

Eve O'Sullivan

From: Licensing Staff
Subject: Killycard Historical Landfill - Notice response - H0364-01
Attachments: H0364-01 Killycard Historic Landfill Response to EPA.pdf

From: Kieran Duffy <kduffy@monaghancoco.ie>
Sent: 02 April 2020 11:09
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Subject: Killycard Historical Landfill - Notice response - H0364-01

A chara,

I refer to Monaghan County Council's COA application for Killycard historical landfill lodged on January 15th 2020 and the subsequent notice for further information issued by the EPA on Feb 28th 2020 under Reg 7(4) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and recovery activity) Regulations 2008.

Please find attached Monaghan County Council's response to the notice in support of our application.

Best regards all and take care.

Kieran Duffy
A/SEE
Monaghan County Council

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KILLYCARD HISTORIC LANDFILL CO. MONAGHAN

RESPONSE TO EPA RFI TO SUPPORT CERTIFICATE OF AUTHORISATION APPLICATION

Prepared for: Monaghan County Council



Date: March 2020

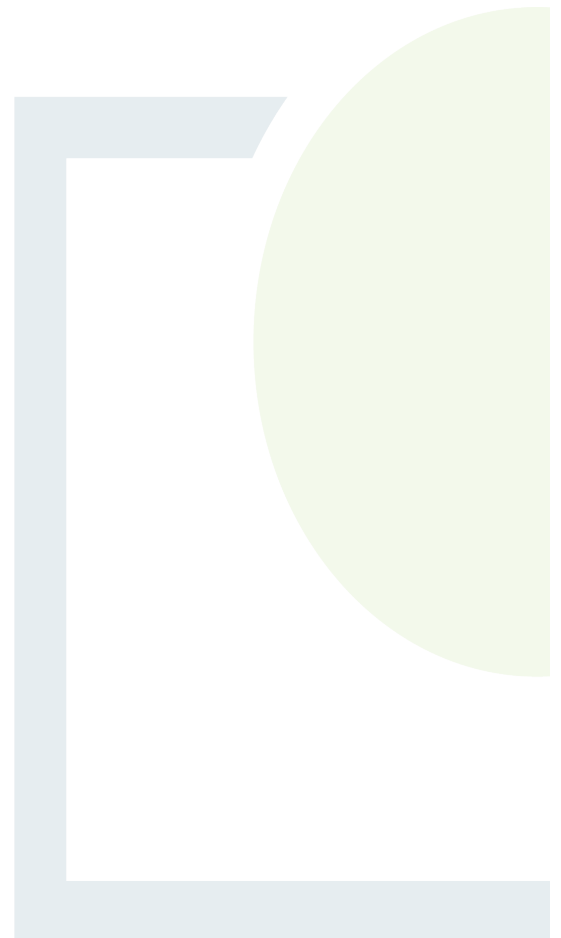
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KILLYCARD HISTORIC LANDFILL, CO. MONAGHAN RESPONSE TO EPA RFI TO SUPPORT CERTIFICATE OF AUTHORISATION APPLICATION

User is responsible for Checking the Revision Status of This Document

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00	Issue to Client	AB	MON	BG	30/03/2020

Client: Monaghan County Council

Keywords: EPA, Certificate of Authorisation, Request for Information

Abstract: This document presents the response to the request for information issued by the EPA to support the recent Certificate of Authorisation application made Monaghan County Council for Killycard Historic Landfill.

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1. RESPONSE TO REGULATION 7(2) COMPLIANCE REQUIREMENTS

1.1 Background

Monaghan County Council (MCC) submitted an application for a certificate of authorisation for Killycard Historic Landfill on 6th January 2020. The application was accompanied by the following supporting documentation.

- Tier 2 Risk Assessment, Historic Landfill at Killycard, Co. Monaghan, November 2018 Rev 1, Issue to Client, 05.12.2019
- Tier 3 Risk Assessment Killycard Historic Landfill Site, Co. Monaghan December 2019, Rev 1, Issue to Client, 05.12.2019

The EPA responded on 28th February 2020, informing MCC that the application does not comply with Regulation 7(2) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008.

In accordance Regulation 7(4), MCC are required to supply the information as requested by the EPA in the response to the certificate of authorisation application. FT has prepared responses to the following items as requested by the EPA.

1.2 Response

The following responses have been prepared to each query raised.

1. Submit a copy of the Section 22 Registration for the closed landfill.

See attached in Appendix 1 to this document.

