

# Rowan

## River Camac Surface Water Monitoring 2021 Report 2021



**Hinch Site, Saggart, Co. Dublin**

**Coffey Constructions Ltd**

*Client Ref: 6613/COF0001-6*

***Date: 08/06/2021***

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# Executive Summary

## Scope of Report

Rowan Engineering Consultants Ltd (Rowan) were contracted to carry out baseline Surface Water monitoring on the River Camac to submit as supporting documentation to South Dublin County Council as part of Coffey Constructions infill planning application for the Hinch site.

## Conclusion

This conclusion is our professional opinion based on the surface water sample taken on the 18<sup>th</sup> of May 2021.

After reviewing the laboratory analysis results issued by The Water Lab for upstream (SW1) and downstream (SW2) samples on the River Camac, the concentrations are within the limits as set out by the EPA Surface Water Regulations 2009 (S.I No. 272 of 2009, as amended) where relevant.

# Section 1                      Limitations

## 1.1 Limitations

The results and conclusions of this report are based on upstream and downstream surface water monitoring event which took place in May 2021 at The River Camac by Rowan. The surface water results are limited to the quality of the sample taken on that date. Sampling methodologies have been chosen to best represent the quality of surface waters on and around the site. The results are limited to the methodologies described in Section 3.1. Analytical results are limited to the limitations of the laboratory analytical methodologies and standards used as detailed in the Laboratory Results Report shown in Appendix B. Historical reports on surface water were not available for review when compiling this report.

## Section 2 Introduction

### 2.1 Introduction

Rowan were contracted to carry out surface water monitoring upstream and downstream of the proposed site at the River Camac. The sampling location will be referred to as SW1 and SW2.

### 2.2 Location

The Proposed project is located in the townland of Slade, Co. Dublin. The nearest village to the site is Saggart, which is located c.600m northeast of the proposed site. The proposed site is c.2.4ha. The site is bounded to the north by the Irish Water construction site, to the west by an ESB sub-station, to the southwest by the Camac River and to the east by a yard. Refer to **Figure 1** for proposed Site Location. Water samples were taken at two separate locations on the River Camac and then sent to The Water Lab for Chemical Analysis. These locations are summarized in Table 1 and illustrated in Figure 2.

### 2.3 Proposed Project Details

The principal activities associated with the proposed development are;

- Land recontouring works on c 16,000m<sup>2</sup> of a folio size of c.2.4ha (allowing buffers).
- The volume of material to be placed on the site is c.35,000m<sup>3</sup> with an average fill level of c.3.5m above existing. Refer to planning drawing numbered LH.001 submitted as part of the planning application for full details.

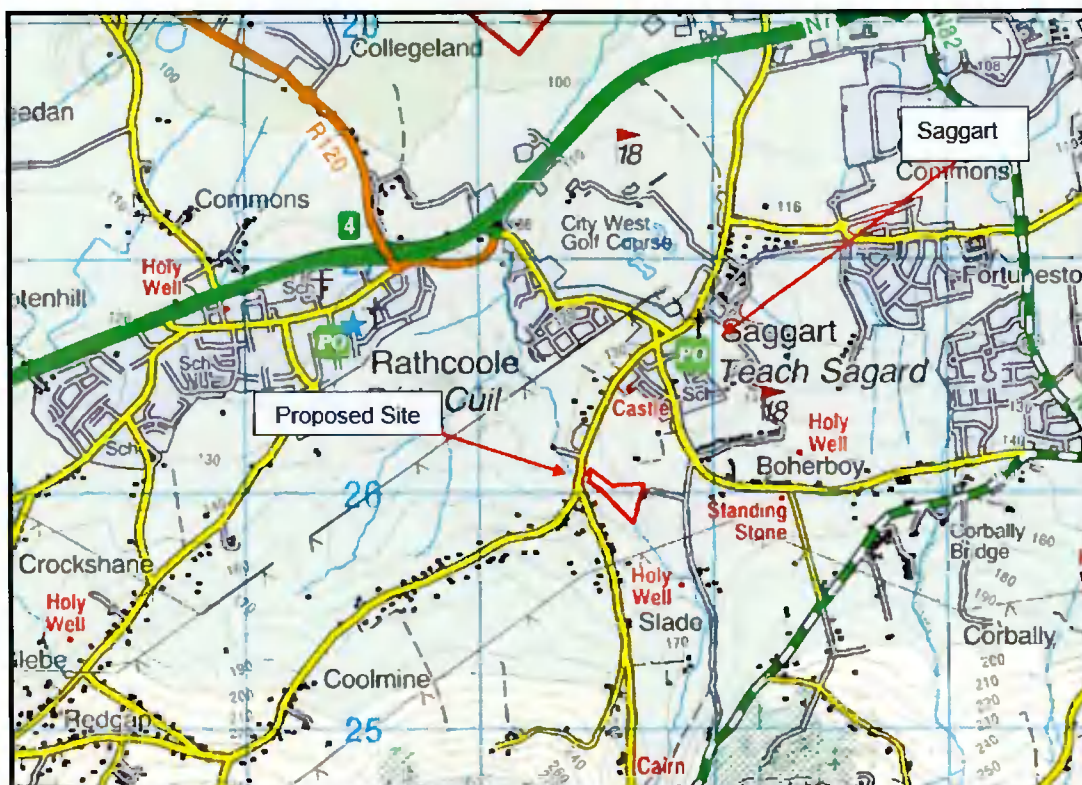


Figure 1: Site Location (outlined in red)

