

Annual Environmental Report

2021



Kilkenny City and Environs

D0018-01

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1 EXECUTIVE SUMMARY AND INTRODUCTION TO THE 2021 AER

This Annual Environmental Report has been prepared for D0018-01, Kilkenny City and Environs, in Kilkenny in accordance with the requirements of the wastewater discharge licence for the agglomeration. Specified reports where relevant are included as an appendix to the AER.

1.1 ANNUAL STATEMENT OF MEASURES

A summary of any improvements undertaken is provided where applicable.

New sludge receiving facility planned by IW for 2022 to include upgrade/new belt press PFT upgrade planned Planned upgrade of existing house at the main gate into new lab

1.2 TREATMENT SUMMARY

The agglomeration is served by a wastewater treatment plant(s)

- KILKENNY CITY AND ENVIRONS WWTP with a Plant Capacity PE of 77000, the treatment type is 3P - Tertiary P removal

1.3 ELV OVERVIEW

The overall compliance of the final effluent with the Emission Limit Values (ELVs) is shown below. More detailed information on the below ELV's can be found in Section 2.

Discharge Point Reference	Treatment Plant	Discharge Type	Compliance Status	Parameters failing if relevant
TPEFF1500D0018SW001	KILKENNY CITY AND ENVIRONS WWTP	Treated	Non-Compliant	Ammonia-Total (as N) mg/l

1.4 LICENCE SPECIFIC REPORTING

Assessment / Report

There are no Licence Specific Reports included in this AER.

2 TREATMENT PLANT PERFORMANCE AND IMPACT SUMMARY

2.1 KILKENNY CITY AND ENVIRONS WWTP - TREATED DISCHARGE

2.1.1 INFLUENT MONITORING SUMMARY - KILKENNY CITY AND ENVIRONS WWTP

A summary of influent monitoring for the treatment plant is presented below. This monitoring is primarily undertaken in order to determine the overall efficiency of the plant in removing pollutants from the raw wastewater.

Parameters	Number of Samples	Annual Max	Annual Mean
Total Phosphorus (as P) mg/l	39	14	6.00
COD-Cr mg/l	39	768	454
pH units	39	8.03	7.58
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	39	282	123
Total Nitrogen mg/l	39	58	33
Ammonia-Total (as N) mg/l	39	29	18
Suspended Solids mg/l	39	900	343
Hydraulic Capacity	N/A	26485	10294

If other inputs in the form of sludge / leachate are added to the WWTP then these are included in Section 2.1.5 if applicable.

Significance of Results:

The annual mean hydraulic loading is less than the peak Treatment Plant Capacity. The annual maximum hydraulic loading is less than the peak Treatment Plant Capacity. Further details on the plant capacity and efficiency can be found under the sectional 'Operational Performance Summary'. The design of the wastewater treatment plant allows for peak values and therefore the peak loads have not impacted on compliance with Emission Limit Values.

2.1.2 EFFLUENT MONITORING SUMMARY - TPEFF1500D0018SW001

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
COD-Cr mg/l	125	250	N/A	39	N/A	N/A	22	Pass
Suspended Solids mg/l	35	87.5	N/A	39	N/A	N/A	6.24	Pass
BOD, 5 days with Inhibition (Carbonaceous BOD) mg/l	25	50	N/A	39	N/A	N/A	2.74	Pass
pH units	9.00	9.00	N/A	39	N/A	N/A	7.52	Pass
Ammonia-Total (as N) mg/l	3.00	3.60	N/A	39	1	1	0.290	Fail
Total Phosphorus (as P) mg/l	2.00	2.40	N/A	39	N/A	N/A	0.313	Pass
ortho-Phosphate (as P) - unspecified mg/l	0.500	0.600	N/A	39	N/A	N/A	0.139	Pass

Parameter	WWDL ELV (Schedule A)	ELV with Condition 2 Interpretation included Note 1	Interim % reduction from influent concentration	Number of sample results	Number of exceedances	Number of exceedances with Condition 2 Interpretation included	Annual Mean	Overall Compliance (Pass/Fail)
Total Nitrogen mg/l	N/A	N/A	N/A	39	N/A	N/A	6.48	
Total Oxidised Nitrogen (as N) mg/l	N/A	N/A	N/A	39	N/A	N/A	5.78	

Notes:

1 – This represents the Emission Limit Values after the Interpretation provided for under Condition 2 of the licence is applied

2 – For pH the WWDA specifies a range of pH 6 - 9

Cause of Exceedance(s):

Shock load received from nearby industrial unit. See INCI021107

Significance of Results:

Plant non compliant because of shock load June 2021

2.1.3 AMBIENT MONITORING SUMMARY FOR THE TREATMENT PLANT DISCHARGE TPEFF1500D0018SW001

A summary of monitoring from ambient monitoring points associated with the wastewater discharge is provided in the sections below. For discharges to rivers upstream (U/S) and downstream (D/S) location data is provided. For other ambient points in lakes, coastal or transitional waters, monitoring data from the most appropriate monitoring station is selected.

The table below provides details of ambient monitoring locations and details of any designations as sensitive areas.

Ambient Monitoring Point from WWDL (or as agreed with EPA)	Irish Grid Reference	River Station Code	Bathing Water	Drinking Water	FWPM	Shellfish	WFD Ecological Status
Upstream	253230, 154517	RS15N011990	No	No	No	No	Good
Downstream	253387, 154460	RS15N011993	No	No	No	No	Good

The table below provides a summary of monitoring results for designated ambient monitoring points. The upstream and downstream annual mean values are shown (mg/l), and the difference between both monitoring stations is given as a percentage of the Environmental Quality Standard (EQS) where relevant.

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
BOD - 5 days (Total) mg/l	RS15N011990	1.25	RS15N011993	1.08	1.50	-11.7
Ammonia-Total (as N) mg/l	RS15N011990	0.027	RS15N011993	0.116	0.065	137.7
ortho-Phosphate (as P) - unspecified mg/l	RS15N011990	0.066	RS15N011993	0.018	0.035	-135.7
Conductivity @20°C µS/cm	RS15N011990	451	RS15N011993	464	N/A	
Dissolved Oxygen % O2	RS15N011990	102	RS15N011993	102	N/A	
Temperature °C	RS15N011990	12	RS15N011993	13	N/A	
Sulphate mg/l	RS15N011990	27	RS15N011993	28	N/A	
Nitrite (as N) mg/l	RS15N011990	0.009	RS15N011993	0.010	N/A	
Nitrate (as N) mg/l	RS15N011990	4.39	RS15N011993	3.17	N/A	

Parameter Name	Upstream Monitoring Point Location	Upstream Monitoring Point Annual Mean	Downstream Monitoring Point Location	Downstream Monitoring Point Annual Mean	EQS	% of EQS
Chloride mg/l	RS15N011990	23	RS15N011993	25	N/A	
pH units	RS15N011990	8.31	RS15N011993	8.34	N/A	

Significance of Results:

The WWTP discharge was not compliant with the ELV's set in the wastewater discharge licence for the following: Ammonia-Total (as N) mg/l.

The ambient monitoring results do not meet the required EQS at the upstream and the downstream monitoring locations. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009.

Based on ambient monitoring results a deterioration in Ammonia, concentrations downstream of the effluent discharge is noted.

The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status.

2.1.4 OPERATIONAL PERFORMANCE SUMMARY - KILKENNY CITY AND ENVIRONS WWTP

2.1.4.1 Treatment Efficiency Report - KILKENNY CITY AND ENVIRONS WWTP

Treatment efficiency is based on the removal of key pollutants from the influent wastewater by the treatment plant. In essence the calculation is based on the balance of load coming into the plant versus the load leaving the plant. The efficiency is presented as a percentage removal rate.

A summary presentation of the efficiency of the treatment process including information for all the parameters specified in the licence is included below:

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
TN	128009	24602	81
cBOD	471400	10397	98
TP	23035	1188	95

Parameter	Influent mass loading (kg/year)	Effluent mass emission (kg/year)	Efficiency (% reduction of influent load)
SS	1314832	23694	98
COD	1744206	82729	95

Note: The above data is based on sample results for the number of dates reported

2.1.4.2 Treatment Capacity Report Summary - KILKENNY CITY AND ENVIRONS WWTP

Treatment capacity is an assessment of the hydraulic (flow) and organic (the amount of pollutants) load a treatment plant is designed to treat versus the current loading of that plant.

KILKENNY CITY AND ENVIRONS WWTP	
Peak Hydraulic Capacity (m³/day) - As Constructed	50904
DWF to the Treatment Plant (m³/day)	16968
Current Hydraulic Loading - annual max (m³/day)	26485
Average Hydraulic loading to the Treatment Plant (m³/day)	10294
Organic Capacity (PE) - As Constructed	77000
Organic Capacity (PE) - Collected Load (peak week)^{Note¹}	35100
Organic Capacity (PE) - Remaining	41900
Will the capacity be exceeded in the next three years? (Yes/No)	No

Nominal design capacities can be based on conservative design principles. In some cases assessment of existing plants has shown organic capacities significantly higher than the nominal design capacity. Accordingly plants that appear to be overloaded when comparing a collected peak load with the nominal design capacity can be fully compliant due to the safety factors in the original design.

2.1.5 SLUDGE / OTHER INPUTS - KILKENNY CITY AND ENVIRONS WWTP

'Other inputs' to the waste water treatment plant are summarised in table below

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Industrial / Commercial Sludge	269	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	1071	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	680	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	5602	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	1543	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	427	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	105	Volume (m3)		5	Yes	Yes	Yes

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Industrial / Commercial Sludge	286	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	95	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	1047	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	401	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	314	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	355	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	818	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	1460	Volume (m3)		5	Yes	Yes	Yes

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Industrial / Commercial Sludge	1183	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	2281	Volume (m3)		5	Yes	Yes	Yes
Industrial / Commercial Sludge	1672	Volume (m3)		5	Yes	Yes	Yes
Landfill Leachate (delivered by tanker)	723	Volume (m3)		1	Yes	Yes	Yes
Waterworks Sludge	10483	Volume (m3)		1	Yes	Yes	Yes
Domestic /Septic Tank Sludge	623	Volume (m3)		1	Yes	Yes	Yes
Industrial / Commercial Sludge	601	Volume (m3)		1	Yes	Yes	Yes
Industrial / Commercial Sludge	19284	Volume (m3)		1	Yes	Yes	Yes

Input type	Quantity	Unit	P.E.	% of load to WWTP	Included in Influent Monitoring (Y/N)?	Is there a leachate/sludge acceptance procedure for the WWTP?	Is there a dedicated leachate/sludge acceptance facility for the WWTP? (Y/N)
Industrial / Commercial Sludge	1795	Volume (m3)		5	Yes	Yes	Yes

3 COMPLAINTS AND INCIDENTS

3.1 COMPLAINTS SUMMARY

A summary of complaints of an environmental nature related to the discharge(s) to water from the WWTP and network is included below.

Number of Complaints	Nature of Complaint	Number Open Complaints	Number Closed Complaints
1	Discharge to waters	0	1

3.2 REPORTED INCIDENTS SUMMARY

Environmental incidents that arise in an agglomeration are reported on an on-going basis in accordance with our waste water discharge licences. Where an incident occurs and it is reportable under the licence, it is reported to the Environmental Protection Agency through their Environmental Data Exchange Network, or in some instances by telephone. Some incidents which arise in the agglomeration are recorded by Irish Water but may not be reportable under our licence for example where the incident does not have an impact on environmental performance.

A summary of reported incidents is included below.

3.2.1 SUMMARY OF INCIDENTS

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Abatement Equipment offline	Plant or equipment breakdown at WWTP	1	No	Yes
Breach of ELV	WWTP biological sludge issue	1	Yes	Yes
Breach of ELV	WWTP biological sludge issue	1	Yes	Yes

Incident Type	Cause	No. of incident occurrences	Recurring (Y/N)	Closed (Y/N)
Uncontrolled release	Blocked Sewer	1	No	Yes

3.2.2 SUMMARY OF OVERALL INCIDENTS

Question	Answer
Number of Incidents in 2021	4
Number of Incidents reported to the EPA via EDEN in 2021	4
Explanation of any discrepancies between the two numbers above	N/A

4 INFRASTRUCTURAL ASSESSMENTS AND PROGRAMME OF IMPROVEMENTS

4.1 STORM WATER OVERFLOW IDENTIFICATION AND INSPECTION REPORT

A summary of the operation of the storm water overflows and their significance where known is included below:

4.1.1 SWO IDENTIFICATION

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
TBC	250629, 156449	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250714, 156076	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250788, 155825	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250788, 155825	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250753, 156069	No	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	249967, 154862	No	Medium	Meeting	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
TBC	250466, 158553	No	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	251807, 155463	No	Medium	Meeting	Unknown	Unknown	Not Monitored
TBC	249639, 154695	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250221, 156117	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	251755, 155216	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250561, 156613	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250481, 156641	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	250148, 156114	No	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
TBC	253243, 154520	No	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW001	251361, 155883	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SW002	251753, 155369.1	Yes	Medium	Meeting	Unknown	Unknown	Not Monitored
SW003	250713, 156076	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW004	251305, 155889	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW005	250788, 155825	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW006	250707, 156213	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW007	250713, 156076	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW008	250420, 156252	Yes	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW009	250626, 156455	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW010	250641, 156425	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW011	251745, 155402	Yes	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SW012	249897, 155073	Yes	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored
SW013	249887, 156112	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW014	250212, 156127	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW015	250223, 156136	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW016	250437, 156798	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW017	250448, 156787	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW018	250010, 158102	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW019	249503, 155873	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW021	251775, 155243	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored
SW022	251359, 155883	Yes	Unknown	Not yet Assessed	Unknown	Unknown	Not Monitored

WWDL Name / Code for Storm Water Overflow (chamber) where applicable	Irish Grid Ref. (outfall)	Included in Schedule of the WWDL	Significance of the overflow(High / Medium / Low)	Assessed against DoEHLG Criteria	No. of times activated in 2021 (No. of events)	Total volume discharged in 2021 (m3)	Monitoring Status
SWO20	250753, 156069	Yes	Medium	Not yet Assessed	Unknown	Unknown	Not Monitored

Any TBC SWO(s) were identified as part of the on-going National SWO programme and will be updated in subsequent AER(s) once the information is confirmed.