2. The grid reference numbers for the location of the landfill stated in the application are for a location to the north of the Corrinshigo Lough. Provide the correct grid coordinates for the location of the site.

The grid reference for the centre of the site is:

- Lat/Long Latitude 54.126690N Longitude -6.7618983W
- Irish Grid: Easting 280982; Northing 320431
- ITM: Easting 680926; Northing 82044

3. It is noted that the closed landfill location is included, as indicated by Catchment.ie, within a catchment of rivers Newry, Fane, Glyde and Dee and a sub-catchment of River Fane (Sub-catchment code: 06 8). Please provide the reasoning for Tier 1 Assessment statement that the site lies with a catchment of Erne River.

The mapping provided by Catchment.ie has been reviewed and it confirmed that the Killycard Historic Landfill is located within the Newry, Fane, Glyde and Dee catchments and sub-catchment of River Fane. The information



provided in the Tier 1 assessment is incorrect, the reports and relevant sections have been updated as appropriate.

4. Tier 1 Assessment refers to the following waterbodies:

- a. "southwestern perimeter drainage channel";
- b. "source stream for Corrinshigo Lough";
- c. "northern perimeter drainage channel";
- d. "the lake outlet stream which is a tributary of the Carrickaslane Lough stream"; and
- e. "Corracloghan stream".

Provide a drawing showing these channels and streams, any other streams and land drains that have hydrological connection with the Corrinshigo Lough but are not included in the above list. Include arrows showing flow direction for each water body.

The 'southwestern perimeter drainage channel' and 'source stream for Corrinshigo Lough' refer to the same stream.

The 'northern perimeter drainage channel' and 'the lake outlet stream which is a tributary of the Carrickaslane Lough stream' refer to the same stream.

Upon review of the river network maps provided by the EPA (<https://gis.epa.ie/EPAMaps/>) and catchments.ie it is unclear that the northern perimeter drain is a tributary of Carrickaslane Lough Stream, although it is possible.

Furthermore, there is no hydrological link to the Corracloghan Stream.

A drawing showing the relevant drains is presented in Appendix 2.

Section 2 of the Tier 1 and Tier 2 reports have been updated by FT to reflect this.

5. Discrepancies were noted in relation to surface water monitoring locations SW1 and SW2. Tier 2 Assessment states that "SW1 was selected as the furthest downstream location and samples the Corrinshigo Lough..(and that) SW2 is located along the northern boundary of the landfill and samples from a drainage channel upstream of the landfill". Tier 3 Assessment states however, that surface water monitoring was conducted on the "northern drainage channel upstream of Corrinshigo Lough (SW1) and... further downstream on this channel where it enters the lough (SW2)".

- a. **Provide a symbol and grid reference numbers for the actual upstream and downstream monitoring location.**
- b. **Confirm whether the monitoring results provided in Table 4-5 of Tier 2 Assessment are representative of the monitoring locations referred to in Point 3(a).**

The Tier 2 and Tier 3 have been reviewed and the sampling locations are as follows:

- SW1 is sampled from the Corrinshigo Lough, upstream of the landfill footprint.
- SW2 is sampled downstream of the landfill from the northern perimeter drainage channel.



SW1 Irish Grid location: 280903.4516E, 320449.1650N

SW2 Irish Grid Location: 281034.9309E, 320513.3217N

Figure 4.2, as extracted from the Tier 2 report, shows the surface water sampling locations and is presented in Appendix 3.

Section 4 of the Tier 2 report and Section 1 of the Tier 3 report have been updated by FT to reflect this.

- 6. The application states that the landfill was operational from "circa 1980" to "circa 1987". Tier 2 Assessment states however that the landfill accepted waste through the 1970s and early 1980s ceasing in 1984. Clarify the commencement and closure dates for the landfill.**

Following discussion with MCC, the exact operational period of Killycard Historic Landfill is unknown, however based on local knowledge it was operational circa 1980 to 1987.

The Tier 2 report has been updated to reflect this.

- 7. Tier 1 Assessment states that the site is used for pasture and poultry production. Tier 2 Assessment states however that the site is used for silage production. Clarify the current use of the site. Please also state the proposed use post the completion of the remedial works.**

We can confirm that there are poultry sheds on the site. At the time of the Tier 1 these were used for poultry production, but this activity has ceased and the sheds are disused and in a state of disrepair.

