.1 below.

**Table 2.1: Groundwater Monitoring Locations**

Site	Description
GW1	Upgradient
GW2	Downgradient
GW3	Downgradient

### 2.1 Monitoring Results

Groundwater water results for each of the sampling location are presented in Table 2.1.1, 2.1.2 & 2.1.3. The full groundwater analysis datasets issued are included in Appendix 1.

**TABLE 2.1.1: GW1 Monitoring Results Q4 2016**

Analyte	Unit	Limit	Column 1-4 (See Schedule 5 of Regulations)	25/11/16	19/12/16
pH	pH units	NA	No Limits	5.97	7.45
Electrical Conductivity	uS/cm	800-1875	1,3	284	437
BOD	mg/L	NA	No Limits	2.6	<1
COD	mg/L	NA	No Limits	<2	<7
TOC	mg/L	NA	No Limits	5	<2
Ammonia (as N)	mg/L	NA	No Limits	<0.01	1.19
Nitrate	mg/L	37.5	3,4		24.5
Total Nitrogen (as N)	mg/L	NA	No Limits		8.3
Total Phosphorous (as P)	mg/L	NA	No Limits	0.04	
Orthophosphate (as P)	mg/L	NA	No Limits	0.02	<0.03
Total Dissolved Solids	mg/L	NA	No Limits	170.4	270
Sulphate	mg/L	187.5	3,4	13	17.8
Chloride	mg/L	24-187.5	1,3	42.6	18.1
Phenols	mg/L	NA	No Limits	<5	<0.1
Suspended Solids	mg/L	NA	No Limits		
Detergents (such as Lauryl Sulphate)	mg/L	NA	No Limits		1.3
Dissolved Metals	mg/L	NA	No Limits		See results attached
Total Petroleum Hydrocarbons (to include	mg/L	NA	No Limits		<0.01

mineral oils)					
Diesel Range Organics	mg/L	NA	No Limits		<0.01
Petrol Range Organics	mg/L	NA	No Limits		<0.01
Aluminium	ug/L	150	4	<100	<20
Boron	ug/L	750	3,4	<0.23	21
Cyanide	ug/L	37.5	4	<0.7	
Mercury	ug/L	0.75	4		<1
Potassium (as K)	mg/L	NA	No Limits	1.91	2.7
Sodium	mg/L	150	3	14.9	
Fluoride	mg/L	NA	No Limits	0.13	
Total Coliforms	CFU/100ml	NA	No Limits		<1
Faecal Coliforms	CFU/100ml	NA	No Limits		<1

**TABLE 2.1.2: GW2 Monitoring Results Q4 2016**

Analyte	Unit	Limit	Column 1-4 (See Schedule 5 of Regulations)	25/11/16	19/12/16
pH	pH units	NA	No Limits	5.92	6.93
Electrical Conductivity	uS/cm	800-1875	1,3	288	318
BOD	mg/L	NA	No Limits	<2	<1
COD	mg/L	NA	No Limits	<2	<7
TOC	mg/L	NA	No Limits	3.7	<2
Ammonia (as N)	mg/L	NA	No Limits	<0.01	<0.03
Nitrate	mg/L	37.5	3,4		41.4
Total Nitrogen (as N)	mg/L	NA	No Limits		10.7
Total Phosphorous (as P)	mg/L	NA	No Limits	0.05	
Orthophosphate (as P)	mg/L	NA	No Limits	0.05	<0.03
Total Dissolved Solids	mg/L	NA	No Limits	172.8	231
Sulphate	mg/L	187.5	3,4	8	13.6
Chloride	mg/L	24-187.5	1,3	42.6	20.7
Phenols	mg/L	NA	No Limits	<5	<0.1
Suspended Solids	mg/L	NA	No Limits		
Detergents (such as Lauryl Sulphate)	mg/L	NA	No Limits		1.2
Dissolved Metals	mg/L	NA	No Limits		See results attached
Total Petroleum Hydrocarbons (to include mineral oils)	mg/L	NA	No Limits		<0.01
Diesel Range Organics	mg/L	NA	No Limits		<0.01
Petrol Range Organics	mg/L	NA	No Limits		<0.01
Aluminium	ug/L	150	4	<0.1	<20
Boron	ug/L	750	3,4	<0.23	16
Cyanide	ug/L	37.5	4	<0.7	



