From: [redacted]
To: [redacted]; [redacted]; [redacted]
Cc: Lewis, Helen
Subject: CM: RE: RE: Odour Management Plan V7 - associated procedures
Date: 05 July 2024 10:03:00
Attachments: image001.png
image004.png
image005.jpg
image003.png

Hi [redacted]

I am not sure if perhaps some procedures didn't come through with your previous email but I only received a copy of V7 OMP and HSP01, I've gone through the OMP and listed the procedures and forms mentioned below, if you could provide a copy of each as soon as possible that would be much appreciated.

1. SR21 GECO Working Register
2. SR12 Complaints Register
3. E2 Daily Site Environmental Inspection form
4. E3 Daily Odour Assessment Form
5. E4 Odour Complaint Investigation Form
6. E6 Odour Complaint Form
7. E13 Schedule 6 Notification
8. E8 Waste Pre-Acceptance form
9. EP2 Spillage Response Procedure
10. EP3 Waste Acceptance
11. EP6 Waste Pre-Acceptance procedure
12. EP7 Waste Acceptance – not sure if this is a typo
13. EP8 Waste Rejection Procedure
14. EP9 Environmental Monitoring Procedure
15. Q2 Non-Conformance Form
16. Q12 plant log
17. QP25 AD Foaming Process Control
18. Q102 Measurement of scrubber operating parameters
19. HSP02 Contractor Management
20. HSP6 Risk Assessment & Method Statement Procedure
21. HS9 Driver Induction Handbook.
22. HS28 Warning Card System
23. Risk Assessment & Method Statement 50 – Liquid Digestate Loading
24. RAMS51 Compactor Changeover

Please feel free to only include the relevant pages of some of these procedures if they are very long and if you think any aren't relevant please let us know why.

Thanks
[redacted]

From: [redacted]

Sent: Thursday, July 4, 2024 4:45 PM
To: [redacted]
Cc: Lewis, Helen [redacted]
Subject: CM: RE: Odour Management Plan V7 - associated procedures

Hi [redacted],

As requested, please see attached copies of the most up to date procedures as mentioned in the OMP.

Kind Regards,

[redacted]
SHEQ Manager Northern Ireland
BIO CAPITAL LIMITED
T: [redacted]
E: [redacted]
A: The Corn Store, Hyde Hall Farm, Buntingford, Hertfordshire, SG9 0RU

From: [redacted]
Sent: Thursday, June 27, 2024 9:38 AM
To: [redacted]
Cc: Lewis, Helen [redacted]
Subject: Odour Management Plan V7 - associated procedures

Good morning

Could you please send us in the most up to date versions of the procedures noted on your OMP, we doing an in depth review at present and just want to make sure we have the full

picture.

Thanks

[redacted]

[redacted]
Senior Chemicals Inspector
Chemicals Team
Industrial Pollution and Radiochemical Inspectorate
17 Antrim Road
Lisburn
BT28 3AL
T: [redacted]
E [redacted]

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CHIEF INDUSTRIAL POLLUTION INSPECTOR

THE POLLUTION PREVENTION AND CONTROL (INDUSTRIAL EMISSIONS) REGULATIONS (NORTHERN IRELAND) 2013

ENFORCEMENT NOTICE

Serial No. P0413/12A – EN-400-2024

Name: Granville Anaerobic Digestion and Biogas Plant

Address: Granville Industrial Estate, Granville, Dungannon, BT70 1NJ

Trading as: Granville Eco Park

I, [redacted] being an Inspector appointed by an instrument in writing made pursuant to Regulation 8 (1) of the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 (the 2013 Regulations) and empowered to serve this notice on behalf of the Chief Inspector hereby give you notice that I am of the opinion that as a person operating an installation or mobile plant for which a permit has been granted at

Granville Industrial Estate,
Granville,
Dungannon,
BT70 1NJ

under permit number P0413/12A issued under the 2013 Regulations you have contravened the following conditions of that permit:

Condition 4.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an Authorised Officer of the Chief Inspector, unless the Operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise odour, and that the matters constituting the contravention are specified in the attached Schedule which forms part of this Notice, and I hereby require you to remedy the said contraventions or, as the case may be, the matters likely to give rise to the contraventions by taking the steps specified in the said Schedule.

Signature [redacted] Date 07/03/2024

of Northern Ireland Environment Agency, 17 Antrim Road, Tonagh, Lisburn, County Antrim, BT28 3AL

CHIEF INDUSTRIAL POLLUTION INSPECTOR
THE POLLUTION PREVENTION AND CONTROL (INDUSTRIAL EMISSIONS)
REGULATIONS (NORTHERN IRELAND) 2013

Schedule attached to Enforcement Notice

Serial No. P0413/12A EN-400-2024

Permit Condition	Matters constituting the contravention or making it likely that contravention will arise	Steps to be taken to remedy the said contravention or to remedy matters likely to give rise to said contravention	Steps to be taken within period ending (end date)
Condition 4.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an Authorised Officer of the Chief Inspector, unless the Operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise odour.	Local residents frequently complain about odour related to the installation, on this occasion the complaint of 27/2/24 was substantiated by IPRI inspectors conducting an odour impact assessment in the area on the morning of 28/2/24. IPRI inspectors detected an offensive odour associated with the installation at an unacceptable level approximately 280m offsite. No odour was detected at point 11 on the odour impact assessment which is to the SW (upstream of the wind on that day) of the installation. The IPRI inspectors then entered the installation and confirmed the odour detected off site, was the same odour that could be detected on site.	The Operator shall review and update the odour management plan accordingly for approval by the Chief Inspector. Operator to provide a proposal (who, what and when) of a review by an independent odour control and anaerobic digestion expert to ensure all the requirements of the enforcement notice are addressed. Operator to provide a report by the independent odour control and anaerobic digestion expert of the characterisation and quantification of all major point and fugitive odour sources* (NB * details needed on precisely what characterisation and quantification of all major point and fugitive odour sources means) Operator to provide a report by the independent odour control and anaerobic digestion expert of the odour impact	30 April 2024 30 April 2024 30 June 2024 31 August 2024

		assessment from all major point and fugitive odour sources with options for reducing the impact to an acceptable level (e.g. 98%le <1 OU/m3 at the site boundary) from the significant contributors*. (NB * details of the odour modelling requirements to be provided)	
		Operator to provide a proposal with timescales with justification for remedial actions to ensure an acceptable odour impact (e.g. 98%le <1 OU/m3 at the site boundary), which will include process and emissions monitoring.	31 October 2024
		Operator to provide an updated odour management plan to include proposed remedial actions.	31 December 2024

Signature [redacted] (Name in capitals [redacted]) **Date** 07/03/2024

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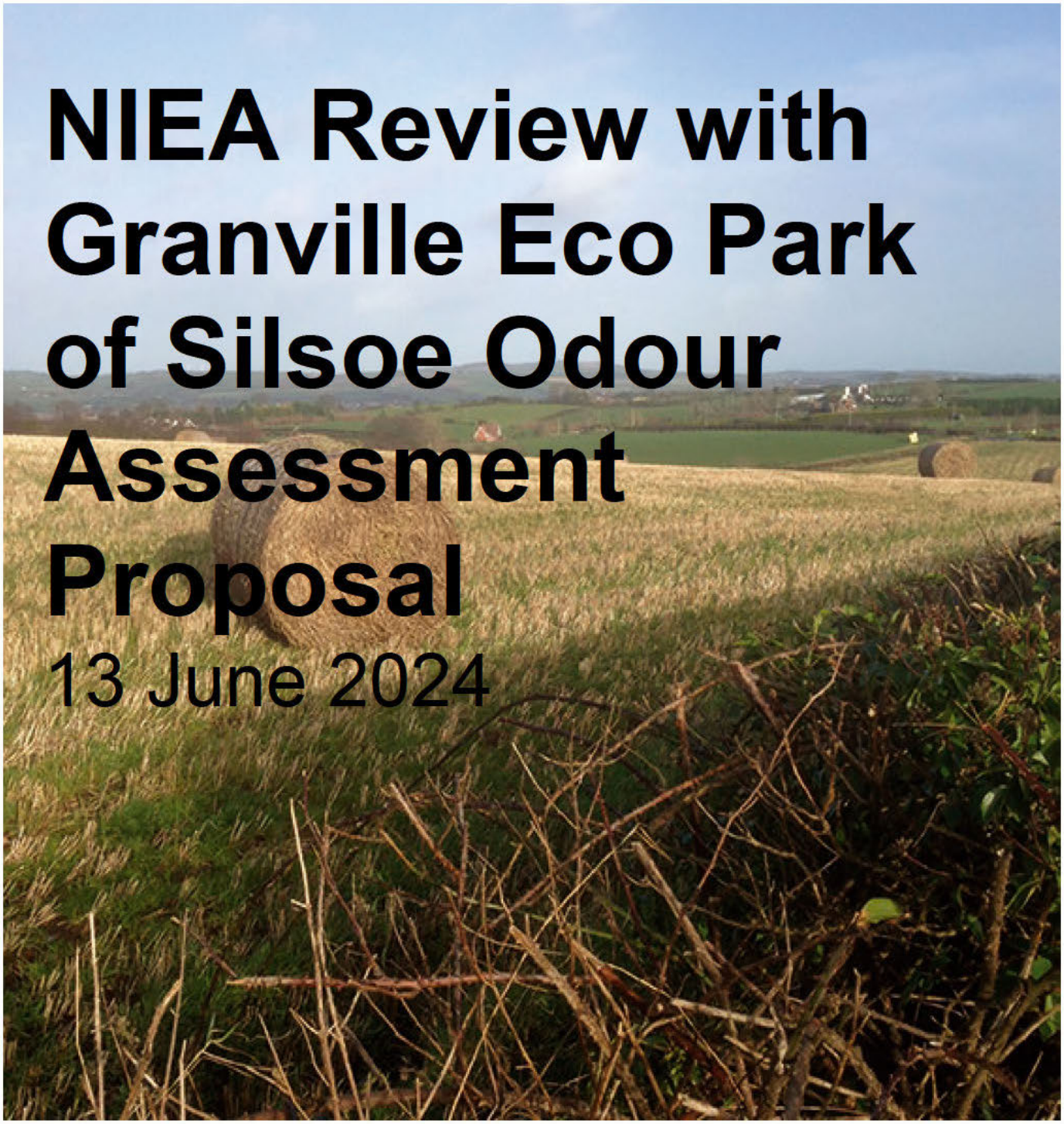
NIEA Review with Granville Eco Park of Silsoe Odour Assessment Proposal