The site is currently used for general agricultural purposes principally animal grazing.

It is proposed that the site will be used for agricultural purposes post completion of the remedial works, it is believed this will be limited to animal grazing.

The Tier 1 and Tier 2 reports have been updated to reflect this.

- 8. The application states that the estimated volume of waste is 27,900m³ and that this volume is equal to approximately 45,000 tonnes of waste. Tier 2 states however that Monaghan County Council have estimated the quantity of waste to be in the region of 30,000m³. Please confirm the final estimated volume of waste to be taken to represent the full extent of the landfill and the tonnage for the amount of deposited waste.**

MCC estimated the quantity of waste at Killycard Historic Landfill was approximately 30,000 m³, prior to commencing the tiered Environmental Risk Assessment (ERA) approach.

A volume calculation was conducted as part of the Tier 2 based on the surveyed surface profiles for the existing ground level and the base of waste as interpreted from the geophysical survey and intrusive site investigation. This estimate indicated an interred waste volume of approximately 29,700 m³ at the site. This is in line with MCC's estimate prior to commencing the ERA for the site.

The volume of 27,900 m³ stated in the Waste Management Act Section 22 Register application is an error/typo and should be read as 29,700 m³.



9. The following observations were made during the site walk over referred to in Tier 1 Assessment:

- a. waste was found to be depositing directly into the Corrinshigo Lough and also to the surface water ditch on the northern edge of the site;**
- b. evidence of recent erosion was noted along large sections of the western landfill boundary.**

State the reason for not including the removal of waste from the Corrinshigo Lough and the said drain, and the measures to prevent the further erosion among the proposed remedial measures.

FT can confirm that any waste deposits present on the soil surface, along the norther perimeter drainage ditch or along the western perimeter of the site adjacent to the Corrinshigo Lough will be removed during and disposed of during the proposed remediation works.

Section 3 of the Tier 3 has been updated by FT to this affect.

FT can confirm that as per our remedial design the landfill cap will act as a preventative measure to the erosion previously noted along the western landfill boundary. Maintenance of the landfill cap will be subject to the requirements of the Certificate of Authorisation and will be ongoing post completion of the remediation works.

Section 3 of the Tier 3 has been updated by FT to this affect.

10. Referring to Drawing No. P1724-0500-0002, explain how will the leachate be transferred from the collection sump into the leachate collection tank. Please also state how the leachate will be transferred to an off-site disposal facility. Include the name of the disposal facility and any authorisation associated with the disposal of leachate at this facility.

A suitably designed HDPE rising main will be used to transfer leachate from the collection sump to the leachate collection tank. The rising main will be buried within the proposed landfill cap. The leachate rising main will be suitably specified for the transport of leachate and be appropriately pressured tested to ensure its integrity prior to commissioning.

The proposed rising main and leachate collection tank are usual landfill infrastructure and will be subject to comprehensive design and specification at the detailed design stage.

Leachate will be removed by a standard suction tanker with an appropriate waste collection permit to Monaghan WWTP facility (Licence no D0061-01).

The design and specification of all proposed components will be undertaken in accordance with all appropriate EPA guidance documents as may be appropriate.

11. Explain how the sub-surface and surface drainage management system presented on Drawing No. P1724-0500-0001 will work.

The proposed sub-surface drainage system will comprise a herring bone drainage network across the site, as shown in Drawing P1724-0500-0001. The network will comprise sub-surface drains constructed with the landfill cap (See Layout Plan: Drawing P1724-0500-0001, dashed blue line & Section Detail P1724-0900-0001-Detail AA, P1724-0900-0002-Detail BB and P1724-0900-0003-Detail CC



The sub-surface drains will be constructed to the natural fall of the ground level, falling first toward the centre of the site and then toward Corrinshigo Lough, all subsurface drainage will discharge via a single outfall chamber as depicted on Drawing P1724-0500-0001 (solid blue circle). This will allow for monitoring of the sub surface drainage systems

A perimeter drainage will connect all herring bone drains to ensure drainage at the extents of the cap. Rodding eye or access points located on the perimeter will allow future access for jetting and other maintenance.

Revised drawing P1724-0500-0001 is presented in Appendix 4 to this document with flow direction arrows added to demonstrate how the system will work.

12. Clarify the following statement in Tier 3 Assessment: "The leachate sump will be set to a control level (0.5m) below (or greater) that of the drain invert limiting hydraulic connectivity between the site and the surface water system" and state whether there will be a mechanical connection between the leachate management system and sub- surface and surface drainage management system.