Table 1: River Camac sample locations

Sample No.	Description	Location (ITM)
SW1	Upstream	X703457 Y726019
SW2	Downstream	X703356 Y726089



Figure 2: Site Sampling Locations

## Section 3 Methodology

### 3.1 Surface Water Sampling Methodology

All monitoring procedures consider best practise guidelines to avoid contamination of the sample. Procedures aim to collect a sample that best represents the condition of the surface water at each monitoring location. The procedures also ensure the safe storage and preservation of the samples during transportation and upon receipt at the certified laboratory for analytical testing.

The following sampling procedure was followed when taking the surface water sample.

- Samples were collected in containers obtained from The Water Lab.
- Samples were taken by fully submerging each sample bottle in the water where possible. The sampling bottle was kept as steady as possible to avoid disturbing sediment.
- Notes were made of the smell, colour and contents of the water. Notes were also taken of any visible inflows and possible pollution sources near the monitoring point.
- Samples collected were sealed, bubble wrapped and placed in a freezer box with ice packs for same day delivery to The Water Lab. This kept the samples at a stable temperature.
- Chain of custody forms were completed by Rowan and delivered with the samples to The Water Lab.

### 3.2 Monitoring Surface Water

Surface water sampling was carried out by Mr. Ian Douglas and Ms. Eimear O'Brien of Rowan on 18<sup>th</sup> of May 2021 at monitoring locations SW1 and SW2. Monitoring locations are shown in Photographs 1&2 below and in Appendix A.



Photograph 1: SW1 (Upstream) Sampling Location



**Photograph 2: SW2 (Downstream) Sampling Location**



## Section 4 Monitoring Results

A visual inspection was carried out on the River Camac on the surface water sample whilst taking the sample. Table 2 below outlines the visual observations at SW1 and SW2 during the sampling event:

Table 2: SW1 and SW2 Visual Inspection

Monitoring Location	Visual Inspection 18 <sup>th</sup> May 2021	Other Comments
SW1	<ul style="list-style-type: none"> <li>• Clear sample</li> <li>• No odour</li> </ul>	Dry weather.
SW2	<ul style="list-style-type: none"> <li>• Clear sample</li> <li>• No odour</li> </ul>	Dry weather.

The samples were taken and dropped to the lab on the day of sampling to minimise time between sampling and analysis and prevent potential contamination of the samples.

The surface water sampling results as reported by The Water Lab for SW1 and SW2 are shown in Table 3 below and the laboratory report can be found in Appendix 2.

Table 3: SW1 and SW2 Monitoring Results

Parameter	SW1 Results	SW2 Results	Units	S.I. No. 272 of 2009
pH	7.88	7.95	pH Unit	6.0 - 9.0
Total BOD	<2	<2	mg/l	Good status $\leq$ 1.5 (mean) or $\leq$ 2.6 (95%ile)
COD	<15	<15	mg/l	-
Ammonia	0.16	0.08	mg/l	Good status $\leq$ 0.065 (mean) or $\leq$ 0.140 (95%ile)
Total Suspended Solids	<8	14	mg/l	-
Total Nitrogen	2.6	2.9	mg/l	-
Total Phosphorous	<0.09	0.11	mg/l	-
Fats, Oils and Grease	<1.00	<1.00	mg/l	-
Mineral Oils	<1.00	<1.00	mg/l	-
EPH >C10 - C20 (Diesel Range)	<0.0001	<0.0001	mg/l	-
EPH >C20 - <C40 (Motor Oil Range)	<0.0001	<0.0001	mg/l	-
EPH >C8 - C10 (Petrol Range)	<0.0001	<0.0001	mg/l	-
EPH >C8 to <C40 (Total)	<0.01	<0.01	mg/l	-

The table includes limits relevant to the Surface Water Regulations 2019 (S.I. No. 77 of 2019).

## **Section 5 Conclusions and Recommendations**

This conclusion is based on the surface water samples taken from upstream (SW1) and downstream (SW2) of the proposed infill site on the 18<sup>th</sup> of May 2021. The lab results show the results are within the limits set out in the EPA Surface Water Regulations 2019 (S.I. No. 77 of 2019).

### **Recommendations**

- It recommended that additional annual monitoring is carried out during the period of time when the site is operational.