13 June 2024



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An Agency wi'in the Depairtment o Fairmin, Environment an' Kintra Matthers

Minutes of Meeting 13 June 2024

Present: Biocapital Group – [redacted], [redacted] and [redacted], Granville Eco Park – [redacted] and [redacted], Silsoe – [redacted], NIEA – Helen Lewis, Philip Cummings and [redacted] (minute taker).

1. NIEA agreed with the operator to witness the testing to reassure all stakeholders, especially the public/their elected representatives that the test and assessment program was done properly. Plan to be on site for approximately 9.30 / 10am on each day.
2. Section 3.2 H_2S and NH_3 – all agreed this is welcome and considered part of the characterisation and quantification of all major point and fugitive sources, especially with respect to the 2 scrubber stages and Activated Carbon unit of the OCU.
3. Section 3.3 Air Flow – all agreed this is essential to determine ACHs and odour emission rate from each area and considered part of the characterisation and quantification of all major point and fugitive sources.
4. Section 3.4 Internal building pressure.

   Paul Outen clarified how this will be done and assessed/interpreted. Paul noted it should have been differential pressure on the proposal and not static pressure. Furthermore, he stated that this measure would only be indicative of how air moves/flows around the building and is unlikely to be used as key factor in the modelling. Paul agreed with the below issues raised by NIEA.

   [NB It is the differential pressure (DP) between the inside and outside of the building as a result of the effectiveness of the building containment and ventilation that will determine the level of fugitive emissions. This will be influenced by the wind speed and direction on the day it is determined. For example, a south westerly wind will result in a positive pressure on the south westerly (door) side of the building and a negative pressure on the north easterly side. The magnitude of the positive and negative wind pressures will depend on the wind speed and direction. It is the suction on the leeward side that can result in fugitive emissions escaping from a building even if a smoke test shows smoke moving away from the doors and into the extraction points. In other words if the wind is blowing towards the doors of the reception building from a south westerly direction then there will be a positive pressure on the outside of the doors and a negative pressure on the inside of the doors resulting in an overall negative differential pressure (DP) between the inside and outside of the south westerly side of the building but there may be a positive differential pressure (DP) between the inside and outside of the north easterly side of the building. Consequently, the differential pressure (DP) between the inside and outside of the building needs to be measured both on the windward side and more critically on the leeward side to confirm the existence and magnitude of any negative pressure.]

5. Section 3.5 Smoke testing.

   [redacted] clarified how this will be done and assessed/interpreted and agreed that it will only be indicative of how air moves/flows around the building and effectiveness of extraction. They will be using a small handheld smoke machine. [redacted] agreed with the points raised by NIEA below.

   [NB It is very difficult to use smoke to determine the integrity of the effectiveness of the building containment and ventilation accurately and reliably. The magnitude of the positive and negative wind pressures will depend on the wind speed and direction. It is the suction on the leeward side that can result in fugitive emissions escaping from a building even though a smoke test shows smoke moving away from the doors. Consequently, results of smoke test are only indicative of best, subject of course to the comments about the effects of wind speed and direction in Section 3.4.]

6. Section 3.6 GC-MS - Determining the levels of VOC speciation is considered part of the characterisation and quantification of all major point and fugitive sources, especially with respect to the 2 scrubber stages and Activated Carbon unit of the OCU.

[redacted] agreed to sample and test each of the OCU sample points for VOC speciation, they will update the proposal to Granville Eco Park cover this change.

[NB Consequently, this should be done at the time of the other tests anyway, otherwise the odour tests for the OCU would have to be repeated to compare with the commensurate levels of odour.]

7. Section 4 Dispersion Modelling – the criteria should be 98%le <1 OU/m^3 outside the site boundary according to H4, which can be at nearest sensitive receptor.

[redacted] requested clarification on where the criteria of <1 OU/m^3 was stated in the H4 guidance document, both [redacted] and Helen Lewis noted that if a particular receptor has become sensitized to an odour then the level can be reduced by 0.5 OU/m^3 in the H4 guidance, as is the case at Granville Eco Park. NIEA stated that they are unable to justify raising it above 1 OU/m^3 due to the sensitivity of the receptors in the surrounding area.

[redacted] stated that his modelling may not be totally comparable to the Olfasense document provided by NIEA but that he would take the ideas on board and attempt to incorporate them into his fugitive emission modelling. He stated that the modelling would include meteorological conditions.

[NB H4 is currently being reviewed and an updated version is due later this year.
This criterion is only one of a number of methods for determining the acceptability of the odour impact as it more useful for assessing the effectiveness of options to reduce the odour impact. It isn't appropriate to assess the impact of open doors. The proposal appears to suggest not modelling fugitive emissions from the building if there is insufficient extraction, which as explained in 3.4 and 3.5 above, will be influenced by wind speed and direction. Consequently, we expect the modeling to include an assessment of the impact of various levels of fugitive emissions compared with extraction rates, (i.e. looking at various scenarios of increasing the Air Changes per Hour), see Olfasense document already provided to GECO.]

8. Section 5 Summary - According to H4 the appropriate modelling criteria is 98%le <1 OU/m^3.

[redacted] and [redacted] agreed with the below points regarding modelling of all odour sources on site to include fugitive emissions and worst-case scenarios for the waste CO_2 stack and CHP stacks.

[NB H4 is currently being reviewed and an updated version is due later this year.
It is debatable about whether this should be determined at/outside the side boundary or at the nearest sensitive receptor. There are risks to using the nearest sensitive receptor, but H4 currently states that is acceptable.
Simply and only modelling the emissions at the ELV from the OCU stack will be a missed opportunity as that will simply show that the odour impact is acceptable, which we know from experience is not always the case. The unacceptable odour impact problems are likely caused by a combination of fugitive emissions from the raw material/digestate buildings, (especially open doors) and/or the open screener and/or releases from other point sources such as the PRVs, CHPs, Biogas plant, flare, etc.
One of the key outcomes/recommendations we need/are expecting is monitoring of the key plant and odour control techniques to ensure and facilitate the operator to demonstrate that the OCU is operating properly and that fugitive emissions from the raw material/digestate buildings, (especially open doors) and/or the open screener and/or releases from other point sources such as the PRVs, CHPs, Biogas plant, flare, etc. are/were BAT/AM if we receive a report/complaint about odour.]

9. [redacted] queried how the other odour sources in the industrial estate would be taken into account during the sampling and modelling process, it was agreed that is very difficult to separate odours from other sources but that the focus would be on Granville Eco Park and odour sources from that site. Philip Cummings explained how the 98%le <1 OU/m^3 criteria the site boundary as opposed to at the nearest sensitive receptor would provide a higher level of comfort.

10. [redacted] noted that the characterisation of odour sources section of the enforcement notice was due to be completed by the end of July 2024 but that the GC-MS samples may take slightly longer to analyse and provide the associated information. NIEA indicated that Granville Eco Park should notify NIEA of this in writing and request a reasonable extension.