A level sensor will be installed in the leachate sump to maintain the leachate level of the landfill at least 0.5 m below the surface level of the lake and the invert level of the open surface water drain.

This will limit the hydraulic connectivity between the waste body and the surface water system i.e. any subsurface water from the lake or land drain will flow towards the leachate sump as it is at a lower level, rather than leachate flowing towards either the lake or land drain.

There will not be a mechanical connection between the leachate management system and the sub-surface and surface drainage management system.

1.3 Revised Non-Technical Summary

Please refer to the updated Tier 2 and Tier 3 reports for revised technical summary.

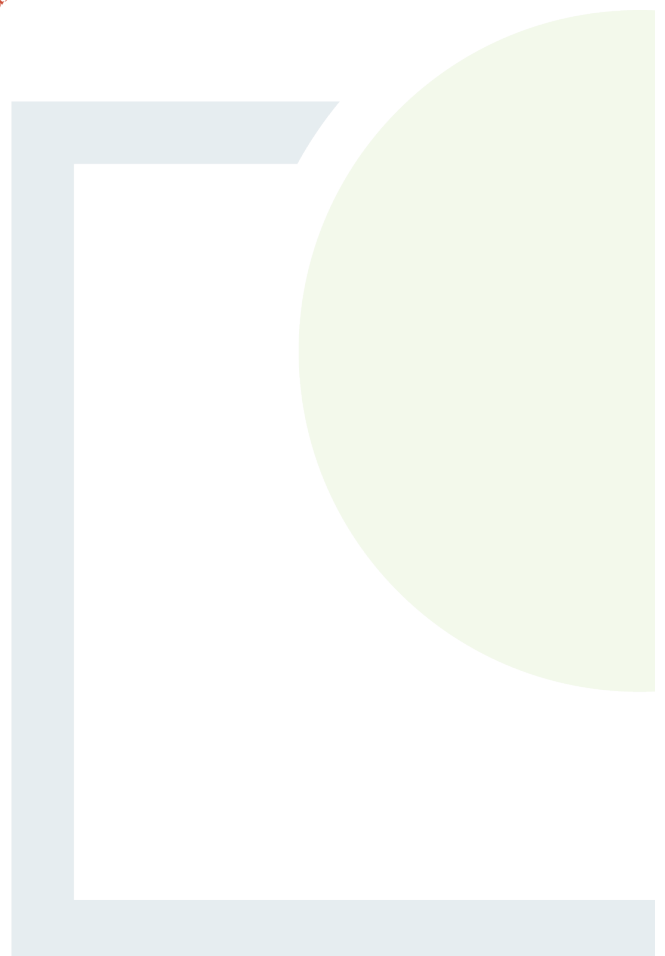


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APPENDIX 1

Waste Management Act
Section 22 Registration for
Killicard Historic Landfill

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Section 22 Details for Killycard Site – H0364-01



Waste Management Act Section 22 Register

Home

Site Details

Risk Assessment

Useful Information

Contact EPA

Landfill WebGIS

Administration

Manage Sites

Reports

Maps

Email Users

Site Id	S22-02528
Site Name	Killycard
Waste Category	Local Authority
County	Monaghan
Townland	Select Townland
Town	Castleblayney
Waste Details	
Waste Activity	Disposal
Principle Waste Type	Municipal
Additional Waste Type	Other
Additional Waste Type	Other
Hazardous Waste Present	<input type="checkbox"/>
Estimated Waste Quantity (tonnes)	45000
Verification Method	Site Investigations
Start/End Dates	
Start Date	01/01/1980
End Date	01/01/1987

Holder Details

Holder of Waste	monaghan county council
Site Owner	private

Comments

Certificate of Authorisation (COA)