SWO Summary	
How much sewage was discharged via SWOs in the agglomeration in the year (m3)?	Unknown
Is each SWO identified as not meeting DoEHLG Guidance included in the Programme of Improvements?	N/A
The SWO Assessment included the requirements of relevant of WWDL schedules?	Yes
Have the EPA been advised of any additional SWOs / changes to Schedule C3 and A4 under Condition 1.7?	N/A

4.2 REPORT ON PROGRESS MADE AND PROPOSALS BEING DEVELOPED TO MEET THE IMPROVEMENT PROGRAMME REQUIREMENTS.

4.2.1 SPECIFIED IMPROVEMENT PROGRAMME SUMMARY

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Specified Improvement Programmes (under Schedule A and C of WWDL)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works	Timeframe for Completing the Work	Comments
D0018-SIP:01	Phosphorous reduction (ferric dosing)	C	31/12/2013	Yes	Works Completed		

A summary of the status of any other improvements identified by under Condition 5 assessments- is included below.

4.2.2 IMPROVEMENT PROGRAMME SUMMARY

Improvement Identifier	Improvement Description / or any Operational Improvements	Improvement Source	Expected Completion Date	Comments
No additional improvements planned at this time.				

4.2.3 SEWER INTEGRITY RISK ASSESSMENT

The utilisation of multiple capital maintenance programmes and the outputs of the workshops with the Local Authority Operations Staff held under the programme can be used to satisfy the requirements of Condition 5 regarding network integrity. Improvement works identified by way of these programmes and workshops will be included in the Improvements Summary Tables 4.2.1 and 4.2.2.

5 LICENCE SPECIFIC REPORTS

A wastewater discharge licence may require a number of reports on specific subject areas to be prepared for the agglomeration in question. These reports are submitted to the EPA as part of the Annual Environmental Report. This section provides a list of the various reports required for this agglomeration and a brief summary of their recommendations.

Licence Specific Report	Required by licence	Year included in AER	Included in this AER
Priority Substances Assessment	Yes	2015	No

6 CERTIFICATION AND SIGN OFF

6.1 SUMMARY OF AER CONTENTS

Parameter	Answer
Does the AER include an Executive Summary?	Yes
Does the AER include an assessment of the performance of the Waste Water Works (i.e. have the results of assessments been interpreted against WWDL requirements and or Environmental Quality Standards)?	Yes
Has a Technical amendment/licence review application been submitted to the Agency by IW?	No
List reason e.g. additional SWO identified	N/A
Is there a need to request/advise the EPA of any modification to the existing WWDL with respect to condition 4 changes to monitoring location, frequency etc	Yes
List reason e.g. changes to monitoring requirements	Ambient monitoring location change
Have these processes commenced?	No
Are all outstanding reports and assessments from previous AERs included as an appendix to this AER	N/A

I certify that the information given in this Annual Environmental Report is truthful, accurate and complete:

Signed: Date: 12/04/2022

This AER has been produced by Irish Water's Environmental Information System (EIMS) and has been electronically signed off in that system for and on behalf of ,

Katherine Walshe

Acting Head of Environmental Regulation.

7 APPENDIX

Appendix
Appendix 7.1 - Other



Sludge Register/Report

PREPARED FOR

Kilkenny County Council
Period: 01/01/2021 to 31/12/2021

For the landspreading of Kilkenny Cake Biosolid

Index

Section	Details
1	Introduction
2	Quantities of sludge produced and supplied to Agriculture
3	Biosolid composition and properties
4	Treatment Process
5	Name and address of spreadlands
6	Haulier and spreader details
7	Communication
8	Conclusions

Section 1

Introduction

Introduction

31 January 2022

RE: Kilkenny Limed Biosolids Sludge Register Report
for 2021

To whom it may concern,

I enclose herewith details of Kilkenny Limed Biosolids spread from 1st Jan 2021 to 31st December 2021

The Product referred to here is Kilkenny Limed Biosolid:

Spreading was carried out in accordance with the Code of Good Practice for the Use of Biosolid in Agriculture issue by the DOELG.

Under the Waste Management (Use of Sewage Sludge in Agriculture) Regulations 1998 and its amendment the SI 267 of 2001, each local authority is required to maintain a Sludge Register, which should include the following information:

- a. The quantities of sludge produced and the quantities supplied for use in agriculture in their functional area.
- b. The composition and properties of the sludge having regard to the parameters referred to in Part II of the schedule and its amendment, which 'extends the requirement for maintaining a register to include dry matter, organic matter, pH, nitrogen and phosphorus'.

- c. The treatment which the sludge have undergone having regard to the types of treatment referred to in article 2.
- d. The name and address of each recipient of the sludge and the locations of each site where the sludge is used.

Also included in this document are details on our Haulier and Spreader Contractor, Communication between Veolia and the Client and conclusions. Please see index for full contents of document.

Section 2

Quantities of sludge produced and quantities for use
in Agriculture

**The Quantities of sludge produced and quantities supplied to
Agriculture in each functional area are as follows;**

Veolia received 6,719.02 **(3,563.52 + 3,155.50)** tonnes from 1st January to the 31st December 2021. The following table is a summary of the activities that occurred during the year.

2021	Opening Balance	Biosolids Imported to Store	Biosolids from store to Field	Closing Balance in Store	Biosolids Spread	Biosolids from Plant to Farm	Balance at Farm
Jan-21	0	0	0	0	0	0	0
Feb-21	0	0	0	0	0	0	0
Mar-21	0	0	0	0	529.85	592.15	62.3
Apr-21	0	0	0	0	475.9	502.9	89.3
May-21	0	0	0	0	277.16	501.94	314.08
Jun-21	0	0	0	0	314.08	0	0
Jul-21	0	0	0	0	249.48	635.76	386.28
Aug-21	0	0	0	0	825.83	486.37	46.82
Sep-21	0	0	0	0	297	584.73	334.55
Oct-21	0	0	0	0	594.22	259.67	0
Rest of October	0	0	0	0	0	0	0
Nov-21	0	0	0	0	0	0	0
Dec-21	0	0	0	0	0	0	0
			0		3563.52	3563.52	

3,563.52 tonnes was delivered from KK WWTP direct to farm

Farmers who received Kilkenny Cake Biosolid during 2021 are as follows;

Eddie Byrne, Upper Grange, Gowran, Co. Kilkenny (204.82t)

John Alyward, Coppanagh, Graignamanagh, Co. Kilkenny (647.14t)

Padraig Holohan, Lower Grange, Goresbridge, Co. Kilkenny (282.08)

Stephen Holohan, Lower Grange, Goresbridge, Co. Kilkenny (123.26t)

Aidan Cummins, Barrettstown, Knocktopher, Co. Kilkenny (561.46)

Martin Kelly, Ballyine House, Borris, Co. Carlow (65.46t)
 John Lanigan, Raheendonore, Graignamanagh, Co. Kilkenny (127.33t)
 Daniel Maher, Donore, Bagnalstown, Co. Carlow (416.22t)
 Kieran Ryan, Kilcoran, Rathdowney, Co. Laois (431.52t)
 John Murphy, Boherduff, Bagnalstown, Co. Carlow (521.53t) - Land in
 Co. Kilkenny
 Liam Kelly, Clogrennan, Carlow, Co. Carlow (182.70t)

2021	H&L digestion
Jan-21	531.64
Feb-21	516.74
Mar-21	0
Apr-21	0
May-21	174.98
Jun-21	522.72
Jul-21	0
Aug-21	0
Sep-21	0
Oct-21	236.48
Nov-21	624.34
Dec-21	548.6
	3155.5

3,155.50 tonnes was delivered from KK WWTP to H&L Moyne, Templetoohy, Co. Tipperary where it went for digestion.

The following SUIVRA reports are a detailed report of “DELIVERED QUANTITIES PER DAY – TO STORAGE” of the Biosolid, the “DELIVERED QUANTITIES PER DAY – DIRECT TO FIELD” and “DELIVERIES FROM STORE TO FIELD”.

0.00t was delivered from Portarlinton store to farm in 2021

The balance in store on the 31st December 2021 is 0.00 tonnes.

HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
01-03-2021	14137	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	19,20
	14136	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	20,98
Sub-total						40,18
02-03-2021	14212	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	20,78
Sub-total						20,78
03-03-2021	14213	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,18
Sub-total						22,18
04-03-2021	14214	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	20,02
Sub-total						20,02
05-03-2021	14215	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	22,02
Sub-total						22,02
08-03-2021	14217	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	20,14
	14216	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	23,20
Sub-total						43,34
09-03-2021	14218	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	20,48
Sub-total						20,48
10-03-2021	14219	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	21,52
Sub-total						21,52
11-03-2021	14220	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	22,46
Sub-total						22,46
12-03-2021	14221	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	21,52
Sub-total						21,52
15-03-2021	14222	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	22,46

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID

Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
15-03-2021	14223	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	23,22
Sub-total						45,68
16-03-2021	14224	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	19,62
Sub-total						19,62
19-03-2021	14225	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	20,04
Sub-total						20,04
20-03-2021	14226	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	23,00
Sub-total						23,00
22-03-2021	14227	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	23,16
Sub-total						23,16
23-03-2021	14228	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,52
Sub-total						22,52
24-03-2021	14229	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,32
Sub-total						22,32
25-03-2021	14230	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	19,78
Sub-total						19,78
26-03-2021	14232	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	17,50
	14231	OLIVER CONROY	IE26597 STEPHEN HOLOHON	S. HOLOHAN FARMYARD	GRANGE LOWER	20,24
Sub-total						37,74
29-03-2021	14233	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	20,36
	14234	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 04-1 AIDAN C	BARRETTSTOWN	21,13
Sub-total						41,49
30-03-2021	14235	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	21,62

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID

Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
Sub-total						21,62
31-03-2021	14236	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	22,90
	14237	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	17,78
Sub-total						40,68
01-04-2021	14238	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	21,14
Sub-total						21,14
06-04-2021	14239	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	21,82
	14240	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	24,42
Sub-total						46,24
07-04-2021	14241	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 15A P HOLOHAN	BARROWMOUNT	20,16
Sub-total						20,16
08-04-2021	14242	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,51
Sub-total						22,51
09-04-2021	14243	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	23,36
Sub-total						23,36
12-04-2021	14244	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	18,96
	14245	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,11
Sub-total						41,07
14-04-2021	14246	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	23,48
Sub-total						23,48
15-04-2021	14247	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	20,76
Sub-total						20,76
16-04-2021	14249	OLIVER CONROY	IE26313 MARTIN KELLY	MARTIN KELLY BALLYINE	BALLYINE	19,78

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
16-04-2021	14248	OLIVER CONROY	IE26313 MARTIN KELLY	MARTIN KELLY BALLYINE	BALLYINE	22,70
Sub-total						42,48
19-04-2021	14250	OLIVER CONROY	IE26313 MARTIN KELLY	MARTIN KELLY BALLYINE	BALLYINE	22,98
	14251	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	21,66
Sub-total						44,64
20-04-2021	14252	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,38
Sub-total						22,38
21-04-2021	14253	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,91
Sub-total						22,91
22-04-2021	14254	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	21,47
Sub-total						21,47
24-04-2021	14255	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	20,74
Sub-total						20,74
26-04-2021	14156	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	24,34
Sub-total						24,34
27-04-2021	14157	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	21,98
	14158	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,64
Sub-total						44,62
28-04-2021	14159	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	19,60
Sub-total						19,60
29-04-2021	14160	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	21,00
Sub-total						21,00
01-05-2021	14161	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,52

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
Sub-total						22,52
05-05-2021	14162	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	25,06
	14163	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,94
Sub-total						48,00
06-05-2021	14164	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,16
Sub-total						22,16
07-05-2021	14165	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,98
	14166	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	20,20
Sub-total						43,18
10-05-2021	14168	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	25,36
	14167	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	23,34
Sub-total						48,70
11-05-2021	14169	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,12
Sub-total						22,12
12-05-2021	14171	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	23,08
	14170	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	19,72
Sub-total						42,80
13-05-2021	14172	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,82
Sub-total						22,82
14-05-2021	14173	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,90
Sub-total						22,90
15-05-2021	14174	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	21,90
Sub-total						21,90

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID

Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
17-05-2021	14176	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	24,28
	14175	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	25,18
Sub-total						49,46
18-05-2021	14177	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	21,42
Sub-total						21,42
19-05-2021	14179	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	25,22
	14178	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	21,38
Sub-total						46,60
20-05-2021	14180	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	22,92
Sub-total						22,92
21-05-2021	14181	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	23,62
Sub-total						23,62
22-05-2021	14182	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	20,82
Sub-total						20,82
01-07-2021	14314	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	19,80
	14315	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,86
Sub-total						42,66
02-07-2021	14316	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,32
Sub-total						22,32
05-07-2021	14317	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,32
	14318	OLIVER CONROY	IE26674 JOHN AYLWARD	JOHN AYLWARD COPPANAGH	COPPANAGH	22,08
Sub-total						44,40
06-07-2021	14319	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	20,66

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
Sub-total						20,66
07-07-2021	14320	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	24,04
Sub-total						24,04
08-07-2021	14321	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	23,32
Sub-total						23,32
09-07-2021	14322	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	23,92
Sub-total						23,92
10-07-2021	14323	OLIVER CONROY	IE10003 EDDIE BYRNE	EDDIE BYRNE (PSA 09)	GRANGE UPPER	22,84
Sub-total						22,84
12-07-2021	14324	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	25,32
Sub-total						25,32
13-07-2021	14325	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	23,58
Sub-total						23,58
14-07-2021	14326	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,50
Sub-total						22,50
15-07-2021	14327	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	21,58
	14328	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	23,16
Sub-total						44,74
16-07-2021	14329	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	24,30
Sub-total						24,30
19-07-2021	14330	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	20,58
Sub-total						20,58
20-07-2021	14331	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	24,08