Recorded by [redacted] on 13 June 2024

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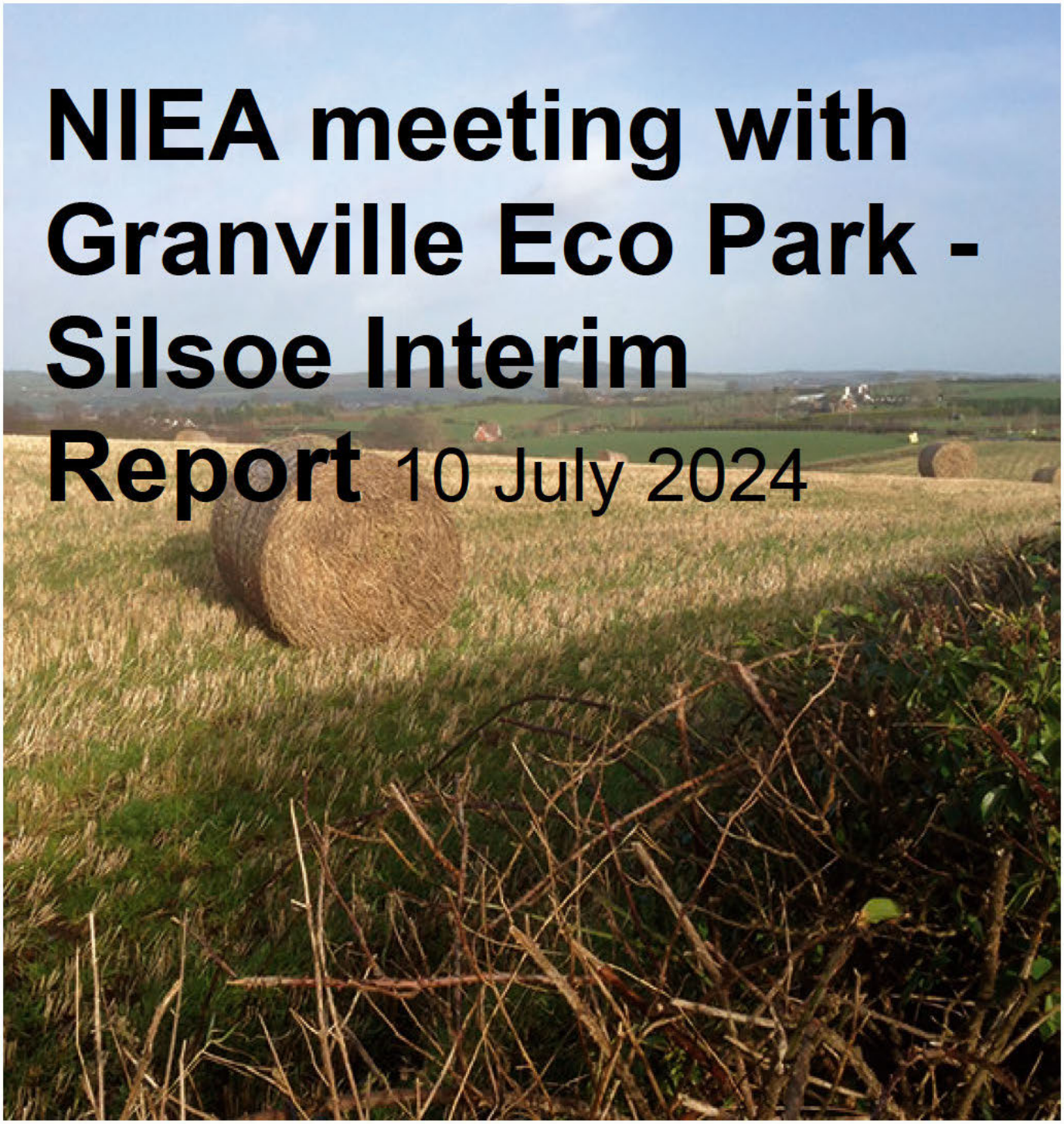
NIEA meeting with Granville Eco Park - Silsoe Interim Report 10 July 2024



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An Agency wi'in the Depairtment o Fairmin, Environment an' Kintra Matthers

Minutes of Meeting 10 July 2024

Present:

Biocapital Group – [redacted], [redacted] *and* [redacted],

Granville Eco Park – [redacted] *and* [redacted]

NIEA – Helen Lewis, Philip Cummings and [redacted] *(minute taker).*

1. **HL** thanked everyone for attending and GECO for notifying/contacting NIEA about their concerns with respect to the very high readings and non-compliances demonstrated by the Silsoe Draft Report, and for submitting part A of Schedule 6 notification. HL explained why the Schedule 6 was required.

   Action 1: GECO to submit Part B of Schedule 6 notification.

2. Compliance Assessment Record 18/19 June 2024 – HL explained that this will be updated following the receipt of the Silsoe interim report and this meeting, and issued to GECO, with substantial non-compliances for the breaches, given the very high emissions recorded. Any actions that can be carried out quickly should be accelerated by GECO.

   Action 2: NIEA to issue CAR for 18/19 June 2024.

3. **Overall results:** NIEA voiced concern that the results were shocking and the primary purpose of this meeting was to provide GECO with an opportunity to provide proposals for getting the site back into compliance as soon as possible.

   GECO explained that the results had come back much higher than expected, but they were taking them at face value. GECO would like to carry out additional testing to MCerts and carry out another sampling event, to provide more accurate data, and more data for the model that Silsoe will produce for them, more accurate data on stacks and flow rates and mentioned potential for erroneous flow results because of where samples were taken from. Very surprised on OCU outlet concentration – breach of the permit. Believe this is where their focus will be in the short term.

   GECO confirmed GCMS results due early next week. [redacted] has spoken to carbon supplier and will provide results to them and swap carbon filter out within 2 weeks.

   Supplier no longer exists for the scrubbers so GECO will be reaching out to independent equipment supplier.

   Action 3: GECO to send written plan of action to NIEA to include short, medium and long term actions for addressing the issues highlighted in this report.

Action 4: GECO to supply NIEA with GCMS results as soon as they come in.

4. **Odour Control Unit**: The results were discussed, and given the extremely elevated levels, and that as the OCU was failing to abate odour emissions leading to a breach of the permit, it was agreed that GECO should give priority to getting the OCU back into compliance as soon as possible. GECO gave NIEA a commitment to replace the carbon in the odour control unit (OCU) and carry out a thorough clean and inspection of the scrubbers, replacing any worn or damaged parts, prior to retesting under MCerts. GECO would like an independent assessment of the OCU, to help them identify what the issues are.

   NIEA voiced the concern that the system wasn't working properly and only this testing found it out. GECO must carry out a thorough review of the Odour Control Unit – design/capacity maintenance, monitoring, operational control limits, interventions etc

   GECO - Plan is to get Element Ireland to test under MCerts criteria, take duplicate samples and send them to Olfasense and Silsoe, so will have inter-lab comparison. Need to understand when Element can attend site – mid July or end of August 2024. Will reach out to Element this week and send proposal to NIEA next week.

   NIEA officers are required to be present on site when the MCerts testing is carried out, and will require the test plan 2 weeks in advance of the testing date.

   Action 5: GECO to submit proposals for changing the carbon in the filter and cleaning and repairing (as required) the scrubbers for agreement in writing on or by 17 July 2024. This must include proposals of how GECO intend to control and treat odorous emissions when the OCU is out of action (or plan a period of stoppage).

   Action 6: GECO to provide details (who, what, where, when) for the MCerts retesting they propose, for agreement in writing.

   Action 7: GECO to provide test plan 2 weeks in advance of testing, for agreement with NIEA prior to sampling. NIEA officers to be on site during sampling.

   Action 8: GECO to provide NIEA with details of the independent assessment of the OCU – who they propose to commission to do this work, what they are asking for, and when this is to be undertaken. Results of this assessment must be provided to NIEA.

5. **Other Emissions** the other areas of the site giving rising to highly elevated emissions were also discussed, – for example, extremely high levels of odour emissions from vibrating screens and the gas upgrading plant. GECO stated they recognise

that is an issue and committed to addressing deadlines within enforcement notice. Have not had any design discussion yet and would want to follow the deadlines on enforcement notices. They may need to request extensions to deadlines, especially where capitol investment is required. NIEA noted they expect anything that is easy to fix to be accelerated. Anything with high capitol expenditure, NIEA will factor this into required timeframes. Agree short term focus must be OCU as it is obviously completely failing. Any request to extend the deadlines in the Enforcement Notice must be made in writing (with reasons for request).
GECO – plans to capture carbon dioxide, and will submit permit variation regarding this.