Application made for COA	<input checked="" type="checkbox"/>
Date	06/01/2020

Comments

Certificated	<input type="checkbox"/>
Date	DD/MM/YYYY
Cert Number	

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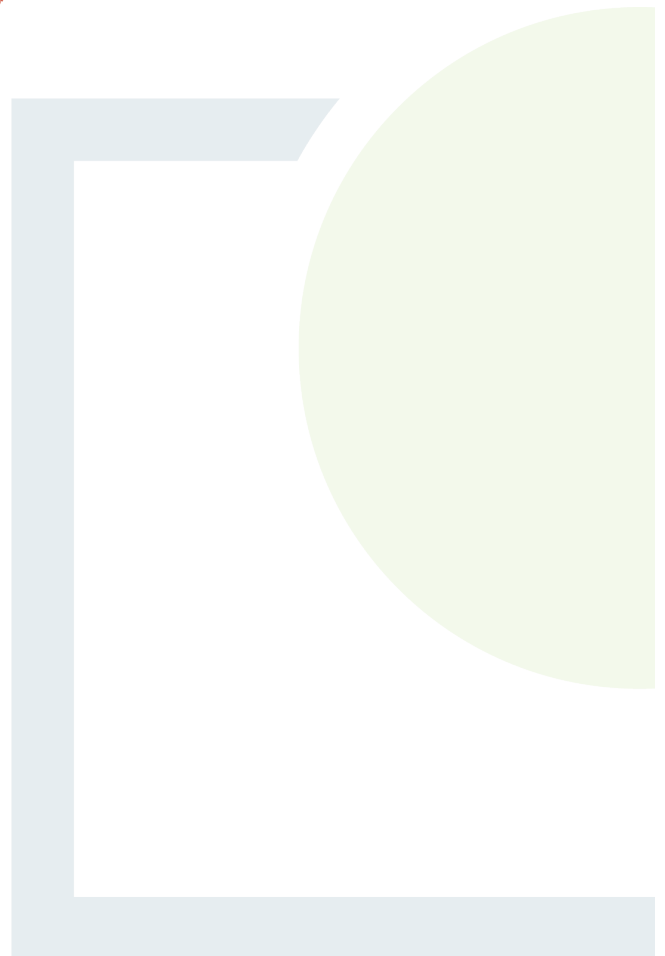


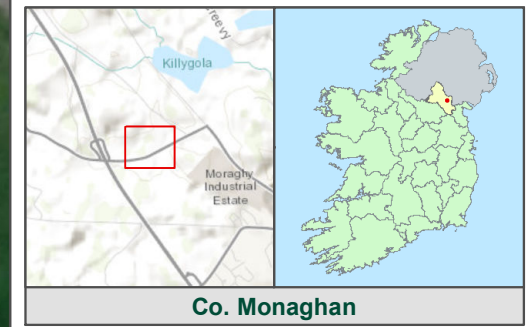
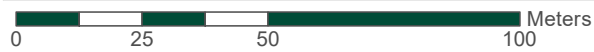
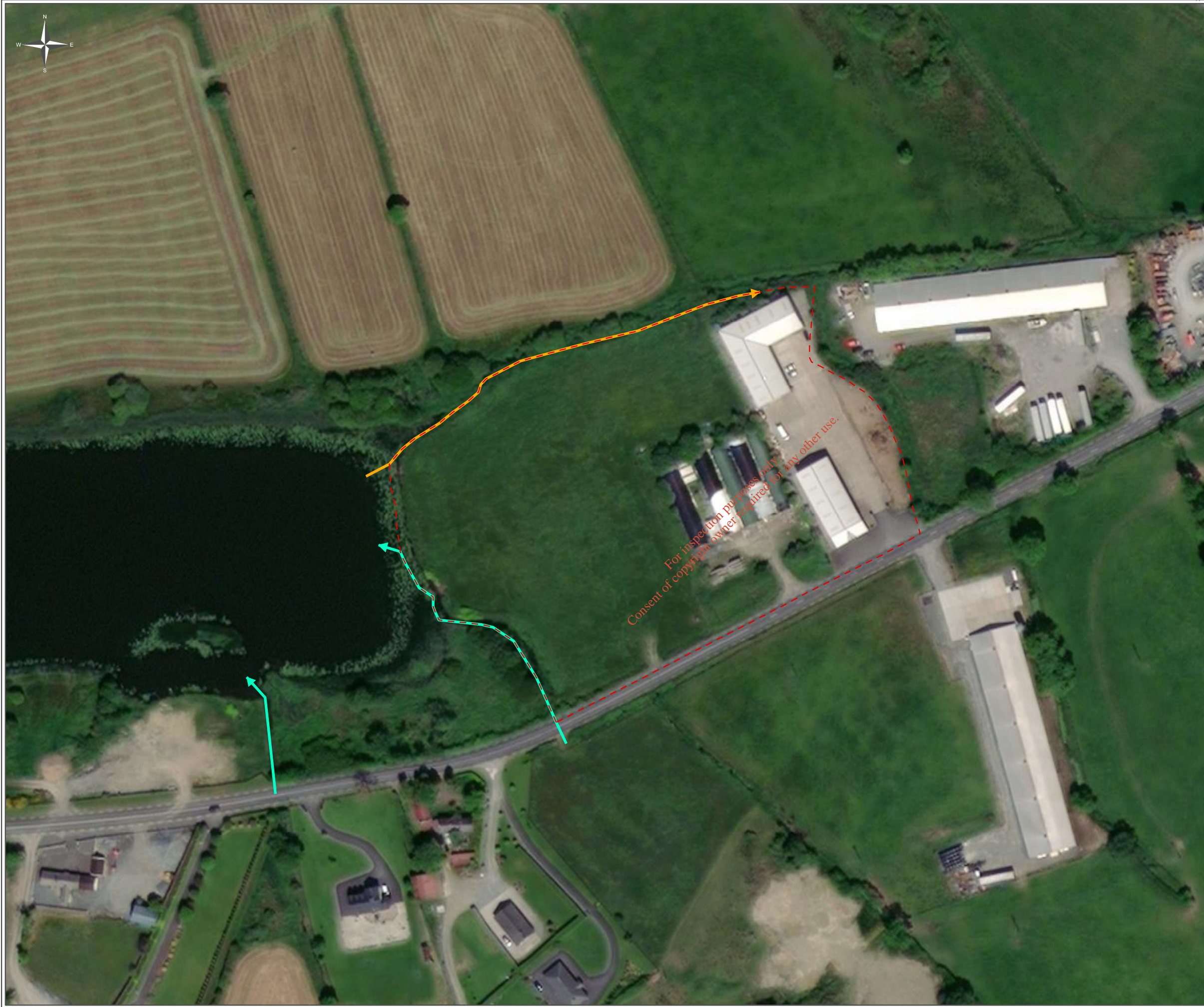
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APPENDIX 2