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
20-07-2021	14332	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	20,88
Sub-total						44,96
21-07-2021	14333	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	23,74
Sub-total						23,74
22-07-2021	14334	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	25,20
Sub-total						25,20
23-07-2021	14335	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	25,16
Sub-total						25,16
26-07-2021	14337	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	24,94
	14336	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	19,56
Sub-total						44,50
27-07-2021	14338	OLIVER CONROY	IE01014 LIAM KELLY	L. KELLY PSA 05	SESKINREA	19,14
Sub-total						19,14
28-07-2021	14339	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	21,00
Sub-total						21,00
29-07-2021	14340	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	24,54
Sub-total						24,54
30-07-2021	14341	OLIVER CONROY	IE26740 KIERAN RYAN	CAKE PAD	RATHDOWNEY	22,34
Sub-total						22,34
03-08-2021	14342	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	19,10
	14343	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,76
Sub-total						41,86
05-08-2021	14344	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,61

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
05-08-2021	14345	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	21,12
Sub-total						43,73
06-08-2021	14346	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,52
Sub-total						20,52
07-08-2021	14347	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	18,37
Sub-total						18,37
10-08-2021	14348	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,34
	14349	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,96
Sub-total						41,30
11-08-2021	14350	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,46
Sub-total						20,46
12-08-2021	14401	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,16
Sub-total						20,16
13-08-2021	14402	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	21,32
Sub-total						21,32
14-08-2021	14403	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	19,66
Sub-total						19,66
17-08-2021	14404	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,52
Sub-total						20,52
19-08-2021	14405	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,17
Sub-total						22,17
20-08-2021	14406	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	17,52
Sub-total						17,52

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HAULAGE REPORT BY DAY

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Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
21-08-2021	14407	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,02
Sub-total						22,02
24-08-2021	14408	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	24,86
	14409	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	23,74
Sub-total						48,60
25-08-2021	14410	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	20,83
Sub-total						20,83
26-08-2021	14411	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	19,27
Sub-total						19,27
27-08-2021	14412	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	21,24
Sub-total						21,24
30-08-2021	14413	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	23,50
Sub-total						23,50
31-08-2021	14414	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	23,32
Sub-total						23,32
01-09-2021	14415	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	21,24
Sub-total						21,24
02-09-2021	14416	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	21,46
Sub-total						21,46
03-09-2021	14417	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,16
Sub-total						22,16
06-09-2021	14418	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	19,56
	14419	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,28

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID

Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP

Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
Sub-total						41,84
07-09-2021	14420	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	21,84
Sub-total						21,84
08-09-2021	14421	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	20,35
Sub-total						20,35
09-09-2021	14422	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,65
Sub-total						22,65
10-09-2021	14423	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,38
Sub-total						22,38
13-09-2021	14424	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,64
Sub-total						22,64
14-09-2021	14425	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,56
	14426	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	19,46
Sub-total						42,02
15-09-2021	14427	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,58
	14428	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,89
Sub-total						45,47
16-09-2021	14429	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	21,42
Sub-total						21,42
17-09-2021	14430	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	22,15
Sub-total						22,15
21-09-2021	14432	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	21,60
	14431	OLIVER CONROY	IE26644 DANIEL MAHER	DANIEL MAHER FARMYARD	DONORE	21,78

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
Sub-total						43,38
22-09-2021	14433	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	21,86
Sub-total						21,86
23-09-2021	14434	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	22,76
Sub-total						22,76
24-09-2021	14435	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	23,18
Sub-total						23,18
25-09-2021	14440	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	21,37
Sub-total						21,37
27-09-2021	14436	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	21,50
Sub-total						21,50
28-09-2021	14437	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	22,68
Sub-total						22,68
29-09-2021	14438	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	21,54
	14439	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	20,36
Sub-total						41,90
30-09-2021	14441	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	18,48
Sub-total						18,48
01-10-2021	14442	OLIVER CONROY	IE10017 PADRAIGH HOLOHAN	PSA 03 A P HOLOHAN	GRANGE LOWER	21,34
Sub-total						21,34
04-10-2021	14443	OLIVER CONROY	IE26570 JOHN LANIGAN	JOHN LANIGAN RAHEENDONORE	RAHEENDONORE	19,96
	14444	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,14
Sub-total						42,10

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
05-10-2021	14445	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	21,08
Sub-total						21,08
06-10-2021	14446	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,49
Sub-total						22,49
07-10-2021	14447	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,46
Sub-total						22,46
08-10-2021	14448	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,60
Sub-total						22,60
11-10-2021	14449	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,78
Sub-total						22,78
12-10-2021	14450	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	22,70
Sub-total						22,70
13-10-2021	12471	OLIVER CONROY	IE26420 AIDAN CUMMINS	PSA 05-1 AIDAN C	BALLYNAMONA	20,76
Sub-total						20,76
14-10-2021	12453	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	19,24
	12452	OLIVER CONROY	IE26678 JOHN MURPHY	JOHN MURPHY CLASHWILLIAM	CLASHWILLIAM	22,12
Sub-total						41,36
TOTAL						3 563,52

Number of skips ::	163
Number of disposal days ::	130
Average number of skips by day ::	1
Average ton. by skip ::	21,86 t
Average ton. by day ::	27 t/day

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Direct to Farm

Date	Ticket	Haulier	Destination	Storage	Town	Tonnage
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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
04-01-2021	14110	OLIVER CONROY	DES	MOYNE	21,36
Sub-total					21,36
05-01-2021	14111	OLIVER CONROY	DES	MOYNE	19,60
	14112	OLIVER CONROY	DES	MOYNE	18,88
Sub-total					38,48
06-01-2021	14113	OLIVER CONROY	DES	MOYNE	20,50
Sub-total					20,50
07-01-2021	14114	OLIVER CONROY	DES	MOYNE	20,70
Sub-total					20,70
08-01-2021	14115	OLIVER CONROY	DES	MOYNE	14,12
	14116	OLIVER CONROY	DES	MOYNE	18,52
Sub-total					32,64
11-01-2021	14117	OLIVER CONROY	DES	MOYNE	23,54
Sub-total					23,54
12-01-2021	14118	OLIVER CONROY	DES	MOYNE	23,32
	14119	OLIVER CONROY	DES	MOYNE	22,66
Sub-total					45,98
13-01-2021	14120	OLIVER CONROY	DES	MOYNE	22,34
Sub-total					22,34
14-01-2021	14121	OLIVER CONROY	DES	MOYNE	20,80
Sub-total					20,80
15-01-2021	14122	OLIVER CONROY	DES	MOYNE	20,46
	14123	OLIVER CONROY	DES	MOYNE	22,20
Sub-total					42,66

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
18-01-2021	14124	OLIVER CONROY	DES	MOYNE	20,60
	14125	OLIVER CONROY	DES	MOYNE	19,14
Sub-total					39,74
19-01-2021	14126	OLIVER CONROY	DES	MOYNE	14,94
Sub-total					14,94
20-01-2021	14127	OLIVER CONROY	DES	MOYNE	19,06
Sub-total					19,06
21-01-2021	14128	OLIVER CONROY	DES	MOYNE	19,46
	14129	OLIVER CONROY	DES	MOYNE	20,56
Sub-total					40,02
25-01-2021	14130	OLIVER CONROY	DES	MOYNE	22,08
Sub-total					22,08
26-01-2021	14131	OLIVER CONROY	DES	MOYNE	24,86
Sub-total					24,86
27-01-2021	14132	OLIVER CONROY	DES	MOYNE	21,06
Sub-total					21,06
28-01-2021	14133	OLIVER CONROY	DES	MOYNE	20,12
Sub-total					20,12
29-01-2021	14134	OLIVER CONROY	DES	MOYNE	19,72
	14135	OLIVER CONROY	DES	MOYNE	21,04
Sub-total					40,76
01-02-2021	14136	OLIVER CONROY	DES	MOYNE	21,64
	14137	OLIVER CONROY	DES	MOYNE	22,20
Sub-total					43,84

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
02-02-2021	14138	OLIVER CONROY	DES	MOYNE	19,60
Sub-total					19,60
03-02-2021	14139	OLIVER CONROY	DES	MOYNE	21,72
Sub-total					21,72
04-02-2021	14140	OLIVER CONROY	DES	MOYNE	23,20
Sub-total					23,20
05-02-2021	14141	OLIVER CONROY	DES	MOYNE	20,16
Sub-total					20,16
08-02-2021	14142	OLIVER CONROY	DES	MOYNE	22,40
	14143	OLIVER CONROY	DES	MOYNE	23,70
Sub-total					46,10
10-02-2021	14144	OLIVER CONROY	DES	MOYNE	22,80
Sub-total					22,80
11-02-2021	14145	OLIVER CONROY	DES	MOYNE	22,30
Sub-total					22,30
12-02-2021	14146	OLIVER CONROY	DES	MOYNE	19,42
Sub-total					19,42
15-02-2021	14147	OLIVER CONROY	DES	MOYNE	21,00
Sub-total					21,00
16-02-2021	14148	OLIVER CONROY	DES	MOYNE	23,30
Sub-total					23,30
17-02-2021	14149	OLIVER CONROY	DES	MOYNE	21,58
Sub-total					21,58
18-02-2021	14150	OLIVER CONROY	DES	MOYNE	21,56

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
18-02-2021	14151	OLIVER CONROY	DES	MOYNE	22,22
Sub-total					43,78
19-02-2021	14152	OLIVER CONROY	DES	MOYNE	19,96
Sub-total					19,96
22-02-2021	14153	OLIVER CONROY	DES	MOYNE	21,68
	14154	OLIVER CONROY	DES	MOYNE	22,64
Sub-total					44,32
23-02-2021	14155	OLIVER CONROY	DES	MOYNE	21,32
Sub-total					21,32
24-02-2021	14156	OLIVER CONROY	DES	MOYNE	21,20
Sub-total					21,20
25-02-2021	14157	OLIVER CONROY	DES	MOYNE	21,70
Sub-total					21,70
26-02-2021	14158	OLIVER CONROY	DES	MOYNE	19,00
	14159	OLIVER CONROY	DES	MOYNE	20,44
Sub-total					39,44
24-05-2021	14183	OLIVER CONROY	DES	MOYNE	21,92
Sub-total					21,92
25-05-2021	14184	OLIVER CONROY	DES	MOYNE	24,02
	14185	OLIVER CONROY	DES	MOYNE	23,16
Sub-total					47,18
26-05-2021	14186	OLIVER CONROY	DES	MOYNE	22,94
Sub-total					22,94
27-05-2021	14187	OLIVER CONROY	DES	MOYNE	22,48

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
Sub-total					22,48
28-05-2021	14188	OLIVER CONROY	DES	MOYNE	19,62
	14189	OLIVER CONROY	DES	MOYNE	19,46
Sub-total					39,08
31-05-2021	14190	OLIVER CONROY	DES	MOYNE	21,38
Sub-total					21,38
02-06-2021	14191	OLIVER CONROY	DES	MOYNE	22,62
Sub-total					22,62
03-06-2021	14192	OLIVER CONROY	DES	MOYNE	21,42
	14193	OLIVER CONROY	DES	MOYNE	19,96
Sub-total					41,38
04-06-2021	14194	OLIVER CONROY	DES	MOYNE	23,48
Sub-total					23,48
08-06-2021	14195	OLIVER CONROY	DES	MOYNE	24,54
Sub-total					24,54
11-06-2021	14196	OLIVER CONROY	DES	MOYNE	22,60
	14197	OLIVER CONROY	DES	MOYNE	22,70
Sub-total					45,30
14-06-2021	14198	OLIVER CONROY	DES	MOYNE	22,32
Sub-total					22,32
15-06-2021	14199	OLIVER CONROY	DES	MOYNE	21,54
	14200	OLIVER CONROY	DES	MOYNE	23,02
Sub-total					44,56
16-06-2021	14301	OLIVER CONROY	DES	MOYNE	23,26

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
Sub-total					23,26
17-06-2021	14302	OLIVER CONROY	DES	MOYNE	25,14
Sub-total					25,14
18-06-2021	14303	OLIVER CONROY	DES	MOYNE	21,82
Sub-total					21,82
21-06-2021	14304	OLIVER CONROY	DES	MOYNE	23,08
Sub-total					23,08
22-06-2021	14305	OLIVER CONROY	DES	MOYNE	20,60
	14306	OLIVER CONROY	DES	MOYNE	21,88
Sub-total					42,48
23-06-2021	14307	OLIVER CONROY	DES	MOYNE	22,98
Sub-total					22,98
24-06-2021	14308	OLIVER CONROY	DES	MOYNE	23,78
Sub-total					23,78
25-06-2021	14309	OLIVER CONROY	DES	MOYNE	20,62
Sub-total					20,62
28-06-2021	14310	OLIVER CONROY	DES	MOYNE	23,26
Sub-total					23,26
29-06-2021	14311	OLIVER CONROY	DES	MOYNE	23,48
	14312	OLIVER CONROY	DES	MOYNE	24,46
Sub-total					47,94
30-06-2021	14313	OLIVER CONROY	DES	MOYNE	24,16
Sub-total					24,16
18-10-2021	12454	OLIVER CONROY	DES	MOYNE	19,50

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
Sub-total					19,50
19-10-2021	12455	OLIVER CONROY	DES	MOYNE	22,22
	12456	OLIVER CONROY	DES	MOYNE	21,44
Sub-total					43,66
20-10-2021	12457	OLIVER CONROY	DES	MOYNE	21,76
Sub-total					21,76
21-10-2021	12458	OLIVER CONROY	DES	MOYNE	20,80
Sub-total					20,80
22-10-2021	12459	OLIVER CONROY	DES	MOYNE	22,04
Sub-total					22,04
26-10-2021	12460	OLIVER CONROY	DES	MOYNE	23,26
Sub-total					23,26
27-10-2021	12461	OLIVER CONROY	DES	MOYNE	20,24
	12462	OLIVER CONROY	DES	MOYNE	21,34
Sub-total					41,58
28-10-2021	12463	OLIVER CONROY	DES	MOYNE	21,28
Sub-total					21,28
29-10-2021	12464	OLIVER CONROY	DES	MOYNE	22,60
Sub-total					22,60
01-11-2021	12465	OLIVER CONROY	DES	MOYNE	23,14
	12466	OLIVER CONROY	DES	MOYNE	21,02
Sub-total					44,16
02-11-2021	12467	OLIVER CONROY	DES	MOYNE	21,34
Sub-total					21,34