## Appendix A: Site Layout



# Appendix B: SW1 & SW2 Lab Results



Contact Name:	Ian Douglas	Date Sampled:	18/06/2021
Customer Name:	Rowan Engineering Consultants	Date Received:	18/06/2021
Address:	Scarlockstown Business Park	Sample Location:	Coffey
	Trim		Coffey
	Co. Meath	Date Analysis Started:	18/06/2021
		Date Analysis Completed:	08/06/2021
	Ireland	Sample Type:	Surface Water
Sample Condition:	Satisfactory	Sample Description:	S1
Sample ID:	N2860	Grab/Composite:	Grab

## TEST REPORT

Parameter	Result	Units	Method	Accreditation Status
Total BOD	<2	mg/l O2	SOP-LTM-001	---
COO	<15	mg/l O2	SOP-LTM-002	---
pH	7.88	pH units	SOP-LTM-004	---
Ammonia	0.18	mg/l NH3-N	SOP-LTM-007	---
Total Suspended Solids	<8	mg/l	SOP-LTM-003	---
Total Phosphorous	<0.09	mg/l P	SOP-LTM-008	---
Fats, Oils and Grease	<1.00	mg/l	Sub-C	**
Mineral Oils	<1.00	mg/l	Sub-C	---
EPH >C8 to <C40 (Total)	<0.01	mg/l	Sub-C	**
EPH >C8 - C10 (Petrol Range)	<0.0001	mg/l	Sub-C	**
EPH >C10 - C20 (Diesel Range)	<0.0001	mg/l	Sub-C	**
EPH >C20 - <C40 (Motor Oil Range)	<0.0001	mg/l	Sub-C	**
Total Nitrogen	2.6	mg/l N	SOP-LTM-005	---

Comments:

Signed:

Date:

08/06/2021

Mr Kevin Harte - Technical Supervisor

The above results relate to the sample(s) tested.  
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\*\*\* Non-accredited

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#### Report Notes

##### Accreditation Status

Accreditation Status is denoted as follows:

- INAB accredited to ISO 17025
- \*\* Accredited by Sub-con Lab to ISO 17025
- \*\*\* Non-accredited

Sub-contracted accreditation is provided by the sub-con lab's own accreditation provider.

##### Microbiological Analysis

The results obtained from microbiological testing in cfu/100ml should be interpreted as follows:

- 0 cfu/100ml - Not detected in the volume of sample analysed
- 1 - 3 cfu/100ml - Less than 4 cfu/100ml detected
- 4 - 9cfu/100ml - Estimated result

Sample results for Micro analysis tested outside 24 hours from the time of sampling may have impacted the validity of results.

This will be noted in the report comments section of the report if it applies to this sample.

##### Sampling

Samples taken by staff of The Water Lab follow SOP-LGM-001-Sampling. Specific sampling requirements for individual tests are described on those test SOPs.

##### Testing

All results of Laboratory testing apply to the sample as received, except where indicated otherwise.

All in-house testing is performed at The Water Lab's premises at the M4 Business Park in Celbridge, Co. Kildare. Subcontracted testing is performed at the premises of the subcontractor used, and these tests are noted as 'Sub-C' in the method section of the report. Testing performed at the site of sampling is noted as '(on-site)' in the parameter section of the report.



Contact Name:	Ian Douglas	Date Sampled:	18/05/2021
Customer Name:	Rowan Engineering Consultants	Date Received:	18/05/2021
Address:	Scurlockstown Business Park	Sample Location:	Coffey
	Trim		Coffey
	Co. Meath	Date Analysis Started:	18/05/2021
		Date Analysis Completed:	08/08/2021
	Ireland	Sample Type:	Surface Water
Sample Condition:	Satisfactory	Sample Description:	S2
Sample ID:	N2861	Grab/Composite:	Grab

### TEST REPORT

Parameter	Result	Units	Method	Accreditation Status
Total BOD	<2	mg/l O2	SOP-LTM-001	***
COD	<15	mg/l O2	SOP-LTM-002	***
pH	7.95	pH units	SOP-LTM-004	***
Ammonia	0.08	mg/l NH3 N	SOP-LTM-007	***
Total Suspended Solids	14	mg/l	SOP-LTM-003	***
Total Phosphorous	0.11	mg/l P	SOP-LTM-006	***
Fats, Oils and Grease	<1.00	mg/l	Sub-C	**
Mineral Oils	<1.00	mg/l	Sub-C	***
EPH >C8 to <C40 (Total)	<0.01	mg/l	Sub-C	**
EPH >C8 - C10 (Petrol Range)	<0.0001	mg/l	Sub-C	**
EPH >C10 - C20 (Diesel Range)	<0.0001	mg/l	Sub-C	**
EPH >C20 - <C40 (Motor Oil Range)	<0.0001	mg/l	Sub-C	**
Total Nitrogen	2.9	mg/l N	SOP-LTM-005	***

Comments:	
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Signed:

Date: 08/08/2021

Mr Kevin Harto - Technical Supervisor

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