Stream/Drainage Channel
Flow Directions

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Legend

- Site Boundary
- Northern perimeter drainage channel
- Southwestern perimeter drainage channel/source stream for Corrinshigo Lough

Figure Title
Surface Water Drainage

Figure No. Appendix 2

Project
ERA of Historic Landfill at Killicard, Co. Monaghan

Client
Monaghan County Council

Scale 1:1,500 **Page Size** A3

Revision A **Date** 18/03/2020

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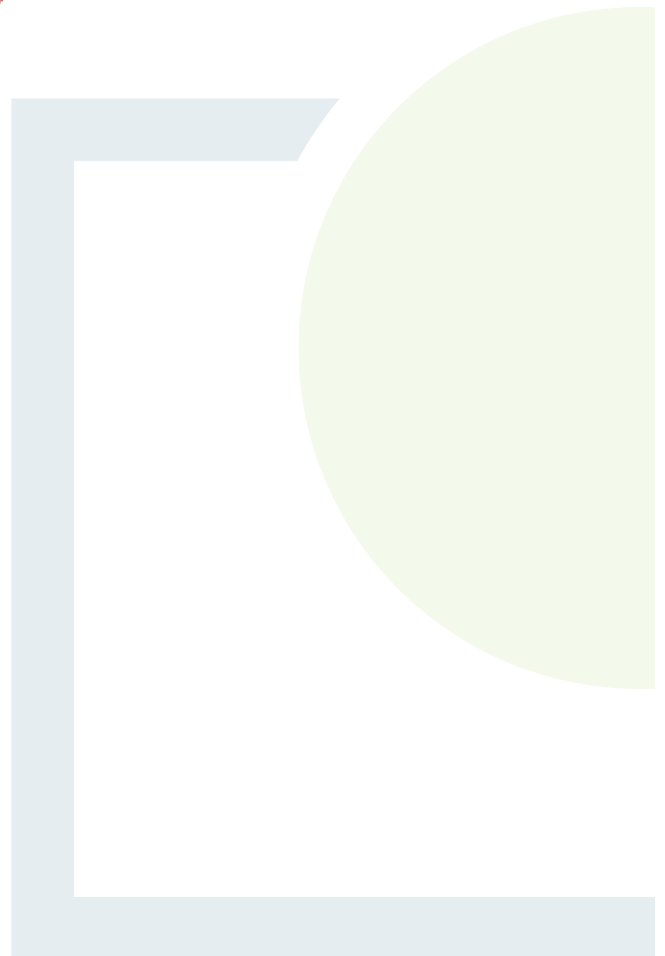