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
03-11-2021	12468	OLIVER CONROY	DES	MOYNE	21,48
Sub-total					21,48
04-11-2021	12469	OLIVER CONROY	DES	MOYNE	23,44
Sub-total					23,44
05-11-2021	12470	OLIVER CONROY	DES	MOYNE	22,74
Sub-total					22,74
08-11-2021	12472	OLIVER CONROY	DES	MOYNE	20,00
Sub-total					20,00
09-11-2021	12473	OLIVER CONROY	DES	MOYNE	21,14
Sub-total					21,14
10-11-2021	12474	OLIVER CONROY	DES	MOYNE	20,78
Sub-total					20,78
11-11-2021	12475	OLIVER CONROY	DES	MOYNE	22,18
	12476	OLIVER CONROY	DES	MOYNE	18,78
Sub-total					40,96
12-11-2021	12477	OLIVER CONROY	DES	MOYNE	20,44
Sub-total					20,44
15-11-2021	12478	OLIVER CONROY	DES	MOYNE	21,30
Sub-total					21,30
16-11-2021	12479	OLIVER CONROY	DES	MOYNE	22,36
Sub-total					22,36
17-11-2021	12480	OLIVER CONROY	DES	MOYNE	23,10
	12481	OLIVER CONROY	DES	MOYNE	21,86
Sub-total					44,96

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
18-11-2021	12482	OLIVER CONROY	DES	MOYNE	22,02
Sub-total					22,02
19-11-2021	12483	OLIVER CONROY	DES	MOYNE	23,84
Sub-total					23,84
22-11-2021	12485	OLIVER CONROY	DES	MOYNE	23,16
	12484	OLIVER CONROY	DES	MOYNE	24,16
Sub-total					47,32
23-11-2021	12486	OLIVER CONROY	DES	MOYNE	21,98
Sub-total					21,98
24-11-2021	12487	OLIVER CONROY	DES	MOYNE	23,52
Sub-total					23,52
25-11-2021	12489	OLIVER CONROY	DES	MOYNE	22,52
	12488	OLIVER CONROY	DES	MOYNE	24,26
Sub-total					46,78
26-11-2021	12490	OLIVER CONROY	DES	MOYNE	22,48
Sub-total					22,48
29-11-2021	12492	OLIVER CONROY	DES	MOYNE	23,98
	12491	OLIVER CONROY	DES	MOYNE	23,90
Sub-total					47,88
30-11-2021	12493	OLIVER CONROY	DES	MOYNE	23,42
Sub-total					23,42
01-12-2021	12494	OLIVER CONROY	DES	MOYNE	24,14
Sub-total					24,14
02-12-2021	12495	OLIVER CONROY	DES	MOYNE	24,68

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HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
Sub-total					24,68
03-12-2021	12496	OLIVER CONROY	DES	MOYNE	20,80
	12497	OLIVER CONROY	DES	MOYNE	20,92
Sub-total					41,72
06-12-2021	12498	OLIVER CONROY	DES	MOYNE	20,86
Sub-total					20,86
07-12-2021	12499	OLIVER CONROY	DES	MOYNE	22,42
	12500	OLIVER CONROY	DES	MOYNE	21,74
Sub-total					44,16
08-12-2021	13951	OLIVER CONROY	DES	MOYNE	24,42
Sub-total					24,42
09-12-2021	13952	OLIVER CONROY	DES	MOYNE	23,44
Sub-total					23,44
10-12-2021	13953	OLIVER CONROY	DES	MOYNE	21,62
Sub-total					21,62
13-12-2021	13954	OLIVER CONROY	DES	MOYNE	23,80
	13955	OLIVER CONROY	DES	MOYNE	22,40
Sub-total					46,20
14-12-2021	13956	OLIVER CONROY	DES	MOYNE	22,94
Sub-total					22,94
15-12-2021	13957	OLIVER CONROY	DES	MOYNE	21,88
	13958	OLIVER CONROY	DES	MOYNE	21,42
Sub-total					43,30
16-12-2021	13960	OLIVER CONROY	DES	MOYNE	20,50

SEDE IRELAND, Kilkenny Industrial Business Park , Dublin Road, Purcellsinch, Co. Kilkenny
 Tel : +353 (56) 776 3950 Fax :

HAULAGE REPORT BY DAY

Biosolid :: KILKENNY LIMED BIOSOLID
Period :: From 01-01-2021 To 31-12-2021

Collecting Point :: KILKENNY WWTP
Haulage Type :: Digester

Date	Ticket	Haulier	Destination	Town	Tonnage
Sub-total					20,50
17-12-2021	13959	OLIVER CONROY	DES	MOYNE	23,72
Sub-total					23,72
18-12-2021	13961	OLIVER CONROY	DES	MOYNE	22,48
Sub-total					22,48
20-12-2021	13962	OLIVER CONROY	DES	MOYNE	25,70
Sub-total					25,70
21-12-2021	13963	OLIVER CONROY	DES	MOYNE	24,44
Sub-total					24,44
22-12-2021	13964	OLIVER CONROY	DES	MOYNE	25,56
	13965	OLIVER CONROY	DES	MOYNE	20,84
Sub-total					46,40
30-12-2021	13966	OLIVER CONROY	DES	MOYNE	23,64
	13967	OLIVER CONROY	DES	MOYNE	24,24
Sub-total					47,88
TOTAL					3 155,50

Number of skips ::	144
Number of disposal days ::	111
Average number of skips by day ::	1
Average ton. by skip ::	22 t
Average ton. by day ::	28 t/day

SEDE IRELAND, Kilkenny Industrial Business Park , Dublin Road, Purcellsinch, Co. Kilkenny
 Tel : +353 (56) 776 3950 Fax :

Section 3

Biosolid Composition and Properties

Composition and Properties of the sludge.



The following page shows the Biosolid Analysis for the Biosolid. This report generated by our IT Software SUIVRA shows a detailed report of the product.

BIOSOLID ANALYSIS

KK001

Period : From 01-01-2021 to 31-12-2021

Works
Kilkenny City and Environs

Sludge
KILKENNY LIMED BIOSOLID

Sampled	Laboratory	DS (%)	Org. Mat (% DS)	pH	Tot.N (% DS)	Tot.P (% DS)	Tot.K (% DS)	Tot.Ca (% DS)	mg/kg Dry Solids						E. Coli (MPN/g DM)	Sal (MPN/4g)	
									Cd	Cr	Cu	Hg	Ni	Pb			Zn
08-03-2021	IAS LTD															4	0
01-04-2021	IAS LTD															0	0
08-04-2021	IAS LTD															0	0
14-04-2021	IAS LTD															46	0
22-04-2021	IAS LTD															0	0
26-04-2021	IAS LTD															0	0
26-04-2021	IAS LTD	15,00			5,40	2,01	0,25									2	0
06-05-2021	IAS LTD															0	0
13-05-2021	IAS LTD															0	0
13-05-2021	IAS LTD	15,60								0,48	14,0	422,1	0,18	12,1	15,6	352,2	
18-05-2021	IAS LTD																0
27-05-2021	IAS LTD																0
01-07-2021	IAS LTD	22,40	50,0	12,2	3,20	1,13	0,16										0
08-07-2021	IAS LTD																0
08-07-2021	IAS LTD	16,30								0,53	12,8	464,5	0,33	12,8	39,3	406,4	
16-07-2021	IAS LTD																0
21-07-2021	IAS LTD																0
22-07-2021	IAS LTD																0
28-07-2021	IAS LTD																0
30-07-2021	IAS LTD			12,5													0
30-07-2021	IAS LTD			11,8													0
30-07-2021	IAS LTD			12,5													0
30-07-2021	IAS LTD			12,1													0
30-07-2021	IAS LTD	16,20	63,6		5,00	1,65	0,19										0
11-08-2021	IAS LTD			12,6													0
20-08-2021	IAS LTD			12,4													0
20-08-2021	IAS LTD			12,4													0
25-08-2021	IAS LTD			10,5													0
02-09-2021	IAS LTD			10,9													0
09-09-2021	IAS LTD			9,6													0
10-09-2021	IAS LTD																0
17-09-2021	IAS LTD			12,3													0
17-09-2021	IAS LTD	16,50								0,86	12,9	450,7	2,24	12,3	18,5	357,3	
22-09-2021	IAS LTD			12,3													0
27-09-2021	IAS LTD	23,00	41,4	9,0	1,70	1,33	0,21										0
29-09-2021	IAS LTD			10,6													0
05-10-2021	IAS LTD																9
05-10-2021	IAS LTD																2



BIOSOLID ANALYSIS

KK001

Period : From 01-01-2021 to 31-12-2021

Works
Kilkenny City and Environs

Sludge
KILKENNY LIMED BIOSOLID

Sampled	Laboratory	DS (%)	Org. Mat (% DS)	pH	Tot.N (% DS)	Tot.P (% DS)	Tot.K (% DS)	Tot.Ca (% DS)	mg/kg Dry Solids						E. Coli (MPN/g DM)	Sal (MPN/4g)	
									Cd	Cr	Cu	Hg	Ni	Pb			Zn
15-10-2021	IAS LTD															0	0
		Number	7	3	15	4	4	4	0	3	3	3	3	3	3	3	
		Limit								20	100	1 000	16	300	750	2 500	
		Mean	17,86	51,7	11,6	3,83	1,53	0,20		0,62	13,2	445,8	0,92	12,4	24,5	372,0	
		Standard deviation	3,10	0,0	1,1	1,48	0,33	0,03		0,17	0,5	17,7	0,94	0,3	10,6	24,4	
		Min	15,00	41,4	9,0	1,70	1,13	0,16		0,48	12,8	422,1	0,18	12,1	15,6	352,2	
		Max	23,00	63,6	12,6	5,40	2,01	0,25		0,86	14,0	464,5	2,24	12,8	39,3	406,4	



Maximum Spreading Rates - Heavy Metal

Amendment No 267 of 2001		Cd	Cr	Cu	Hg	Ni	Pb	Zn
Maximum Heavy Metal Addition (No. 267 of 2001)	kg/ha/year	0.05	3.5	7.5	0.1	3	4	7.5
Mean Heavy Metal Concentration in the Co. Kilkenny Limed Cake	mg/kg DS	0.62	13.2	445.8	0.92	12.4	24.5	372
Mean Heavy Metal Concentration in the Co. Kilkenny Limed Cake	kg/tonne DS	0.00062	0.0132	0.4458	0.00092	0.0124	0.0245	0.372
Maximum Spreading Rate (total dry solids)	tonnes/ha/year	80.6	265.2	16.8	108.7	241.9	163.3	20.2
Maximum Spreading Rate (wet weight @ 17.86%* DS content)	tonnes/ha/year	451.5	1484.6	94.2	608.6	1354.6	914.1	112.9

Actual Spread rate approx 25 t/ha - Max spread rate before Heavy Metal limit - 92.5t/ha

17.86% 17.86% 17.86% 17.86% 17.86% 17.86% 17.86% 17.86%

Section 4

Treatment Process

Kilkenny Limed Biosolid

ORIGIN OF THE KILKENNY LIMED BIOSOLID AND TREATMENT PROCESSES INVOLVED

KILKENNY Limed Biosolid

KILKENNY BIOSOLID is Lime Treated **Class A Biosolids** from the Urban Wastewater Treatment Plant at Purcellsinch, Co Kilkenny.

Lime stabilisation of sludge is a method used to raise the pH in the sludge to a level that makes it unfavourable for the growth of organisms. Stabilisation helps to minimise the potential of odour generation and destroys pathogens.

The lime content of this product will also benefit farmers where the soil has a low pH or has elevated levels of metals present in the soil

A real benefit can be seen from the **KILKENNY LIME BIOSOLID** when spread on land in **continuous tillage** where soils can suffer exhaustion and **soil structure** in particular is impaired. Due to the **high organic matter** content of the product, **KILKENNY LIME BIOSOLID** is ideal for restoring **humus** in the soil, consequently improving the **soil structure**. An increase in soil microbial activity can also be observed in the form of an increase in the earthworm population.