6. NIEA reiterated that there must be evidence based decision making, and that the draft permit variation V3 will be reviewed, and additional improvement programme requirements may be put on this. The draft will be re-shared with GECO for comment.

Action 9: NIEA to review draft variation 3, and update improvement programme. To share with GECO for comment.
END.

Recorded by [redacted] on 10 July 2024

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IPRI PPC Part A Compliance Assessment Report

IPRI Report No.	2023/24-6	**Permit Number**	P0413/12/V2
Inspector	[redacted], H Lewis, P Cummings	**Date**	5/3/2024
	Onsite meeting and site inspection	**Operator**	Granville Ecopark
		Installation	Dungannon

Core areas covered (with sections in permit)

[C = Compliant, NA = Not Assessed, NR = Not Regulated, NC = Non Compliance identified. Where NC, enter number under each Category: **M** (Minor), **I** (Intermediate), **S** (Substantial)]

	C/NA/NR	M-NC	I-NC	S-NC
Other (1, 2.1, 2.12 & 7)	NA			
Air emissions (2.2.1)	NA			
Water emissions (2.2.2)	NA			
Sewer emissions (2.2.3)	NA			
Soil and Groundwater protection (2.2.4 & 2.2.5)	NA			
Odour (2.2.6)	NA			
Environmental Management system (2.3, 2.8, 2.11)	NA			
Resource Efficiency (2.4 & 2.7)	NA			
Waste Management (2.5 & 2.6)	NA			
Noise (2.9)	NA			
Monitoring, Reporting and Notifying (2.10, 3, 4 & 5)	NA			
Improvement programme status (6)	Complete			

Overall Comments:

Meeting at site to discuss draft enforcement notice related to unacceptable level of nuisance odour being detected offsite on 28/2/24 by IPRI officers.

Site inspection completed after meeting, no significant issues raised but odour was noted from the biogas upgrading plant.

Reason why I-NC not escalated to S-NC: n/a

Response to Non Compliances	**Mark one box only**
No non-compliances were identified.	
The non-compliances identified will be adequately addressed by the actions listed below.	Enforcement notice issued 7/3/24 related to odour incident on 28/2/24.

Action Summary: (Note: cross out any date missed deadline and insert a new date)

No.	Details	By	Date
Actions			

NIEA Officer:	**Date:**
[redacted]	6/3/24

Report

Present: [redacted], Helen Lewis, Philip Cummings (NIEA), [redacted], [redacted], [redacted] (GECO).

IPRI present a draft copy of the enforcement notice regarding the unacceptable level of odour detected offsite by IPRI officers on 28/2/24 for discussion.

The operator accepted the requirements laid out in the enforcement notice but were not content about the notice being served as enforcement action.

IPRI advised the operator that they could contact the Chief Inspector in writing to discuss the enforcement notice and the operator indicated that they would do that after the meeting. The discussion occurred on 06/03/24 and the Chief Inspector informed the operator that he was content that the decision to issue the enforcement notice is the appropriate course of action.

The operator has been conducting internal investigations to find the source of the odour on 27 and 28 Feb 2024 and have engaged with the biogas upgrading plant manufacturer to attempt to rectify the odour emanating from the CO_2 release stack.

IPRI completed a site inspection with the operator after the meeting.

It was noted that general housekeeping was good at the time of the visit.

Odours relating to the biogas upgrader, combustion in the CHPs and general digestate / reception hall were noted throughout the site, but not particularly strong at any point.

Supervisory Check

LM Comments: Enforcement notice issued 07 March 2024	Date: 07/03/24

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IPRI PPC Part A Compliance Assessment Report

IPRI Report No.	2024/25-2	**Permit Number**	P0413/12/V2
Inspectors	P Cummings, [redacted]	**Date**	18.06.24
Inspectors	P Cummings, [redacted]	**Date**	19.06.24
	Site Inspection	**Operator**	Granville Ecopark Limited
		Installation	Dungannon

Core areas covered (with sections in permit)

[C = Compliant, NA = Not Assessed, NR = Not Regulated, NC = Non Compliance identified. Where NC, enter number under each Category: **M** (Minor), **I** (Intermediate), **S** (Substantial)]

	C/NA/NR	M-NC	I-NC	S-NC
Other (1, 2.1, 2.12 & 7)	NC			
Air emissions (2.2.1)	NA			1
Water emissions (2.2.2)	NA			
Sewer emissions (2.2.3)	NA			
Soil and Groundwater protection (2.2.4 & 2.2.5)	NA			
Odour (2.2.6)	NC			1
Environmental Management system (2.3, 2.8, 2.11)	NA			
Resource Efficiency (2.4 & 2.7)	NA			
Waste Management (2.5 & 2.6)	NA			
Noise (2.9)	NA			
Monitoring, Reporting and Notifying (2.10, 3, 4 & 5)	NA			
Improvement programme status (6)	Complete			

Overall Comments:

Inspectors attended the site to observe the odour monitoring being carried out by independent odour specialists (Silsoe) appointed by Granville Ecopark LTD in response to the Enforcement Notice issued by NIEA on 7th March 2024.

An interim/draft Silsoe report was submitted to NIEA by Granville Ecopark LTD on Friday 5th July 2024. The interim results indicate that odours emanating from the scrubber are over 10 times the limit set in the permit. Other areas that were tested also indicate a lack of, or ineffective, abatement and elevated odorous emissions.

A meeting was held between NIEA officials and Granville Ecopark representatives on 10/07/24 to discuss the interim/draft Silsoe report.

Reason why I-NC not escalated to S-NC: n/a

Response to Non Compliances	**Mark one box only**
No non-compliances were identified.	
The non-compliances identified will be adequately addressed by the actions listed below.	X

Action Summary: (Note: cross out any date missed deadline and insert a new date)

No.	Details	By	Date
Open Actions			
2023/24-3-5	Operator to provide an inspection plan for digestor tanks. Extension granted in line with Improvement Condition in permit variation	Operator	~~**30 April 2024**~~ **31 December 2024**
2024/25-1-1	Operator to ensure site diary is adequately completed on a daily	Operator	**31 July 2024**

	basis, provide evidence of training for relevant employees.		
New Actions			
2024/25-2-1	Operator to provide initial proposal in writing on immediate/short, medium and longer term actions and timeframes for implementation as agreed at meeting on 10/07/04, for agreement with the Chief Inspector. This must include (but is not limited to) actions 2024/25-2-2, 2024/25-3, 2024/25-2-9, 2024/25-2-12, and 2024/25-2-13	Operator	**17 July 2024**
2024/25-2-2	Waste reception hall - Operator to fix any gaps between the ground and roller doors and fit appropriate rubber seal where missing or damaged.	Operator	**See action 2024/25-2-1**
2024/25-2-3	Waste reception building and outside areas to be cleaned and provide procedure for cleaning, frequency, responsibility, and where this is recorded. (see photos 2, 4, 5, 6, 8, 12 and 13)	Operator	**31 July 2024**
2024/25-2-4	Additional extraction points to be considered in waste reception building in conjunction with the work being carried out by Silsoe.	Operator	**31 October 2024**
2024/25-2-5	Provide process flow diagram of the pasteurisation process.	Operator	**31 July 2024**
2024/25-2-6	Add in detail about the grit removal process to the Odour Management Plan and resubmit for review.	Operator	**27 July 2024**
2024/25-2-7	Provide written procedure for grit removal from the digestate tanks, including how the process is managed to control odours (BAT14 d).	Operator	**31 July 2024**
2024/25-2-8	Fix louvres in digestate building.	Operator	**See action 2024/25-2-1**
2024/25-2-9	Provide process flow diagram for scrubber, in particular control and monitoring instrumentation and set points should be included.	Operator	**31 July 2024**
2024/25-2-10	Change carbon in Odour Control Unit and provide specification, safety data sheet and the design specification for the activated carbon bed. Retest emissions from Odour Control Unit - MCerts.	Operator	**See action 2024/25-2-1**
2024/25-2-11	Inspect the scrubbers internally and check for any fouling or damage to internal surface. Clean, repair and replace, as necessary. Retest as for action 2024/25-2/11.	Operator	**See action 2024/25-2-1**
2024/25-2-12	Check integrity of the drainage system for acid/alkali being dumped from the scrubber reservoirs, provide evidence checks and repairs completed where required.	Operator	**30 August 2024**
2024/25-2-13	Provide proposal to enclose the digestate screening process and	Operator	**31 October 2024**

	extract odorous emissions to suitable treatment facility, in conjunction with the work being carried out by Silsoe.		
2024-25-2-14	Provide procedure to ensure that the digestate released from the shredder is appropriately managed.	Operator	**31 July 2024**
2024/25-2-15	Provide a methodology for a suitable odour control technique for capturing and treating the vented air from the tankers, in conjunction with the work being carried out by Silsoe.	Operator	**31 October 2024**
2024/25-2-16	Provide a process flow diagram for the biomethane upgrading plant. Describe how the process is controlled and monitored to prevent emissions. Supply a safety data for the amine used – how is this substance monitored to prevent fugitive emissions?	Operator	**31 July 2024**
2024/25-2-17	Provide a proposal for a suitable odour control technique for capturing and treating the vented air from the PRVs, in conjunction with the work being carried out by Silsoe.	Operator	**31 October 2024**
2024/25-2-18	Provide details regarding the use of de-foaming agents – what is used, how often is this used, and where is this recorded - when operating the AD plant as designed.	Operator	**31 July 2024**
2024/25-2-19	Operator to provide requested information by email.	Operator	**Complete – received by email 4 July 2024**

NIEA Officer:	**Date:**
[redacted]	04/07/24 04/07/24

Report

18/6/2024: Present: Philip Cummings and [redacted] (NIEA), [redacted], [redacted], [redacted] (GECO).