Mercury	ug/L	0.75	4		<1
Potassium (as K)	mg/L	NA	No Limits	0.47	0.7
Sodium	mg/L	150	3	9.13	
Fluoride	mg/L	NA	No Limits	0.01	
Total Coliforms	CFU/100ml	NA	No Limits		<1
Faecal Coliforms	CFU/100ml	NA	No Limits		<1

**TABLE 2.1.3: GW3 Monitoring Results Q4 2016**

Analyte	Unit	Limit	Column 1-4 (See Schedule 5 of Regulations)	19/12/16
pH	pH units	NA	No Limits	6.92
Electrical Conductivity	uS/cm	800-1875	1,3	293
BOD	mg/L	NA	No Limits	<1
COD	mg/L	NA	No Limits	21
TOC	mg/L	NA	No Limits	2
Ammonia (as N)	mg/L	NA	No Limits	<0.03
Nitrate	mg/L	37.5	3,4	25.8
Total Nitrogen (as N)	mg/L	NA	No Limits	7.2
Total Phosphorous (as P)	mg/L	NA	No Limits	
Orthophosphate (as P)	mg/L	NA	No Limits	<0.03
Total Dissolved Solids	mg/L	NA	No Limits	194
Sulphate	mg/L	187.5	3,4	13.3
Chloride	mg/L	24-187.5	1,3	27.3
Phenols	mg/L	NA	No Limits	<0.1
Suspended Solids	mg/L	NA	No Limits	
Detergents (such as Lauryl Sulphate)	mg/L	NA	No Limits	1.1
Dissolved Metals	mg/L	NA	No Limits	See results attached
Total Petroleum Hydrocarbons (to include mineral oils)	mg/L	NA	No Limits	<0.01
Diesel Range Organics	mg/L	NA	No Limits	<0.01
Petrol Range Organics	mg/L	NA	No Limits	<0.01
Aluminium	ug/L	150	4	<20
Boron	ug/L	750	3,4	<12
Cyanide	ug/L	37.5	4	
Mercury	ug/L	0.75	4	<1
Potassium (as K)	mg/L	NA	No Limits	2.7
Sodium	mg/L	150	3	
Fluoride	mg/L	NA	No Limits	
Total Coliforms	CFU/100ml	NA	No Limits	64
Faecal Coliforms	CFU/100ml	NA	No Limits	100



## **2.2 Interpretation of Groundwater Results**

The following is an overview of the groundwater water monitoring results recorded in 2016 and a discussion of how these results compare to results reported for previous monitoring events:

Results were broadly similar over the two month period.

The new well, GW3, shows the presence of total coliforms and faecal coliforms. It is highly unlikely that the waste activity would impact on these parameters. Please note that the January sample was clear of total coliforms and faecal coliforms.

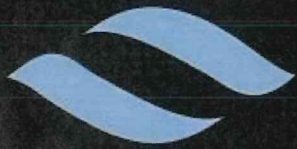
These results will be compared to future results.

### **3 CONCLUSIONS AND RECOMMENDATIONS**

The Mallow Contracts Ltd facility has not adversely affected groundwater quality. These results will be compared with future results when they are obtained.

## **APPENDIX 1**

**Groundwater Quality Datasheets for Q4 2016 at Mallow Contracts Ltd Site:**



**Chemical Analysis Results Sheet**

Customer: Cuthbert Environmental  
Ref: Mallow  
Laboratory Reference No: WT53205  
Date of testing: 25/11/2016  
Sample details:  
1. GW1  
2. GW 2  
3. Storm water

**Note: Results reflect conditions at time of sampling only**

<i>Chemical Analysis</i>	<b>Test results Sample 1</b>	<b>Units</b>
pH	5.97	pH
Conductivity	284	us/cm
COD(Total)	<2	mg/l
BOD	2.6	mg/l
Ammonia	<0.01	mg/l
Total Phosphorus	0.04	mg/l
Orthophosphate as P	0.02	mg/l
TOC	5.0	mg/l
TDS	170.4	mg/l
Sulphate	13	mg/l
Chloride	42.6	mg/l
Fluoride	0.13	mg/l
Total Cyanide	<0.7	-
Total Aluminium	<0.1	mg/l
Total Boran	<0.23	mg/l
Potassium	1.91	mg/l
Sodium	14.9	mg/l
Phenol	<5.00	ug/l