Section 5

*Name, Address, location, quantities and details of
farmers who received the Biosolids*

Names and addresses of recipients and the locations at which the sludge has been used



This section details the name and address, locations of spreadlands, quantities spread at these locations, maps of spreadlands, individual parcels of each farmer and the area suitable for spreading plus full details concerning the spreading on these parcels. This information concerning the spreading is presented in **the Spreading Report** which follows;

Kilkenny Spreadings

SPREADING REPORT

IE26420

Period :: From 01-01-2021 to 31-12-2021

Farm
AIDAN CUMMINS
Address
Barrettstown
Knocktopher
BARRETTSTOWN
KILKENNY

Farmer
Mr. Cummins AIDAN
Mobile:
Phone 086 3196675

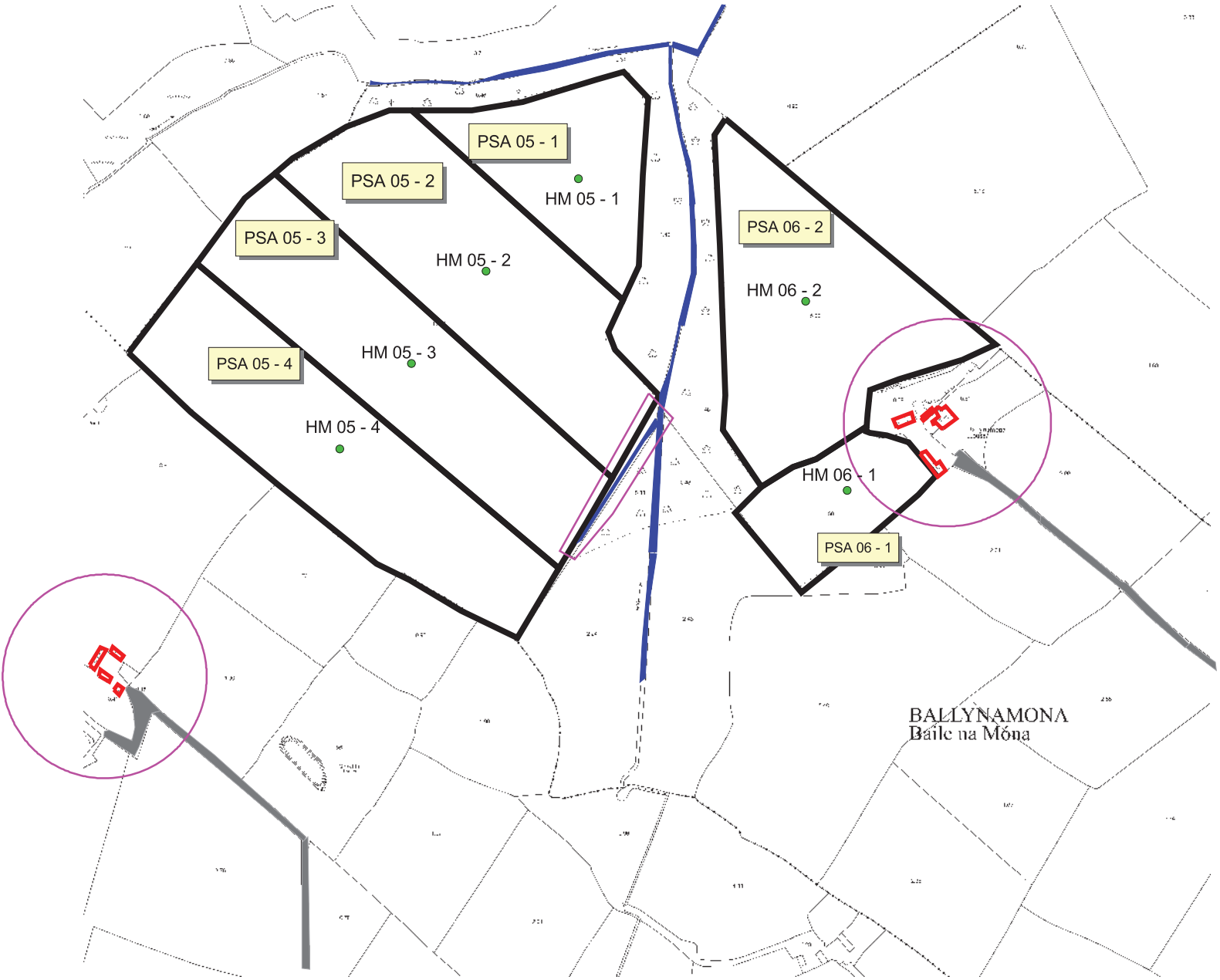
Biosolid :
KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
005 PSA 04-1	BARRETTSTOWN	2.95	Fodder Rape	Spring Barley	31-03-2021	53.10	18.0	2
006 PSA 04-2	BARRETTSTOWN	3.45	Fodder Rape	Spring Barley	31-03-2021	62.10	18.0	2
008 PSA 04-4	BARRETTSTOWN	3.91	Fodder Rape	Spring Barley	31-03-2021	117.05	29.9	2
011 PSA 05-1	BALLYNAMONA	3.00	Winter Barley	Winter Barley	25-03-2021	54.00	18.0	2
012 PSA 05-2	BALLYNAMONA	4.80	Winter Barley	Winter Barley	25-03-2021	120.34	25.1	2
015 PSA 06-1	BALLYNAMONA	1.20	Spring Barley	Spring Barley	12-10-2021	31.00	25.8	2
016 PSA 06-2	BALLYNAMONA	4.75	Spring Barley	Spring Barley	13-10-2021	123.87	26.1	2
TOTAL		24.06				561.46	23.3	14

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
005 PSA 04-1	PSA 04-1 AIDAN C	BARRETTSTOWN	Stockpile		53,10
006 PSA 04-2	PSA 04-1 AIDAN C	BARRETTSTOWN	Stockpile		62,10
008 PSA 04-4	PSA 04-1 AIDAN C	BARRETTSTOWN	Stockpile		117,05
011 PSA 05-1	PSA 04-1 AIDAN C	BARRETTSTOWN	Stockpile		54,00
012 PSA 05-2	PSA 05-1 AIDAN C	BALLYNAMONA	Stockpile		120,34
015 PSA 06-1	PSA 05-1 AIDAN C	BALLYNAMONA	Stockpile		31,00
016 PSA 06-2	PSA 05-1 AIDAN C	BALLYNAMONA	Stockpile		123,87



BALLYNAMONA
Baile na Móna

-  Buffer zones
-  Watercourses
-  Buildings
-  Roads
-  HM (Heavy Metal Sampling Area)
-  PSA (Permanent Sampling Area)

Aidan Cummins
Barrettstown
Knocktopher
Co. Kilkenny

Townland ; Ballinamona

Scale 1 : 8000

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SPREADING REPORT

IE26674

Period :: From 01-01-2021 to 31-12-2021

Farm
JOHN AYLWARD
Address
Coppanagh
Graignamanagh
COPPANAGH
KILKENNY

Farmer
Mr. JOHN AYLWARD
Mobile:
Phone 0876493533

Biosolid :
KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
003 PSA 03	COPPANAGH	2.73	Grassland	Grassland	07-07-2021	53.00	19.4	2
004 PSA 04	COPPANAGH	4.34	Grassland	Grassland	07-07-2021	56.38	13.0	2
006 PSA 06	COPPANAGH	2.29	Grassland	Grassland	17-05-2021	44.26	19.3	2
013 PSA 13	COPPANAGH	2.58	Grassland	Grassland	17-05-2021	50.00	19.4	2
016 PSA 16	COPPANAGH	4.35	Grassland	Grassland	16-04-2021	87.00	20.0	2
017 PSA 17	COPPANAGH	4.35	Grassland	Grassland	26-04-2021	87.00	20.0	2
018 PSA 18	COPPANAGH	4.33	Grassland	Grassland	26-04-2021	86.60	20.0	2
019 PSA 19	COPPANAGH	4.35	Grassland	Grassland	05-05-2021	87.00	20.0	2
TOTAL		29.32				551.24	18.8	16

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
003 PSA 03	JOHN AYLWARD FARMYAR	COPPANAGH	Stockpile	All weather	53,00
004 PSA 04	JOHN AYLWARD FARMYAR	COPPANAGH	Stockpile	All weather	56,38
006 PSA 06	JOHN AYLWARD FARMYAR	COPPANAGH	Stockpile	All weather	44,26
013 PSA 13	JOHN AYLWARD FARMYAR	COPPANAGH	Stockpile	All weather	50,00
016 PSA 16	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	87,00
017 PSA 17	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	87,00
018 PSA 18	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	86,60
019 PSA 19	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	87,00

SPREADING REPORT

IE26674

Period :: From 01-01-2021 to 31-12-2021

Farm
 JOHN AYLWARD
Address
 Coppanagh
 Graignamanagh
 COPPANAGH
 KILKENNY

Farmer
 Mr. JOHN AYLWARD
Mobile:
Phone 0876493533

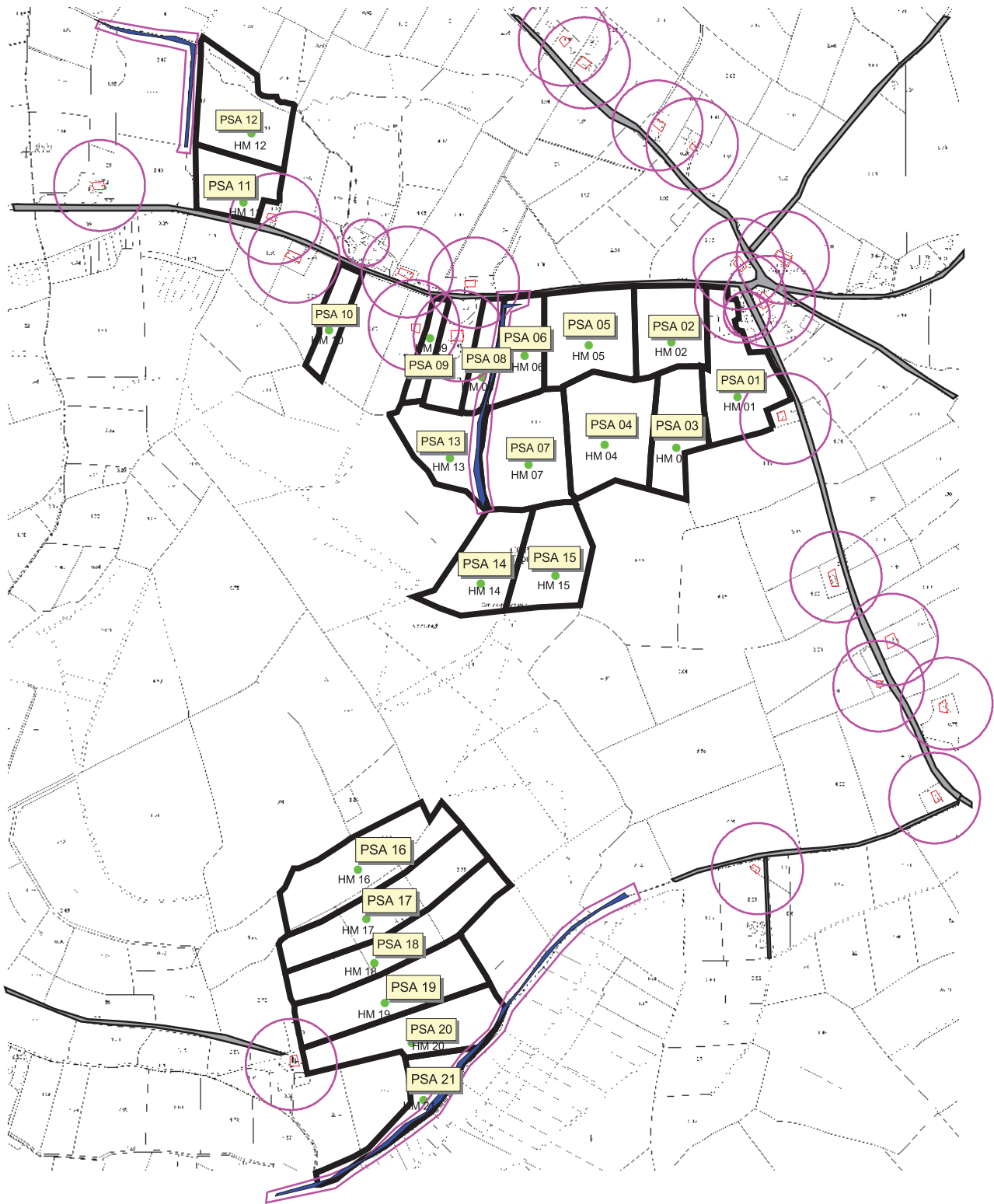
Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
020 PSA 20	COPPANAGH	4.26	Grassland	Grassland	12-05-2021	85.30	20.0	2
021 PSA 21	COPPANAGH	0.53	Grassland	Grassland	05-05-2021	10.60	20.0	2
TOTAL		4.79				95.90	20.0	4

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
020 PSA 20	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	85,30
021 PSA 21	JOHN AYLWARD COPPANA	COPPANAGH	Stockpile	All weather	10,60



-  Watercourse
-  Bufferzones
-  Buildings
-  Roads
-  HM's (Heavy Metals)
-  PSA's (Permanent Sample Area's)

John Aylward
 Coppanagh
 Graignamanagh
 Co. Kilkenny
 Townsland: Coppanagh



Scale 1:11000

SPREADING REPORT

IE26570

Period :: From 01-01-2021 to 31-12-2021

Farm
JOHN LANIGAN
Address
 Raheendonore
 Graignamanagh
 RAHEENDONORE
 KILKENNY

Farmer
 Mr. JOHN LANIGAN
Mobile:
Phone 0863999914

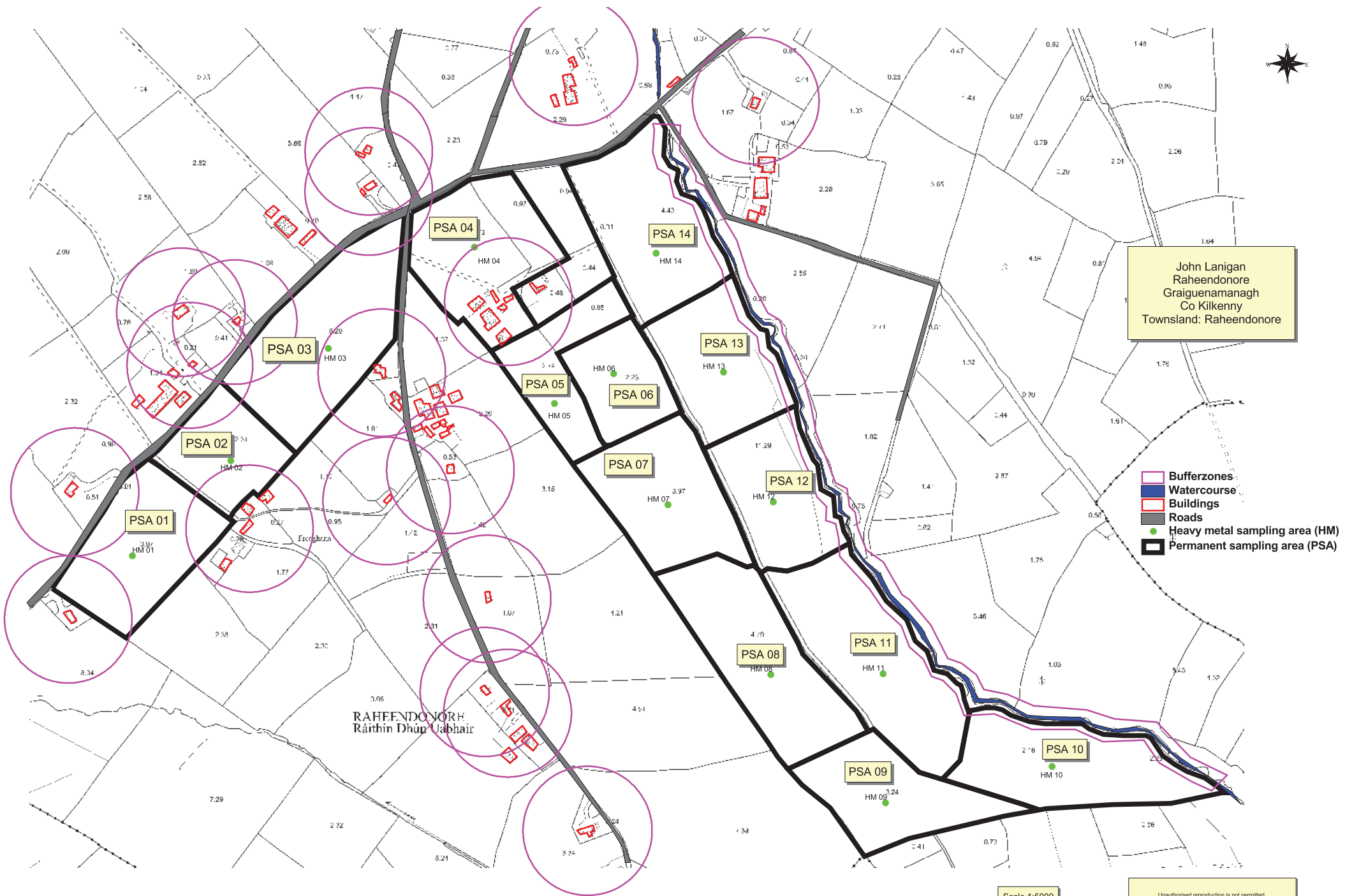
Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
008 PSA 08	RAHEENDONORE	4.68	Grassland	Grassland	13-10-2021	65.91	14.1	2
009 PSA 09	RAHEENDONORE	3.02	Grassland	Grassland	13-10-2021	40.00	13.2	2
011 PSA 11	RAHEENDONORE	1.10	Grassland	Grassland	08-06-2021	21.42	19.5	2
TOTAL		8.80				127.33	14.5	6