The objective of this inspection was to witness the onsite operations, odour management and control techniques during Silsoe odour monitoring on the 18th and 19thJune 2024. The operator stated that the scrubber fan (Odour Control Unit) was operating at 50Hz with CHPs 1, 2 & 3 operating under a normal load.

Summary of site Odour Assessments Observations on 18th June 2024
NIEA, thoughout the day, observed the Silsoe Odour team set up and take readings from the scrubber, CHPs and digestate screener. In the afternoon a smoke test was carried out on the waste reception hall. In addition, a full visual inspection of the site was carried out including inside the larger buildings. P Cummings took a number of photographs on site which have been added to this report. A number of observations were made as follows:

Waste reception hall:
Exit / entry doors.
It was noted that the exterior doors were only opened to permit entry and exit of vehicles. Although one or more of the exterior doors were missing a rubber seal and gaps could be seen between them and the concrete floor.

Photo 1 Rubber seal missing from bottom of doors in waste reception building

ACTION 2024/25-2-2: Waste reception hall - Operator to fix any gaps between the ground and roller doors and fit appropriate rubber seal where missing or damaged.

Hoppers.
The hopper doors were closed but waste could be observed spilling out from the hopper next to the wall.

Photo 2 Overflowing waste reception bays

Whilst in the building, NIEA discussed with GECO that best practice is to ensure that all material is closed in behind the hopper door, and hoppers should have lids with direct extraction. This prevents odour from escaping when vehicles are entering and exiting the building or leaking from the building. The area in front and next to the hopper does not have specific extraction points. The extraction vents are all within the hopper area i.e. there is no direct extraction from the plastic removing equipment area or the area immediately between the hopper doors and the vehicle entry and exit doors.

Hopper extractor louvres / screens were visibility clogged and require cleaning to ensure adequate extraction.

Action 2024/25-2-3: Waste reception building and outside areas to be cleaned and provide procedure for cleaning, frequency, responsibility, and where this is recorded. (see photos 2, 4, 5, 6, 8, 12 and 13)

Action 2024/25-2-4: Additional extraction points to be considered in waste reception building in conjunction with the work being carried out by Silsoe.

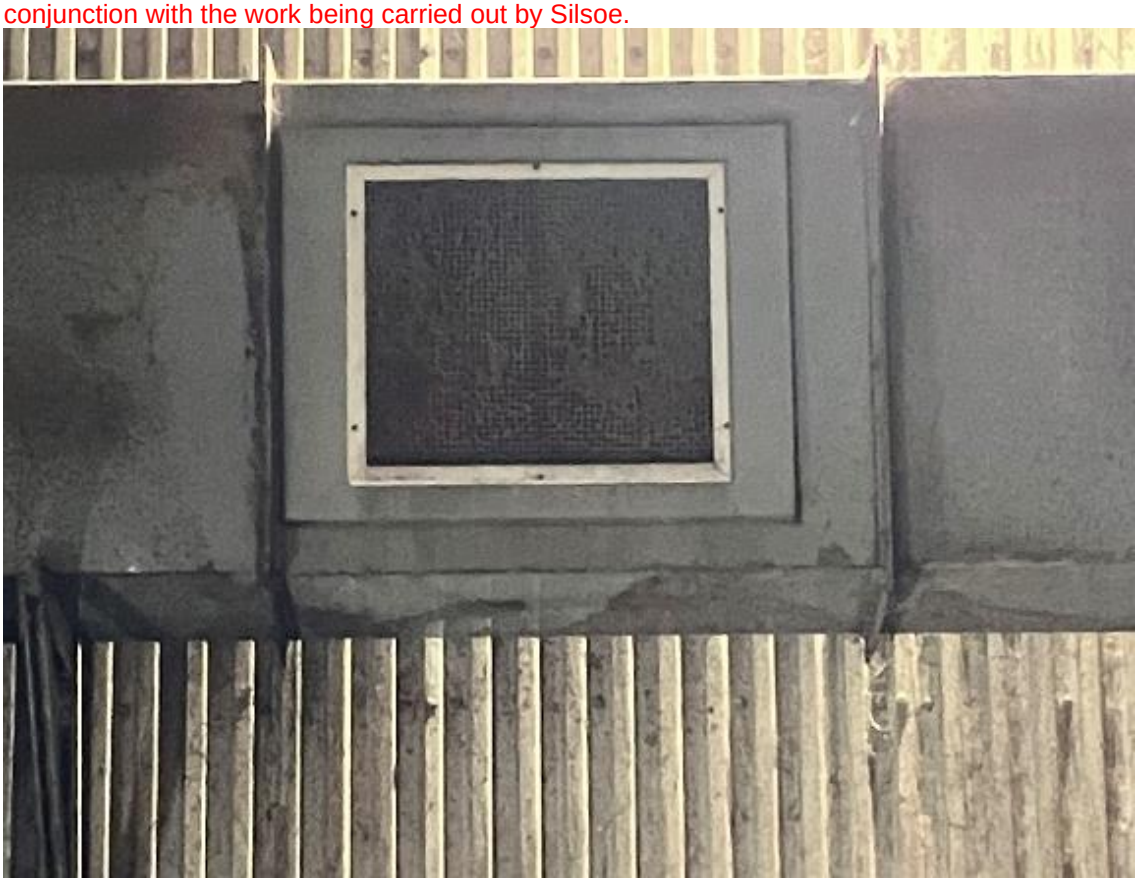

Photo 3 Extraction in waste reception building

Photo 4 Extraction in waste reception building

In the area of the hoppers the stairs, handrails, walls and various pieces of machinery were covered in caked waste material. To reduce odours these areas must be regularly cleaned.

Action 2024/25-2-3.

Photo 5 Waste transfer machinery

Photo 6 Dirty stairwell and floor area

Action 2024/25-2-3.

Waste Separator / Plastic Removal Equipment.
This area had the strongest odours in the building. The equipment including the cabling and conveyors, next to the hoppers, were covered in waste material. To reduce odours these areas must be regularly cleaned.

Action 2024/25-2-3.

Photo 7 Waste sorting machinery

It was noted that area of the building outside of the hoppers has no direct extraction vents. Extraction is through an open pedestrian doorway to the side of the hoppers and damaged / missing panels on the hopper enclosures. Waste material could be seen spilling over the conveyor belt.

Action 2024/25-2-3.

Photo 8 Waste falling out of transfer machinery

Action 2024/25-2-3

And covered cabling and some manual switches as seen the two photographs below.

Action 2024/25-2-3

Photo 9 Waste build up

Photo 10 Dirty, waste covered floors

Action 2024/25-2-3

Soup tank building.
The soup tank is directly connected to the odour extraction. This area was relatively clean with minimal odour. It was noted that the pasteurisation tanks are connected to the odour extraction system via a fan located behind the soup tank, but no measurements (neither pressure or flow) are made to confirm its correct operation.

There is an opportunity to improve the odour control by monitoring the pasteurisation duct pressure and/or extraction rate or surrogate (e.g. fan amps) that are continually monitored and recorded with alarms.

Action 2024/25-2-5 Provide a copy of the process flow diagram of the pasteurisation process.

Grit removal.
The operator has installed a grit removing device and is currently trialling it.

Photo 11 De-gritting machine

NIEA discussed with GECO the importance of removing the grit from the tanks as a preventative measure to stop foaming incidents and ensure the efficiency of the process. Consideration must be given for the potential for nuisance odours from this process and this detail will need to be added to the Odour Management Plan.

Action 2024/25-2-6 Add in detail about the grit removal process to the Odour Management Plan and resubmit for review.

It would appear to NIEA that the operator is routinely discharging material from the bottom of the AD tanks as digestate containing plastics / grit could be seen to the rear of the one AD tank (see photo below) and remnants of previous discharge or spill at a second AD tank could be seen. An explanation was asked regarding these discharges whilst on site, but no clear explanation was given.