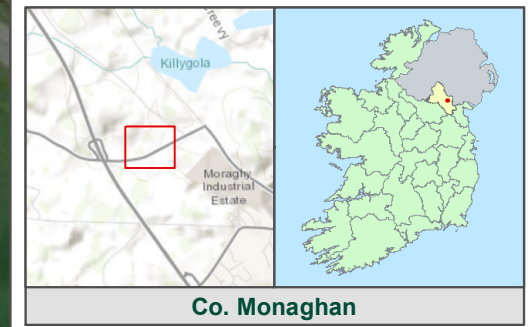
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APPENDIX 3

Surface Water Sampling Locations

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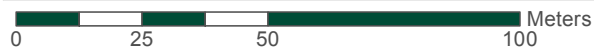




- Legend**
- Surface Water Sampling Locations
 - Site Boundary

Figure Title	Surface Water Sampling		
Figure No.	4.2		
Project	ERA of Historic Landfill at Killicard, Co. Monaghan		
Client	Monaghan County Council		
Scale	1:1,500	Page Size	A3
Revision	A	Date	09/11/2018

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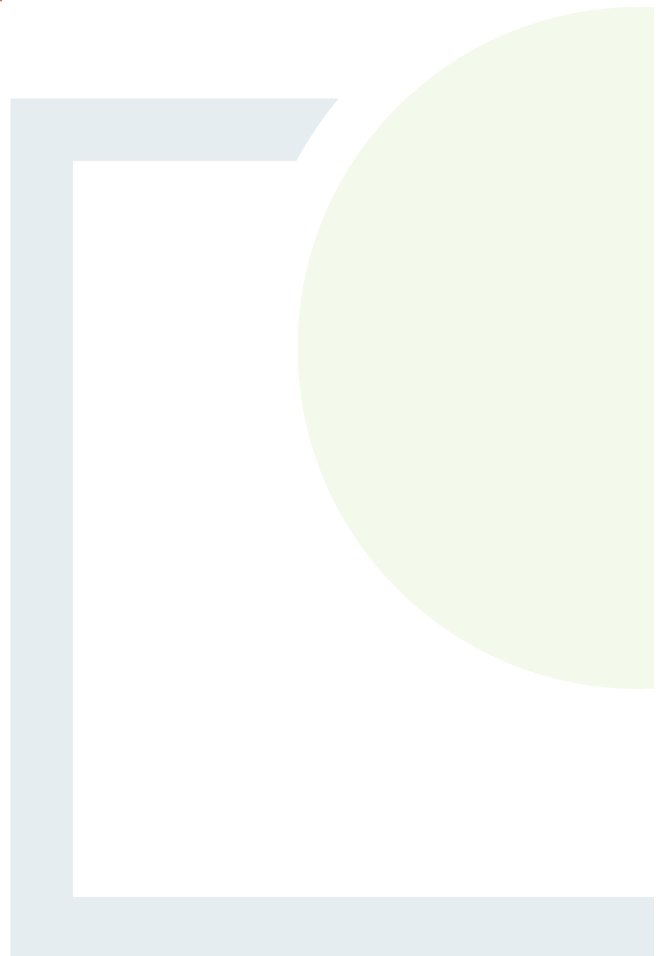
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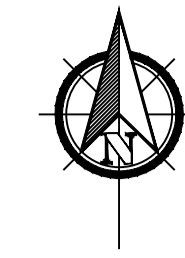
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APPENDIX 4