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
008 PSA 08	JOHN LANIGAN RAHEENDO	RAHEENDONORE	Stockpile	All weather	65,91
009 PSA 09	JOHN LANIGAN RAHEENDO	RAHEENDONORE	Stockpile	All weather	40,00
011 PSA 11	JOHN LANIGAN RAHEENDO	RAHEENDONORE	Stockpile	All weather	21,42



John Lanigan
Raheenonore
Graiguenamanagh
Co Kilkenny
Townland: Raheenonore

- Buffer zones
- Watercourse
- Buildings
- Roads
- Heavy metal sampling area (HM)
- Permanent sampling area (PSA)

RAHEENONORE
Ráthín Dhúg Uabhair

0

0.4

0.8 Miles

Scale 1:5000

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SPREADING REPORT

IE10017

Period :: From 01-01-2021 to 31-12-2021

Farm
 PADRAIGH HOLOHAN
Address
 LOWER GRANGE
 GORESBRIDGE
 GORESBRIDGE T.
 KILKENNY

Farmer
 Mr. PADRAIGH HOLOHAN
Mobile:
Phone 086 2333906

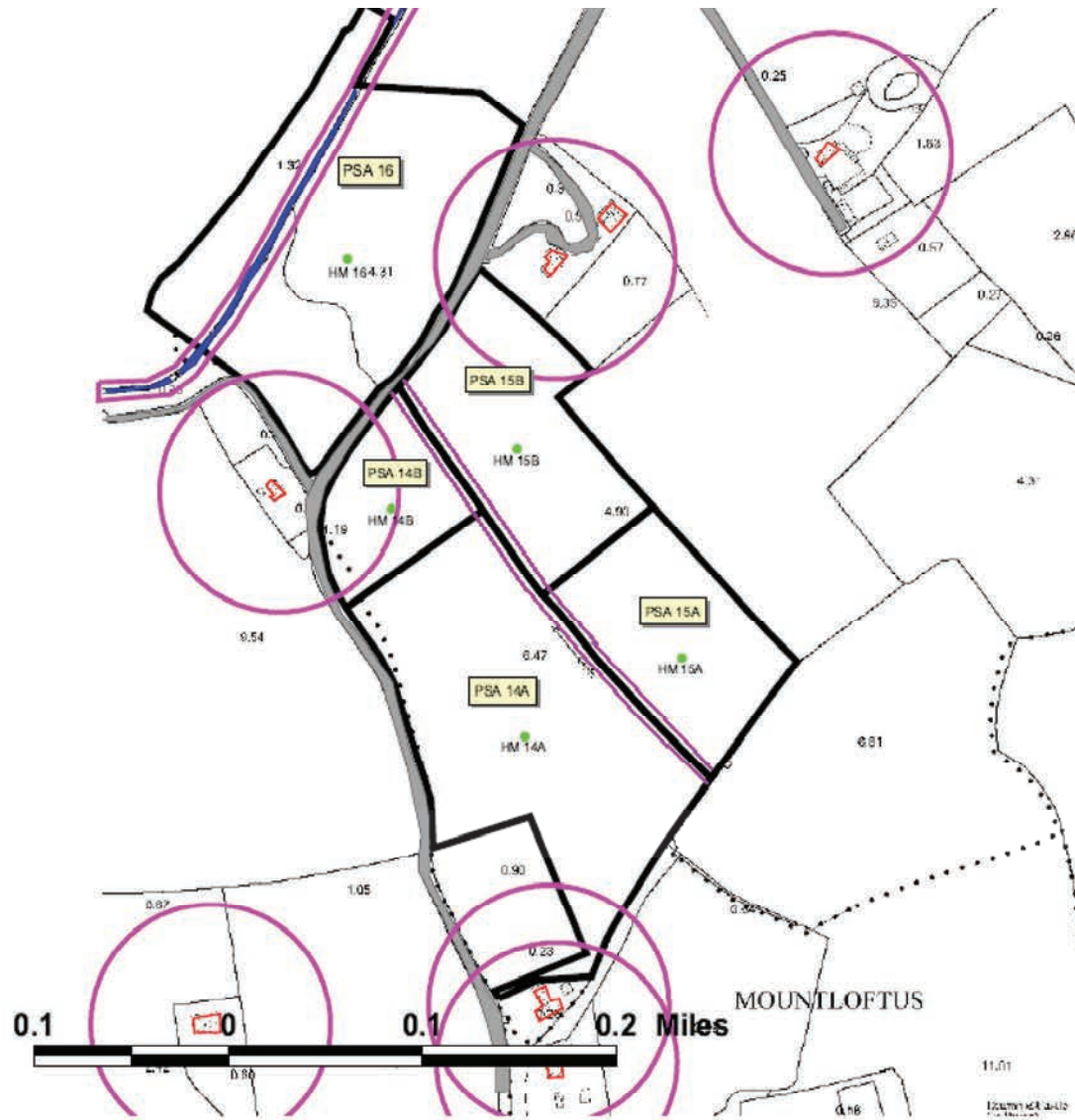
Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
025 PSA 03A	GRANGE LOWER	4.75	Spring Barley	Winter Barley	02-10-2021	70.00	14.7	2
026 PSA 03B	GRANGE LOWER	4.05	Winter Barley	Winter Barley	02-10-2021	62.24	15.4	2
031 PSA 14A	BARROWMOUNT	3.27	Spring Barley	Spring Barley	07-04-2021	78.48	24.0	2
033 PSA 15A	BARROWMOUNT	2.18	Spring Barley	Fodder Beet	07-04-2021	71.36	32.7	2
TOTAL		14.25				282.08	19.8	8

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
025 PSA 03A	PSA 03 A P HOLOHAN	GRANGE LOWER	Stockpile		70,00
026 PSA 03B	PSA 03 A P HOLOHAN	GRANGE LOWER	Stockpile		62,24
031 PSA 14A	PSA 15A P HOLOHAN	BARROWMOUNT	Stockpile	All weather	78,48
033 PSA 15A	PSA 15A P HOLOHAN	BARROWMOUNT	Stockpile	All weather	71,36



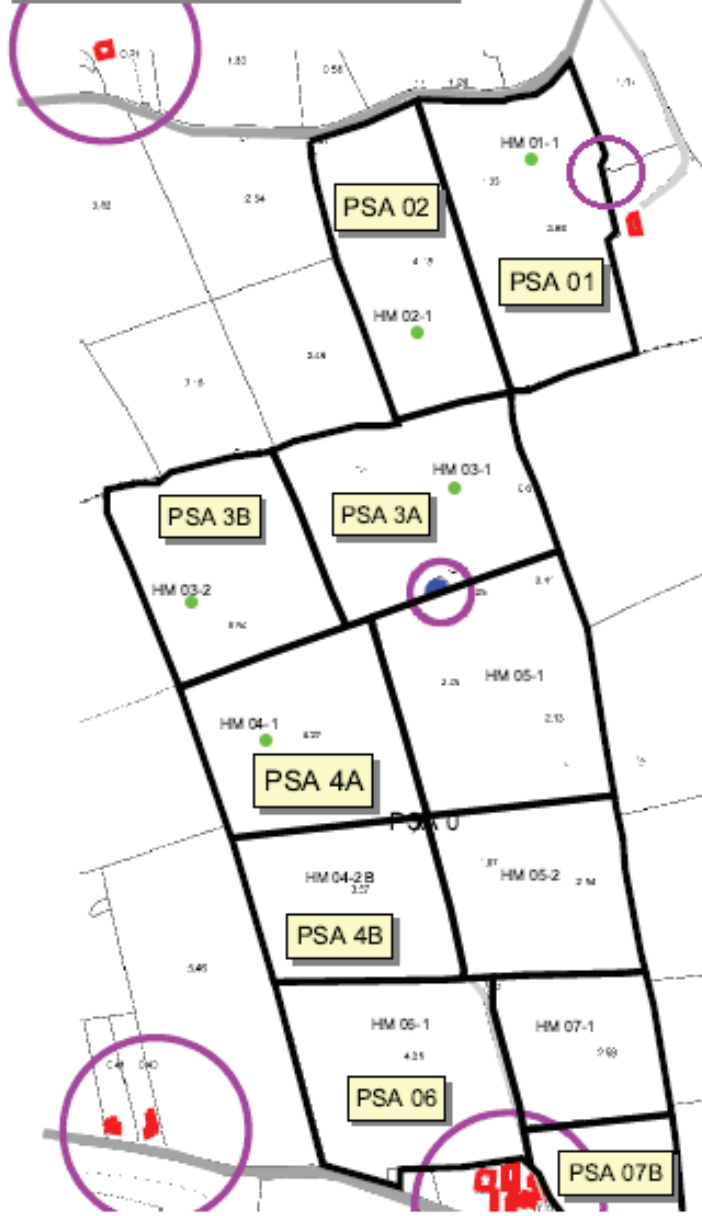
- Bufferzones
- Watercourse
- Roads
- Buildings
- HM (Heavy Metals)
- PSA's (Permanent Sample Area)

Padraig Holohan
 Lower Grange
 Goresbridge
 Co. Kilkenny

Townsland : Barrowmount



Padraig Holohan
 Lower Grange
 Goresbridge
 Co. Kilkenny
 Townsland: Castlekelly/Grange Lower



0.05 0 0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 Miles

- PSA __ Permanent Sampling Area
- Non Spreadable
- Watercourse
- Lanes
- Roads
- Buildings
- Heavy Metal Sample Area (HM)

Scale 1:8000

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SPREADING REPORT

IE26597

Period :: From 01-01-2021 to 31-12-2021

Farm
STEPHEN HOLOHON
Address
Lower Grange
Goresbridge
GRANGE LOWER
KILKENNY

Farmer
Mr. STEPHEN HOLOHON
Mobile:
Phone 0862333906

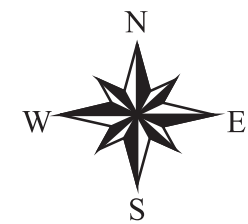
Biosolid :
KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
003 PSA 19	GRANGE LOWER	3.34	Spring Barley	Winter Barley	22-03-2021	43.48	13.0	2
004 PSA 20B	GRANGE LOWER	3.28	Spring Barley	Spring Barley	22-03-2021	42.04	12.8	2
007 PSA 22A	GRANGE LOWER	2.95	Spring Barley	Spring Barley	26-03-2021	37.74	12.8	2
TOTAL		9.57				123.26	12.9	6