Action 2024-25-2-7: Provide written procedure for grit removal from the digestate tanks, including how the process is managed to control odours.

Photo 12 Waste build-up around outside tanks

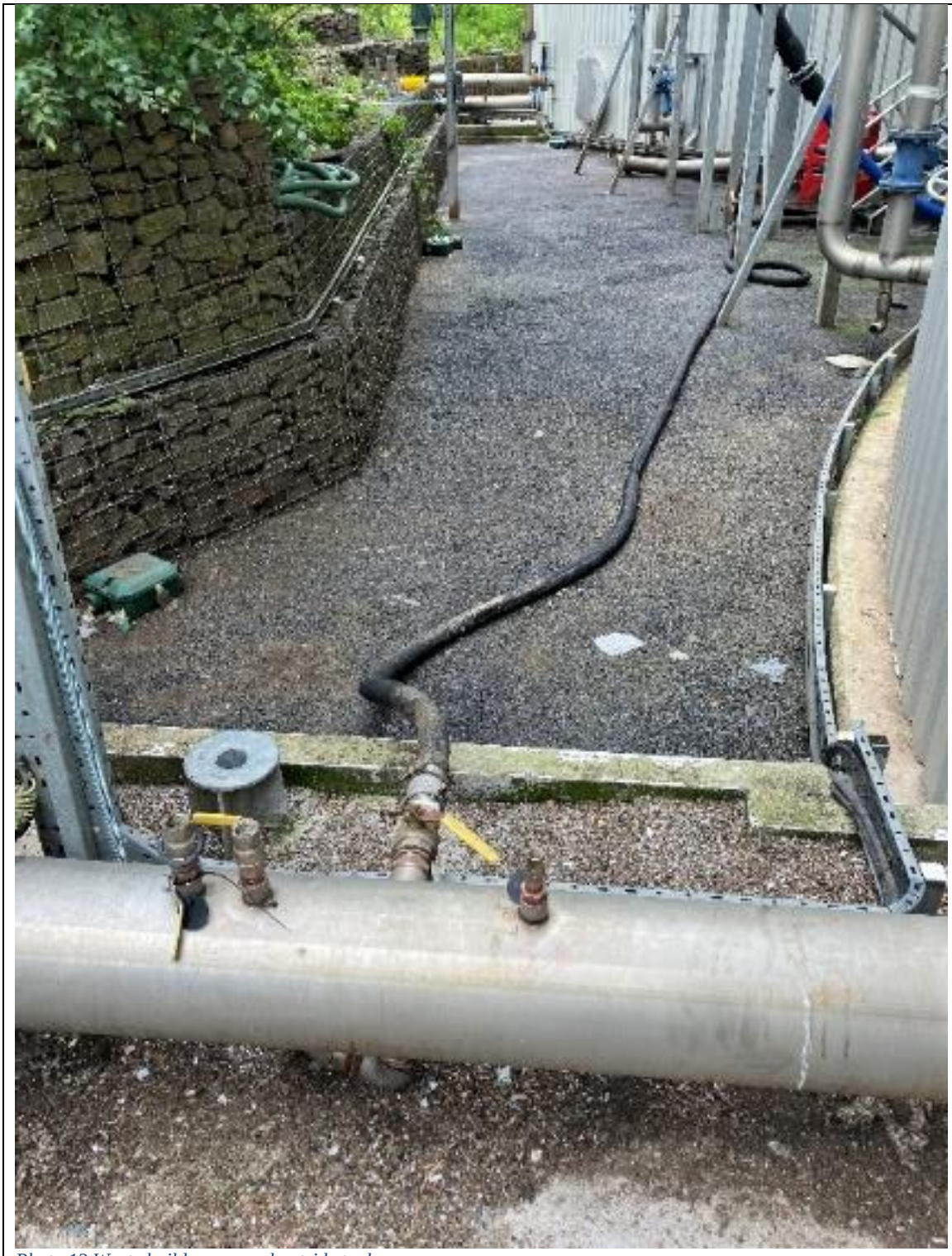

Photo 13 Waste build up around outside tanks

These areas must be kept clean to control potential for fugitive odour emissions.

Action 2024/25-2-3

Digestate Building.
Low levels of odour in this area. NIEA noted that louvres were missing a couple of covers which could result in dust ingress and/or potentially be creating excessive extraction from this area.

Action 2024/25-2-8 Fix louvres in digestate building.

Scrubber.

Discussions on site between NIEA and GECO regarding the scrubber included a discussion on the the dosing and control of the acid and alkali in the scrubbers, which is currently manual. Any failure could go undetected resulting in nuisance odours until noticed and corrected. This is not best practice, and the operator must consider installing automatic dosing and control. The two photographs below show the IBC feeding into the scrubber, the manual valves and a broken pH probe.

Photo 14 Scrubber chemical IBC

Photo 15 Scrubber chemical dosing

Other issues discussed included the spent acid / alkali from the scrubbers being discharged on the surface and into internal drains where on the surface it appeared to be compromised.

Action 2024/25-2-9: Provide process flow diagram for scrubber, in particular control and monitoring instrumentation and set points should be included.

Action 2024/25-2-10: Change carbon in Odour Control Unit and provide specification, safety data sheet and the design specification for the activated carbon bed. Retest emissions from Odour Control Unit - MCerts.

Action 2024/25-2-11: Inspect the scrubbers internally and check for any fouling or damage to internal surface. Clean, repair and replace, as necessary. Retest as for action 2024/25-2/10.

Action 2024/25-2-12: Check integrity of the drainage system for acid/alkali being dumped from the scrubber reservoirs, provide evidence checks and repairs completed where required.

The area around the scrubber was strewn with pieces of wood, steel and plastic piping making physical access to the scrubber difficult for routine maintenance and checks, including the odour assessment being carried out on the day with sampling staff having to step over it to gain access to the scrubber.

Action 2024/25-2-3

Photo 16 Waste build up in scrubber area

Action 2024/25-2-3 Please clear yard of trip hazards and provide a copy of the procedure used for checking and cleaning the yard – good housekeeping.

Digestate screener.
The digestate screener is not enclosed and strong ammonia type odours where being produced while it was operating. Although the odour was localised at the time, there is potential for fugitive odours especially under some meteorological conditions.

Action 2024/25-2-13 Please move the screener into a building to ensure odours are captured by the Odour Abatement System. Where this is not possible, you must ensure that the screener has adequate containment, collection and treatment of diffuse emissions (see WT BAT 14 d).

Photo 17 Digestate screener

Photo 18 Digestate screener waste

A liquid fraction of the digestate is pumped from the digestate screener into the underground piping, however this the pipe was short and as such the liquid which has the potential for odour was being poured out onto the bund to flow over the surface into the interceptor. You can see below where this has pooled against the side of the bund. Again, this risks the release of fugitive odour.

Action 2024/25-2-3

Action 2024-25-2-14 Provide proposals to ensure that the digestate is appropriately managed.

Photo 19 Build up of contaminated liquid beside digestate screener

Dispatch of digestate.
The operator confirmed that currently the air from tankers operated on site loading liquid digestate is vented untreated and into the open. This practice raises the potential for nuisance odours off site adding to the overall site odour loading. This is not best practice. The air vented from digestate tankers should be captured and extracted to a suitable odour control technique, (see WT BAT 14 d.)

Action 2024/25-2-15 Provide a methodology for a suitable odour control technique for capturing and treating the vented air from the tankers.

Biomethane upgrading plant
Action 2024/25-2-16: Supply a process flow diagram for the biomethane upgrading plant. Describe how the process is controlled and monitored to prevent emissions. Supply a safety data for the amine used – how is this substance monitored to prevent fugitive emissions?

Monitoring of the Pressure relief Valves.
It was discussed with the operator the use and monitoring of the pressure release valves (PRVs) and the likelihood of a release being odorous. It was also highlighted that release of PRVs is an emergency measure only,and should not form part of the operational measures to control the process.

Action 2024/25-2-17 Provide your proposal for a suitable odour control technique for capturing and treating the vented air from the PRVs.

Defoaming agent.
While on site it was noted a significant number of IBCs (around 20) most of which appeared to be empty. One label marked them as Frylite cooking oil. As cooking oil can be used as a defoaming agent the operator was asked if they were currently having a foaming issue with the AD tanks. This was initially denied but further enquiry determined that there was / had been a recent foaming issue.

Photo 20 Empty IBCs which contained de-foaming agent (frylite oil)

Action 2024/25-2-18: Provide details regarding the use of de-foaming agents – what is used, how often is this used, and where is this recorded - when operating the AD plant as designed.

19/06/2024: Present: [redacted] and Philip Cummings (NIEA), [redacted], [redacted], [redacted] (GECO).