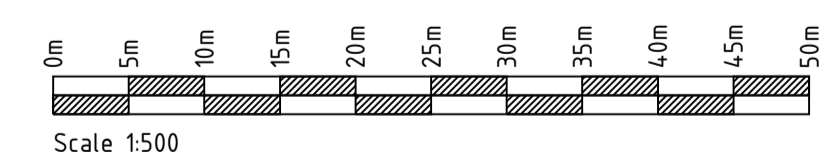
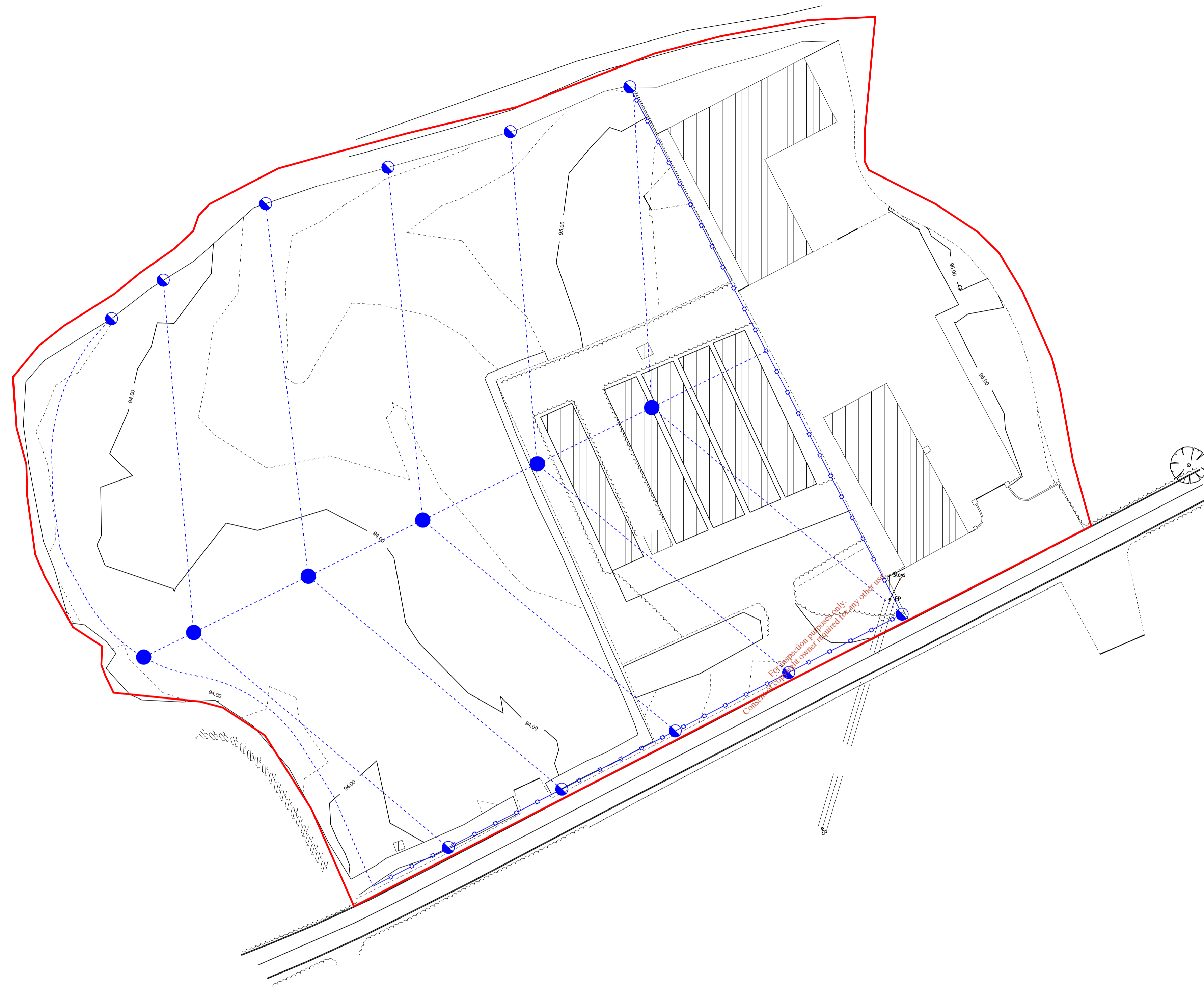
Drawing P1724-0500-0001

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- Legend**
- Site Boundary
 - - - Sub Surface Drainage Network
 - Combined Sub Surface/French Drain
 - Intermediate Inspection Chamber
 - Outfall Chamber
 - Rodding/Jetting Access Point



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Rev.	Description	App By	Date
A	ISSUE FOR DISCUSSION	BG	12.04.19

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PROJECT
ERA OF HISTORIC LANDFILLS AT KILLYCARD AND KILLYCRONAGHAN

CLIENT
MONAGHAN COUNTY COUNCIL

SHEET
SUB-SURFACE AND SURFACE DRAINAGE PLAN

Date	12.04.19	Project number	P1724	Scale (@ A1-)	1:500
Drawn by	SOC	Drawing Number	P1724-0500-0001		
Checked by	JON	Rev			

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05 December 2019



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