STORAGE

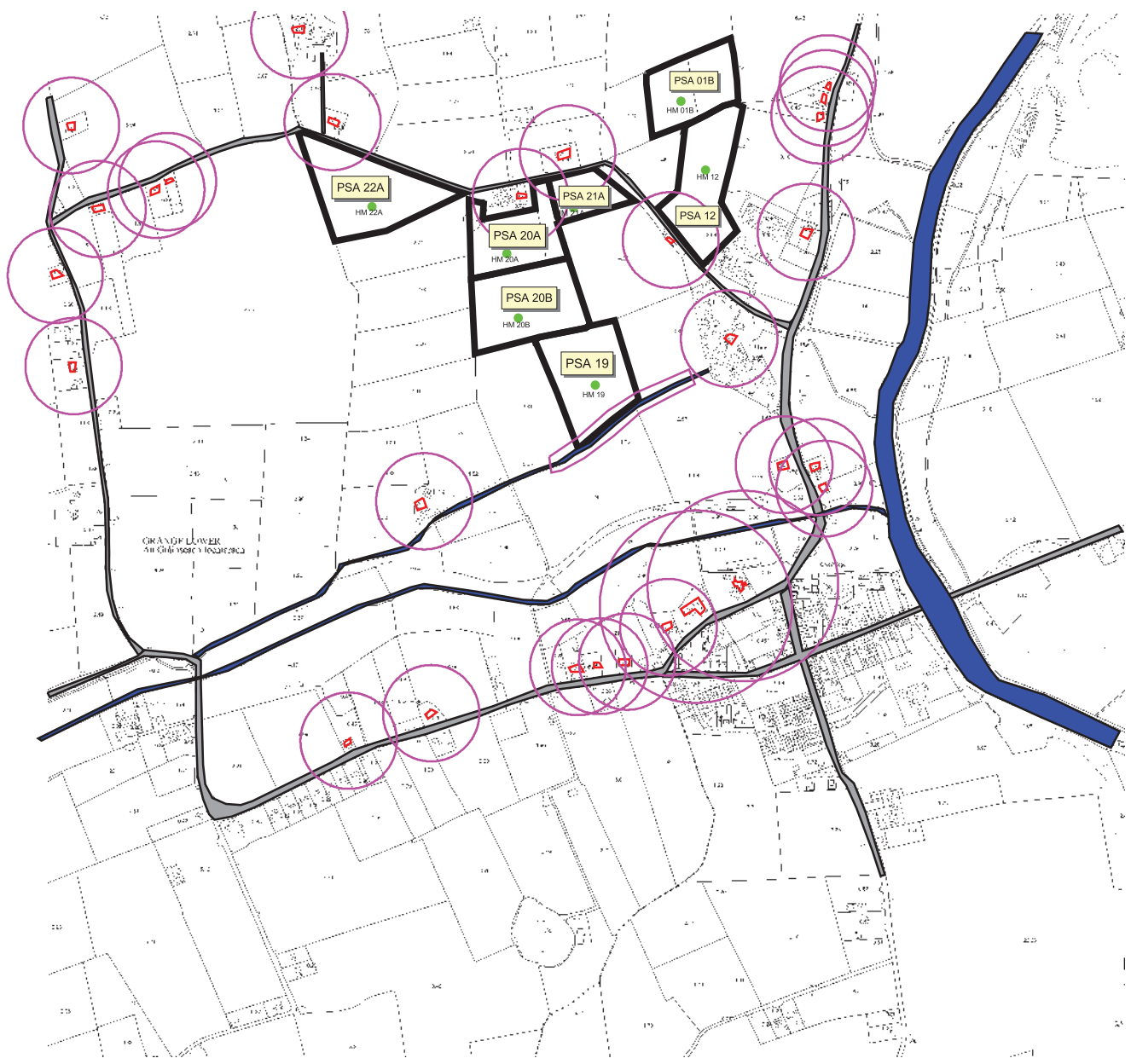
Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
003 PSA 19	S. HOLOHAN FARMYARD	GRANGE LOWER	Stockpile	All weather	43,48
004 PSA 20B	S. HOLOHAN FARMYARD	GRANGE LOWER	Stockpile	All weather	42,04
007 PSA 22A	S. HOLOHAN FARMYARD	GRANGE LOWER	Stockpile	All weather	37,74








Stephen Holohan
Lower Grange
Goresbridge
Co. Kilkenny
Townland: Grange Lower

Scale 1:9000

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-  Bufferzones
-  Buildings
-  Watercourse
-  Roads
-  HM's (Heavy Metals)
-  PSA's (Permanent Sample Area's)

SPREADING REPORT

IE26678

Period :: From 01-01-2021 to 31-12-2021

Farm
JOHN MURPHY
Address
Boherduff
Bagenalstown
BOHERDUFF
CARLOW

Farmer
Mr. JOHN MURPHY
Mobile:
Phone

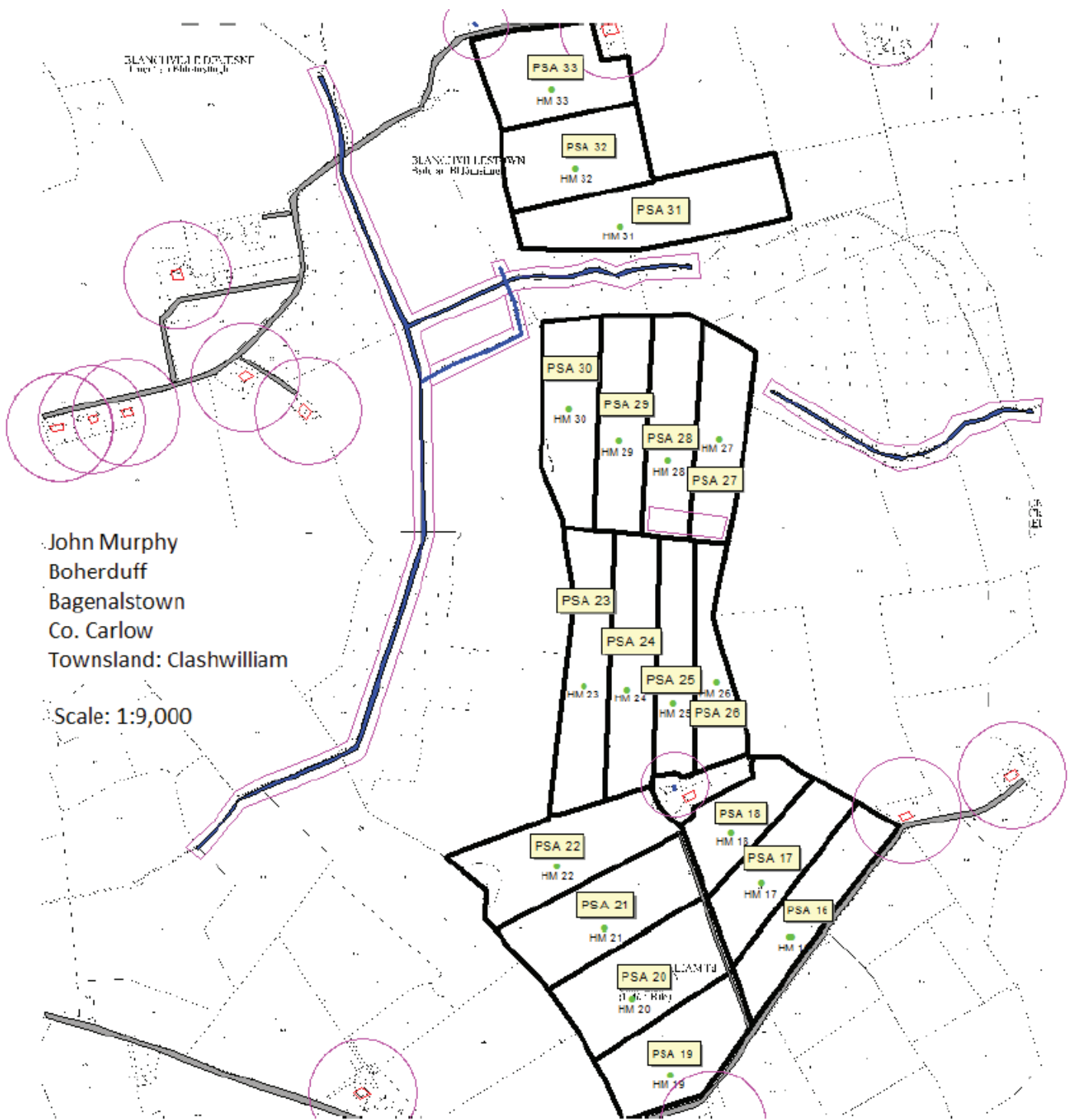
Biosolid :
KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
016 PSA 16	CLASHWILLIAM	3.35	Winter Oil Seed Rape	Winter Wheat	14-10-2021	76.00	22.7	2
017 PSA 17	CLASHWILLIAM	0.27	Winter Oil Seed Rape	Winter Wheat	14-10-2021	5.98	22.1	2
027 PSA 27	CLASHWILLIAM	4.02	Winter Barley	Winter Oil Seed Rape	12-08-2021	105.00	26.1	2
029 PSA 29	CLASHWILLIAM	2.97	Winter Barley	Winter Oil Seed Rape	12-08-2021	65.00	21.9	2
030 PSA 30	CLASHWILLIAM	2.96	Winter Barley	Winter Oil Seed Rape	12-08-2021	75.00	25.3	2
032 PSA 32	BLANCHVILLESTOWN	4.40	Winter Barley	Winter Oil Seed Rape	27-08-2021	100.00	22.7	2
033 PSA 33	BLANCHVILLESTOWN	4.02	Winter Barley	Winter Oil Seed Rape	27-08-2021	94.55	23.5	2
TOTAL		21.99				521.53	23.7	14

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
016 PSA 16	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	76,00
017 PSA 17	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	5,98
027 PSA 27	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	105,00
029 PSA 29	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	65,00
030 PSA 30	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	75,00
032 PSA 32	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	100,00
033 PSA 33	JOHN MURPHY CLASHWILLI	CLASHWILLIAM	Stockpile	All weather	94,55



John Murphy
 Boherduff
 Bagenalstown
 Co. Carlow
 Townland: Clashwilliam

Scale: 1:9,000

SPREADING REPORT

IE10003

Period :: From 01-01-2021 to 31-12-2021

Farm
EDDIE BYRNE
Address
 UPPER GRANGE
 GOWRAN
 GOWRAN
 KILKENNY

Farmer
 Mr. EDDIE BYRNE
Mobile:
Phone 0872535625

Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

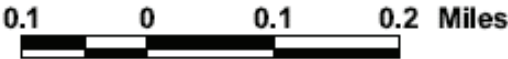
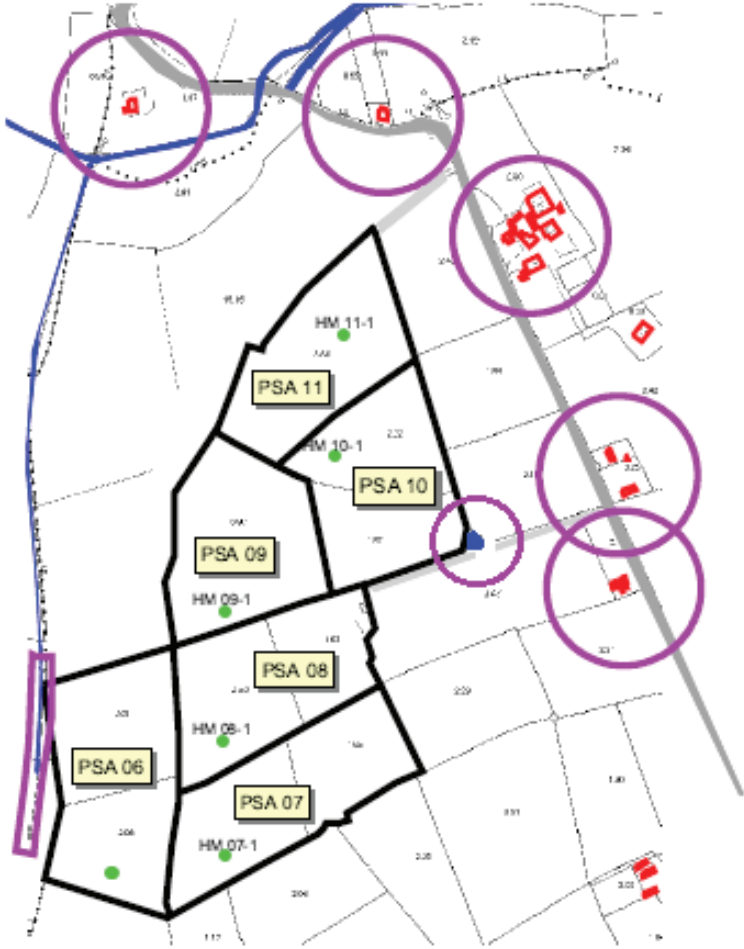
Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
006 PSA 06 GRANGE UPPE	GRANGE UPPER	2.40	Grassland	Grassland	13-07-2021	34.66	14.4	2
007 PSA 07 GRANGE UPPE	GRANGE UPPER	4.15	Grassland	Grassland	25-06-2021	58.00	14.0	2
008 PSA 08 GRANGE UPPE	GRANGE UPPER	4.01	Grassland	Grassland	25-06-2021	55.96	14.0	2
009 PSA 09 GRANGE UPPE	GRANGE UPPER	3.88	Grassland	Grassland	13-07-2021	56.20	14.5	2
TOTAL		14.44				204.82	14.2	8

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
006 PSA 06 GRANGE UPPE	EDDIE BYRNE (FARMYARD)	GRANGE UPPER	Storage		34,66
007 PSA 07 GRANGE UPPE	EDDIE BYRNE (FARMYARD)	GRANGE UPPER	Storage		58,00
008 PSA 08 GRANGE UPPE	EDDIE BYRNE (FARMYARD)	GRANGE UPPER	Storage		55,96
009 PSA 09 GRANGE UPPE	EDDIE BYRNE (FARMYARD)	GRANGE UPPER	Storage		56,20



Eddie Byrne
Upper Grange
Gowran
Co. Kilkenny
Townland: Grange Upper



-  Non spreadable
-  Watercourse
-  Lanes
-  Public roads
-  Buildings
-  Heavy Metal Sample Area (HM)
-  Permanent Sample Area (PSA)

Scale 1:7000

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Digitally Enhanced Map.