Summary of additional Odour Assessment Observations on 19 June 2024
NIEA were accompanied on site by [redacted] and [redacted] from GECO.
The Silsoe Odour team were finishing up readings in the digestate building before leaving site.

During the site walk over the scrubber unit was visited and NIEA raised a number of concerns:

- Manual dosing and control of the chemicals for the acid (sulphuric ~3pH) and alkali (hypochlorite ~9pH) chemical scrubbers
- No continuous monitoring of pH, conductivity, air flow, liquid pressure or liquid level in the scrubbers
- No alarms for liquid reservoirs going out of range in pH or conductivity
- pH probe noted to be broken
- P&ID of scrubber system not available
- Review of manufacturer's operating manual required – noted that the system was designed for NaOH to be used in alkali dosing but operator is using hypochlorite instead
- No clear calibration records on key instrumentation on scrubber system
- Cleaning / maintenance schedule for scrubber – not known when the packed tower was last opened and inspected
- In order to complete maintenance system must be taken offline – no back up for unexpected failure of plant
- Spent acid/alkali from the scrubbers is discharged on the surface and down into the internal drains, the integrity of which appeared to be compromised as there was a gap allowing waste effluent to seep into the ground.

Action 2024/25-2-12: Check integrity of the drainage system for acid/alkali being dumped from the scrubber reservoirs, provide evidence checks and repairs completed where required.

The digestate screener area was also visited. It was operating at the time of inspection and a strong ammonia odour was present in the vicinity (Minor NC for odour). This has the potential to be a major source of fugitive odorous emissions. NIEA recommends that it should be effectively enclosed, so that the odorous air can be contained, and extracted to the existing odour control unit or to a new stand-alone fit-for-purpose localised odour control unit.

Action 2024/25-2-13: Move the screener into a building to ensure odours are captured by the Odour Abatement System. Where this is not possible, you must ensure that the screener has adequate containment, collection and treatment of diffuse emissions (see WT BAT 14 d).

2.0 Discussion in Office

NIEA completed a de-brief with GECO representatives in the office after the site walk over. The following information was requested over the period of 18th and 19th June 2024:

- Waste into site 18 and 19 June – volume/weight and description
- CHP electricity production 18 and 19 June
- Gas produced – flow to CHPs, storage balloon, flare and gas upgrading plant 18 and 19 June
- SCADA screen grab showing pressure across the system 18 and 19 June
- Trend for gas upgrading plant 18 and 19 June
- Trigger levels on site diary – photo for 19 June
- Met data for 18 and 19 June – barometric pressure, humidity, wind direction, temperature
- Digestate output 18 and 19 June
- Tank to tank movement trend 18 and 19 June

ACTION 2024/25-2-19: Operator to provide information listed in 2.0 by email.
COMPLETE: received by email on 3 July 2024.

Supervisory Check

LM Comments: content to issue. Helen Lewis	Date: 11/07/24

Northern Ireland Environment Agency
www.daera-ni.gov.uk

IPRI PPC Part B Compliance Assessment Report

IPRI Report No.	**2023/24 - 5**	**Permit No.**	**P0413/12A**
Inspector	[redacted] & [redacted]	**Date**	**28.02.2024**
Compliance Assessment Type	**Unannounced inspection in response to odour complaint**	**Operator**	**Granville Ecopark (GECO)**
		Installation	**Granville Rd, Granville, Dungannon BT70 1NJ**

Core areas covered (with sections in permit)

[C = Compliant, NA = Not Assessed, NR = Not Regulated, NC = Non-Compliance identified.
Where NC, enter number under each Category: **M** (Minor), **I** (Intermediate), **S** (Substantial)]

	C/NA/NR	M-NC	I-NC	S-NC
Other (1, 2.1, 2.12 & 7)	NA			
Air emissions (2.2.1)	NA			
Water emissions (2.2.2)	NA			
Sewer emissions (2.2.3)	NA			
Soil and Groundwater protection (2.2.4 & 2.2.5)	NA			
Odour (2.2.6)	NC			1
Environmental Management system (2.3, 2.8, 2.11)	NA			
Resource Efficiency (2.4 & 2.7)	NA			
Waste Management (2.5 & 2.6)	NA			
Noise (2.9)	NA			
Monitoring, Reporting and Notifying (2.10, 3, 4 & 5)	NA			
Improvement programme status (6)	NA			

Overall Comments:

Odour assessment was carried out, beginning at 10.10am on 28.02.2024 in response to an odour complaint. Odour was identified at Northern Cryogenics. Observations found that it was a sweet chemical odour associated with Granville Ecopark. The same odour was also observed at Assessment Point 4. A site inspection of Granville Ecopark was deemed necessary to identify the specific source of the odour.

Reason why I-NC not escalated to S-NC:

LM Approval: A Evans | **Date: 4/3/24**

Response to Non-Compliances	**Mark one box only**
No non-compliances were identified.	
The non-compliances identified will be addressed by the actions listed below.	X

Action Summary:

No.	Details	By	Date

NIEA Officer: [redacted] & [redacted] **Date:** 29.02.2024

Report

Meteorological Conditions:

Weather: Cloudy and damp
Temperature: 7°C
Wind Direction: SSW
Wind Speed: Light – Steady

Present: [redacted] and [redacted]

Having found a distinctive odour at point 8 (Northern Cryogenics) and after confirming at point 4 that the same odour was detectable downwind at the GECO boundary.

It was discussed with [redacted] on the phone that [redacted] and [redacted] would carry out a site visit of GECO.

IPRI inspectors were met by [redacted] and [redacted].

A walk around the site was carried out and at the North side of the site the same distinctive odour was detected. Having asked [redacted] what this odour was associated with, we were told that this is the combination odour associated with the CHP combustion of biogas and the separate biogas upgrade plant.

IPRI confirmed they were standing directly downwind (from SSW) of these plants, concluding that this is where the odour emanates from. IPRI confirmed by going to the far east side of the site that the associated bone meal odour from Linergy was not the offending odour previously stated.

All doors were closed, and housekeeping was tidy.

A walk through the offending area showed no obvious defects and returning to the north side of the site the odour was still present.

[redacted] confirmed that the CHP combustion and the Biogas Upgrade Plant runs continually and that nothing had changed recently.

IPRI stated that the odour survey had deemed the situation unsatisfactory, and that [redacted] would be in contact regarding corrective actions required to be taken. [redacted] said he would carry out an odour survey himself and proceed to investigate.

Supervisory Check

LM Comments: Substantial non-compliance raised due to unacceptable level of annoyance odour detected 280m offsite. LM: [redacted]	Date: 4/3/24

Northern Ireland Environment Agency
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IPRI PPC Part A Compliance Assessment Report

IPRI Report No.	2024/25-3	**Permit Number**	P0413/12/V2
Inspectors	[redacted], [redacted]	**Date**	30.08.24
	Unannounced Site Inspection	**Operator**	Granville Ecopark Limited
		Installation	Dungannon

Core areas covered (with sections in permit)

[C = Compliant, NA = Not Assessed, NR = Not Regulated, NC = Non Compliance identified. Where NC, enter number under each Category: **M** (Minor), **I** (Intermediate), **S** (Substantial)]

	C/NA/NR	M-NC	I-NC	S-NC
Other (2.10, 3.4, 4.6 & 7)			1	
Air emissions (4)	C			
Water emissions (4.1)	NA			
Sewer emissions (Table S4.2)	NA			
Soil and Groundwater protection (2.2.4 & 2.2.5)	NA			
Odour (4.4)	C			
Environmental Management system (2.3, 2.8 & 2.11)	NA			
Resource Efficiency (1.5, 1.6)	NA			
Waste Management (2.5, 2.8, 2.6 & 3.3)	NA			
Noise and Vibration (4.5)	C			
Monitoring, Reporting and Notifying (4.7, 5, 5.2, 5.3)	C			
Improvement programme status (2.6)	Complete			

Overall Comments:

The site was clean and tidy with only very localised odours identified onsite.

1 intermediate non-conformance for site diary not being adequately completed (previously raised as minor non-conformance on 23rd May 2024 report).