<i>Chemical Analysis</i>	<b>Test results Sample 2</b>	<b>Units</b>
pH	5.92	pH
Conductivity	288	us/cm
COD(Total)	<2	mg/l
BOD	<2	mg/l
Ammonia	<0.01	mg/l
TOC	3.7	mg/l
Total Phosphorus	0.05	mg/l
Orthophosphate as P	0.05	mg/l
TDS	172.8	mg/l
Sulphate	8	mg/l
Chloride	42.6	mg/l
Fluoride	0.01	mg/l
Total Cyanide	<0.7	-
Total Aluminium	<0.1	mg/l
Total Boran	<0.23	mg/l
Potassium	0.47	mg/l
Sodium	9.13	mg/l
Phenol	<5.00	ug/l

<i>Chemical Analysis</i>	<b>Test results Sample 3</b>	<b>Units</b>
pH	6.26	pH
Conductivity	222	us/cm
COD(Total)	<2	mg/l
BOD	<2	mg/l
Ammonia	0.05	mg/l
Total Nitrogen	39	mg/l
Sulfate	15	mg/l
Suspended solids	4.9	mg/l
Temperature	Ambient	mg/l
Sulphate	15	mg/l
Mineral oil	0.031	mg/l

**Chemical results** are expressed as mg/l (milligrams per litre), this measure is the same as ppm (parts per million) where indicated; or as µg/l (micrograms per litre) where indicated.

**Legends:** *N/D* – Non Detect, *TNTC* – Too Numerous to Count, *N/A* – Not Applicable, > - greater than, < - less than



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# Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point  
Zone 3  
Deeside Industrial Park  
Deeside  
CH5 2UA

Enviroglan  
14 Silverhill  
Herons Wood  
Carrigaline  
Ireland

Tel: +44 (0) 1244 833780  
Fax: +44 (0) 1244 833781



**Attention :** Paul Lynch  
**Date :** 12th January, 2017  
**Your reference :**  
**Our reference :** Test Report 16/18858 Batch 1  
**Location :** Mallow Contracts  
**Date samples received :** 20th December, 2016  
**Status :** Final report  
**Issue :** 1

Three samples were received for analysis on 20th December, 2016 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied. All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc  
Project Manager









## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/18858

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

## ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

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Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM20	Modified BS 1377-3: 1990/USEPA 160.3 Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes			
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM27	Modified US EPA method 9056.Determination of water soluble anions using Dionex (Ion-Chromatography).	PM0	No preparation is required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM33	Determination of Anionic surfactants by reaction with Methylene Blue to form complexes which are analysed spectrophotometrically. (MBAS)	PM0	No preparation is required.				
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquatem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			

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TM38/TM125	Total Nitrogen/Organic Nitrogen by calculation	PMD	No preparation is required.				
TM57	Modified US EPA Method 410.4. Chemical Oxygen Demand is determined by hot digestion with Potassium Dichromate and measured spectrophotometrically.	PMD	No preparation is required.	Yes			
TM58	Modified USEPA methods 405.1 and BS 5687-3. Measurement of Biochemical Oxygen Demand. When cBOD (Carbonaceous BOD) is requested a nitrification inhibitor is added which prevents the oxidation of reduced forms of nitrogen, such as ammonia, nitrite and organic nitrogen which exert a nitrogenous demand.	PMD	No preparation is required.	Yes			
TM60	Modified USEPA 9060. Determination of TOC by calculation from Total Carbon and Inorganic Carbon using a TOC analyser; the carbon in the sample is converted to CO2 and then passed through a non-dispersive infrared gas analyser (NDR).	PMD	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PMD	No preparation is required.	Yes			
TM76	Modified US EPA method 120.1. Determination of Specific Conductance by Metrohm automated probe analyser.	PMD	No preparation is required.	Yes			
Subcontracted	Subcontracted analysis, sent to an ISO 17025 accredited laboratory where possible.						