Carlow Spreadings

SPREADING REPORT

IE26644

Period :: From 01-01-2021 to 31-12-2021

Farm
DANIEL MAHER
Address
 Donore
 Bagenalstown
 DONORE
 CARLOW

Farmer
 Mr. DANIEL MAHER
Mobile:
Phone 0872765062

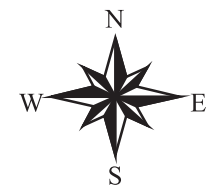
Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
004 PSA 04	DONORE	4.45	Winter Oats	Winter Barley	21-09-2021	75.00	16.9	2
005 PSA 05	DONORE	4.61	Winter Oats	Winter Barley	21-09-2021	75.00	16.3	2
017 PSA 17	DONORE	2.61	Spring Barley	Winter Oats	13-10-2021	59.00	22.6	2
018 PSA 18	DONORE	2.64	Spring Barley	Winter Oats	13-10-2021	60.22	22.8	2
021 PSA 21	DONORE	4.68	Winter Oats	Winter Barley	21-09-2021	75.00	16.0	2
022 PSA 22	DONORE	4.51	Winter Oats	Winter Barley	21-09-2021	72.00	16.0	2
TOTAL		23.50				416.22	17.7	12

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
004 PSA 04	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	75,00
005 PSA 05	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	75,00
017 PSA 17	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	59,00
018 PSA 18	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	60,22
021 PSA 21	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	75,00
022 PSA 22	DANIEL MAHER FARMYARD	DONORE	Stockpile	All weather	72,00



Daniel Maher
Donore
Bagenalstown
Co. Carlow
Townland: Donore



- Bufferzones
- Buildings
- Roads
- HM (Heavy Metals)
- PSA (Permanent Sampling Area)

Scale 1:5000

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SPREADING REPORT

IE26313

Period :: From 01-01-2021 to 31-12-2021

Farm
MARTIN KELLY
Address
 Ballyine House
 Borris,
 BALLYINE
 CARLOW

Farmer
 Mr. MARTIN KELLY
Mobile:
Phone 087 2303491

Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
011 PSA 11	BALLYINE	4.02	Winter Barley	Winter Wheat	19-04-2021	54.46	13.5	2
012 PSA 12	BALLYINE	0.38	Maize	Winter Wheat	19-04-2021	11.00	28.9	2
TOTAL		4.40				65.46	14.9	4

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
011 PSA 11	MARTIN KELLY BALLYINE	BALLYINE	Stockpile	All weather	54,46
012 PSA 12	MARTIN KELLY BALLYINE	BALLYINE	Stockpile	All weather	11,00



Martin Kelly
Ballyine
Borris
Co Carlow
Townland: Ballyine

- Bufferzones/Non spreadable
- Watercourse
- Buildings
- Roads
- HM (Heavy Metal Sampling Area)
- PSA (Permanent Sampling Area)

Scale 1:5000

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SPREADING REPORT

IE01013

Period :: From 01-01-2021 to 31-12-2021

Farm
WILLY KELLY
Address
 ROSSMORE
 BILBOA
 KILMAGIG UPPER
 CARLOW

Farmer
 Mr. WILLY KELLY
Mobile:
Phone 087 9752313

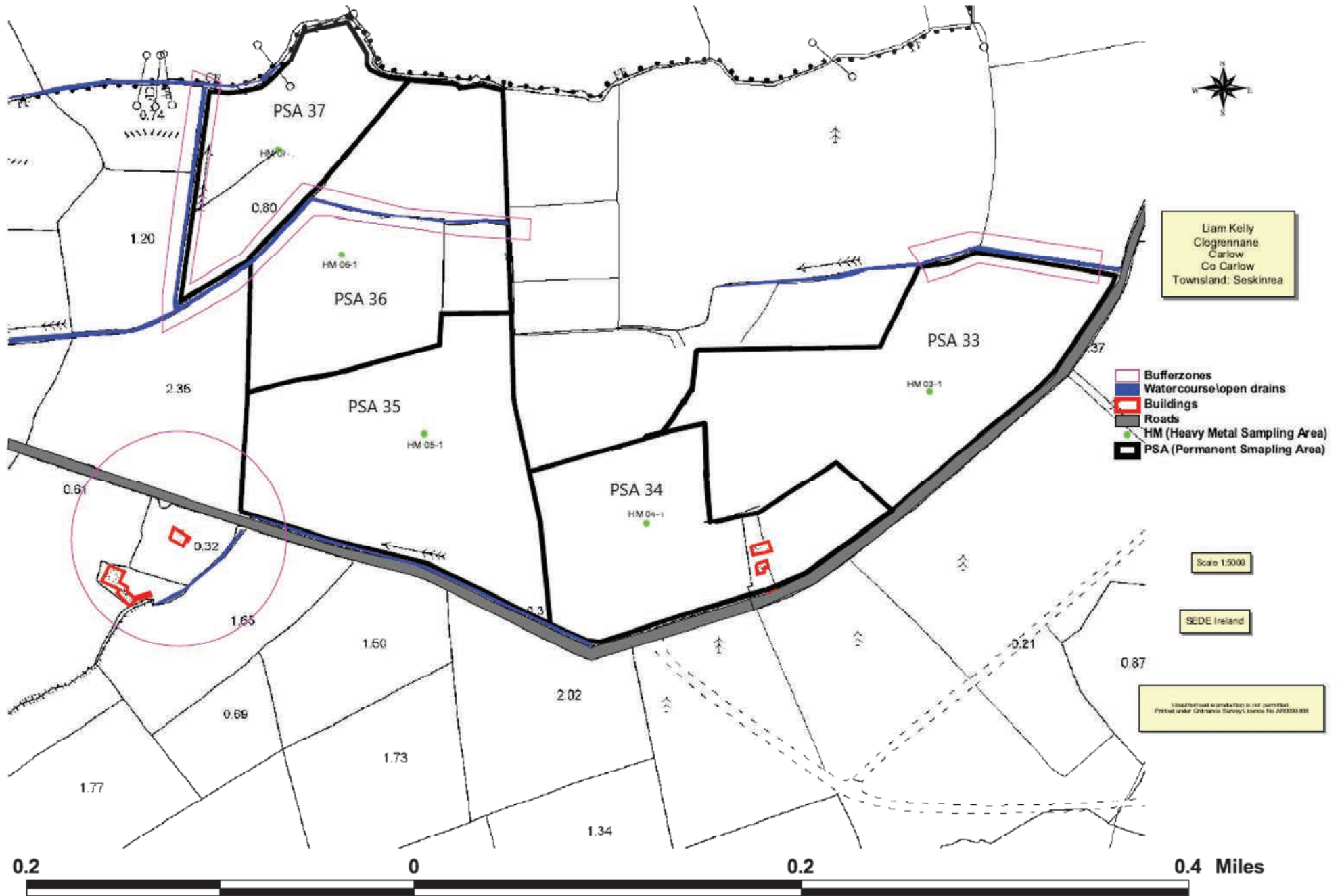
Biosolid :
 KILKENNY LIMED BIOSOLID

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
039 PSA 33	SESKINREA	4.10	Grassland	Grassland	09-08-2021	47.00	11.5	2
040 PSA 34	SESKINREA	2.48	Grassland	Grassland	09-08-2021	28.00	11.3	2
041 PSA 35	SESKINREA	3.85	Grassland	Grassland	09-08-2021	63.00	16.4	2
043 PSA 37	SESKINREA	2.26	Grassland	Grassland	09-08-2021	44.70	19.8	2
TOTAL		12.69				182.70	14.4	8

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
039 PSA 33	SESKINREA	SESKINREA	Stockpile	All weather	47,00
040 PSA 34	SESKINREA	SESKINREA	Stockpile	All weather	28,00
041 PSA 35	SESKINREA	SESKINREA	Stockpile	All weather	63,00
043 PSA 37	SESKINREA	SESKINREA	Stockpile	All weather	44,70



Laois Spreadings

SPREADING REPORT

IE26740

Period :: From 01-01-2021 to 31-12-2021

Farm
KIERAN RYAN
Address

Farmer
Mr. JAMES RYAN
Mobile:
Phone 0894546779

Biosolid :
KILKENNY LIMED BIOSOLID

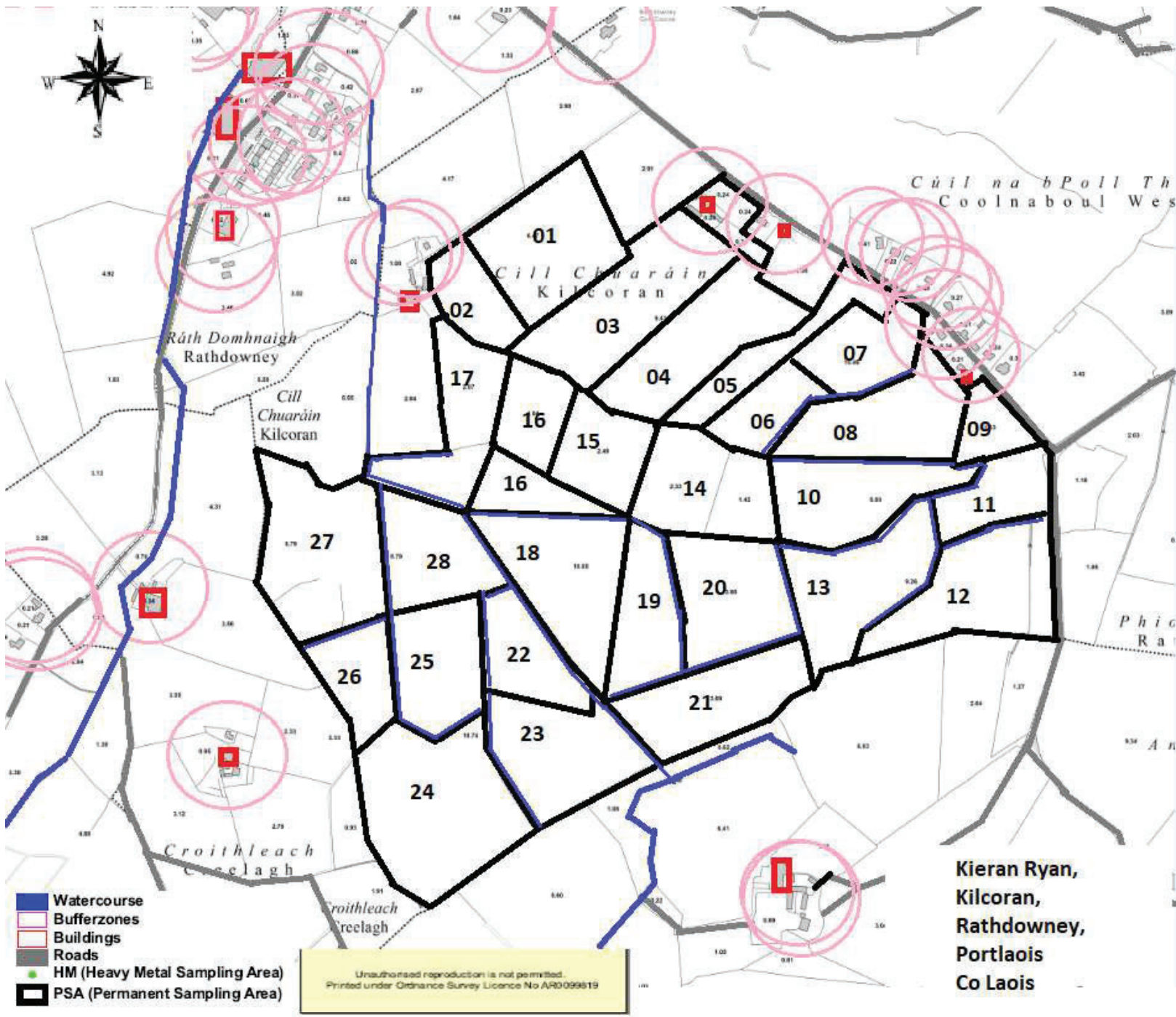
RATHDOWNEY
LAOIS

SPREADING

Field	Town	Surface spread (ha)	Crop		Spreading date	Total Quantity (t)	Rate(t/ ha)	No of soil analysis
			Before	After				
001 PSA 01	KILCORAN	4.91	Grassland	Grassland	05-08-2021	71.20	14.5	2
002 PSA 02	KILCORAN	1.02	Grassland	Grassland	05-08-2021	7.38	7.2	2
005 PSA 05	KILCORAN	2.21	Grassland	Grassland	07-08-2021	30.00	13.6	2
009 PSA 09	KILCORAN	1.08	Grassland	Grassland	05-08-2021	15.00	13.9	2
010 PSA 10	KILCORAN	3.72	Grassland	Grassland	13-07-2021	49.24	13.2	2
025 PSA 25	KILCORAN	3.77	Grassland	Grassland	05-08-2021	80.00	21.2	2
027 PSA 27	KILCORAN	4.20	Grassland	Grassland	02-06-2021	121.79	29.0	2
028 PSA 28	KILCORAN	2.71	Grassland	Grassland	02-06-2021	56.91	21.0	2
TOTAL		23.62				431.52	18.3	16

STORAGE

Field	Storage	Town	Storage Type	Accessibility	Stored Quantity
001 PSA 01	CAKE PAD	RATHDOWNEY	Stockpile		71,20
002 PSA 02	CAKE PAD	RATHDOWNEY	Stockpile		7,38
005 PSA 05	CAKE PAD	RATHDOWNEY	Stockpile		30,00
009 PSA 09	CAKE PAD	RATHDOWNEY	Stockpile		15,00
010 PSA 10	CAKE PAD	RATHDOWNEY	Stockpile		49,24
025 PSA 25	CAKE PAD	RATHDOWNEY	Stockpile		80,00
027 PSA 27	CAKE PAD	RATHDOWNEY	Stockpile		121,79
028 PSA 28	CAKE PAD	RATHDOWNEY	Stockpile		56,91



Kieran Ryan,
Kilcoran,
Rathdowney,
Portlaois
Co Laois

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Section 6

Logistic Details

Haulier & Spreader Details

Haulier



Olivor Conroy,
Farthingtown,
Rochfortbridge,
Co. Westmeath.

Spreader

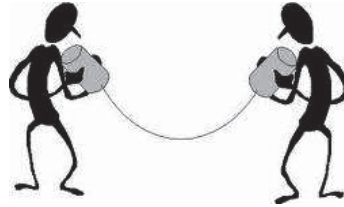


Eddie Byrne and Sons
Upper Grange
Gowran
Co. Kilkenny

Section 7

Communications

Communication



Veolia continues to manage the project successfully. A monthly report is sent to the relevant Local Authority and Veolia which details the production for the previous month along with what spreading occurred, where it was spread and also the balance in the storage. This ensures that Local Authority is always up to speed with where the Sludge is going if ever a complaint or query comes from the public.

There were no adverse public or farmer reactions related to the SLUDGE project showing the continued acceptance of the recycling of SLUDGE in agriculture as part of the general agricultural activity in the countryside.

Section 8

Conclusion

Conclusion

Veolia continues to manage the project successfully and continue to have a good relationship with the client.

If you have any queries on any of the information I have forwarded you or require additional information do not hesitate to contact me on my details below.

Regards

Padraig Joyce B.Agr.Sc

Veolia Organics

Kilkenny Industrial Business Park,

Purcellsinch,

Dublin Road,

Co. Kilkenny

Mobile 0861962466

Phone 0567763950

E-mail : padraig.joyce@veolia.com