Reason why I-NC not escalated to S-NC: n/a

Response to Non Compliances	**Mark one box only**
No non-compliances were identified.	
The non-compliances identified will be adequately addressed by the actions listed below.	X

Action Summary:

Action No.	Details	By	Date
2023/24-3-5	Operator to provide an inspection plan for digestor tanks.	Operator	~~**30 April 2024**~~ **31 December 2024** Extension granted in line with Improvement Condition in permit variation
~~2024/25 1 1~~	Operator to ensure site diary is adequately completed on a daily basis, provide evidence of training for relevant employees.	Operator	31 July 2024 **Completed via e-mail 31st July 2024**
~~2024/25 2 1~~	Operator to provide initial proposal in writing on immediate/short, medium and longer term actions and timeframes for implementation as agreed at meeting on 10/07/04, for agreement with the Chief Inspector.	Operator	**17 July 2024** **Completed via e-mail 18.08.24**

	This must include (but is not limited to) actions 2024/25-2-2, 2024/25-3, 2024/25-2-9, 2024/25-2-12, and 2024/25-2-13		
~~2024/25-2-2~~	Waste reception hall - Operator to fix any gaps between the ground and roller doors and fit appropriate rubber seal where missing or damaged.	Operator	**See action 2024/25-2-1** **Completed**
~~2024/25-2-3~~	Waste reception building and outside areas to be cleaned and provide procedure for cleaning, frequency, responsibility, and where this is recorded. (see photos 2, 4, 5, 6, 8, 12 and 13)	Operator	**31 July 2024** **Completed** via e-mail 31.07.24
~~2024/25-2-4~~	Additional extraction points to be considered in waste reception building in conjunction with the work being carried out by Silsoe.	Operator	31 October 2024 Considered as part of ENF Notice P0413 12A EN-400-2024. E-mail 31.07.24 Therefore: **Closed**
~~2024/25-2-5~~	Provide process flow diagram of the pasteurisation process.	Operator	31 July 2024 **Completed** via e-mail 31.07.24
~~2024/25-2-6~~	Add in detail about the grit removal process to the Odour Management Plan and resubmit for review.	Operator	27 July 2024 **Completed** via e-mail 31.07.24
~~2024/25-2-7~~	Provide written procedure for grit removal from the digestate tanks, including how the process is managed to control odours (BAT14 d).	Operator	31 July 2024 **Completed** via e-mail 31.07.24
~~2024/25-2-8~~	Fix louvres in digestate building.	Operator	**See action 2024/25-2-1** **Completed** via e-mail 31.07.24
~~2024/25-2-9~~	Provide process flow diagram for scrubber, in particular control and monitoring instrumentation and set points should be included.	Operator	31 July 2024 **Completed** via e-mail 31.07.24
2024/25-2-10	Change carbon in Odour Control Unit and provide specification, safety data sheet and the design specification for the activated carbon bed. Retest emissions from Odour Control Unit - MCerts.	Operator	**See action 2024/25-2-1** **Retest 10-13 September 2024**
~~2024/25-2-11~~	Inspect the scrubbers internally and check for any fouling or damage to internal surface. Clean, repair and replace, as necessary. Retest as for action 2024/25-2/11.	Operator	**See action 2024/25-2-1** **Completed** E-mail 18.07.24
2024/25-2-12	Check integrity of the drainage system for acid/alkali being dumped from the scrubber reservoirs, provide evidence checks and repairs completed where required.	Operator	**30 August 2024**

~~2024/25 2 13~~	Provide proposal to enclose the digestate screening process and extract odorous emissions to suitable treatment facility, in conjunction with the work being carried out by Silsoe.	Operator	31 October 2024 **Closed** Being considered as part of the Enforcement Notice
~~2024 25 2 14~~	Provide procedure to ensure that the digestate released from the shredder is appropriately managed.	Operator	31 July 2024 **Closed** E-mail 31.07.24
~~2024/25 2 15~~	Provide a methodology for a suitable odour control technique for capturing and treating the vented air from the tankers, in conjunction with the work being carried out by Silsoe.	Operator	31 October 2024 **Closed** Being considered as part of the Enforcement Notice
~~2024/25 2 16~~	Provide a process flow diagram for the biomethane upgrading plant. Describe how the process is controlled and monitored to prevent emissions. Supply a safety data for the amine used – how is this substance monitored to prevent fugitive emissions?	Operator	31 July 2024 **Completed** E-mail 31.07.24
~~2024/25 2 17~~	Provide a proposal for a suitable odour control technique for capturing and treating the vented air from the PRVs, in conjunction with the work being carried out by Silsoe.	Operator	**31 October 2024** **Closed** To be dealt with as part of the Enforcement Notice
~~2024/25 2 18~~	Provide details regarding the use of de-foaming agents – what is used, how often is this used, and where is this recorded - when operating the AD plant as designed.	Operator	**31 July 2024** **Completed** E-mail 31.07.24
~~2024/25 2 19~~	Operator to provide requested information by email.	Operator	**Complete** – received by email 4 July 2024

NIEA Officer:	**Date:**
C McQuitty	22.05.25

Report

30.08.24: Present [redacted] & [redacted] (NIEA) and [redacted] (Granville Ecopark)

This unannounced inspection was carried out in response to ongoing odour complaints.

The Odour Management Plan (OMP) was discussed in relation to the Technically Competent Person (TCP) coverage being raised to a minimum of 25% due to the complexity of the site. This is to include weekends as the process is 24/7. H Lewis is to discuss the matter with [redacted] later.

A check of the site dairy for the month of August 2024 showed a number of missing records 4th, 10th, 11th, 16th,18th, 21st, 22nd & 24th. No clear explanation was given as to why they were not present.

Dairy entries:
1.8.24 Night shift staff not identified
02.8.24 Night shift staff not identified, Lab test results not fully completed

03.8.24 Night shift staff not identified
04.8.24 Missing
05.8.24 Night shift staff not identified, on call not identified
06.8.24 Night shift staff not identified
07.8.24 Night shift staff not identified
08.8.24 Night shift staff not identified
12.8.24 Night shift staff not identified, lab test results not completed, issues with sight glass viewing identified but no remedy action recorded
13.8.24 Night shift staff not identified, sight glass appears to say yes & no, check of PRVs illegible
14.8.24 Night shift staff not identified, lab test results not complete
15.8.24 Night shift staff not listed, on call not identified, check of PRVs illegible
16.8.24 Missing
17.8.24 Night shift staff not listed, on call not identified
18.8.24 Missing
19.8.24 Night shift not listed, lab test results not completed, foaming identified but no remedial action recorded
20.8.24 Night shift not listed, lab test results not completed, foaming identified but no remedial action recorded
21.8.24 Missing
22.8.24 Missing
23.8.24 Night shift staff not listed, Leak at AD1 PRV identified but no remedial action noted
24.8.24 Missing
25.8.24 Appears complete
26.8.24 Night shift staff list not completed, leak at AD1 identified but no remedial action noted
27.8.24 Appears complete
28.8.24 Lab test results not completed
29.8.24 Night shift staff not listed, foam observed via sight glass but no remedial action noted
30.8.24 Foam observed via sight glass but no remedial action noted, PRV check shows 2,4% difference – no explanation given

1 intermediate non-conformance for site diary not being adequately completed (previously raised as minor non-conformance on 23rd May 2024 report).

The recent releases from the PRVs on the AD tanks was discussed and it was explained that staff on site had been trained in resetting them safely.

Operator is reminded that all leaks are deemed fugitive emissions and need to be reported to NIEA.

Supervisory Check

LM Comments: n/a	Date:

Northern Ireland Environment Agency
Gníomhaireacht Comhshaoil Thuaisceart Éireann
Norlin Airlan Environment Agency
www.daera-ni.gov.uk

Granville Eco Park Enforcement Notice Clarification Meeting – Odour Report Proposal

17 May 2024

Sustainability *at the heart of a living, working, active landscape valued by everyone.*

An Agency within the Department of Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

Gníomhaireacht de chuid na Roinne Talmhaíochta, Comhshaoil agus Gnóthaí Tuaithe

An Agency wi'in the Depairtment o Fairmin, Environment an' Kintra Matthers

Minutes of meeting held between NIEA and Granville Eco Park on 17 May 2024

Attendees: [redacted] ***and*** [redacted] ***(Biocapital group),*** [redacted]***,*** [redacted] ***and*** [redacted] ***(Granville Eco Park),*** [redacted] ***(Silsoe)*** [redacted] ***and Philip Cummings (NIEA).***

1. Welcome and introductions. NIEA appreciated the opportunity to clarify the technical aspects of the Enforcement Notice.
2. NIEA asked the independent odour expert – [redacted] – about his initial thoughts/emerging findings on what the major point and fugitive sources of odour emissions were on the site after his visit at the end of April 2024, (a copy of which will be provided to NIEA in the coming weeks). The main purpose of the discussion, to clarify that NIEA's main concerns, will be included and addressed by the final odour report.
    i. Fugitive emissions – concentrating on buildings, air changes per hour and extraction measurements and a full pressure survey. Silsoe will be using a smoke machine for visual assessment of leaks as well as micromanometer to assess the effectiveness of the building enclosure/extraction. NIEA also noted that housekeeping in the waste intake building could be greatly improved to prevent fugitive odour emissions. NIEA pointed out that the waste intake hoppers and tanks may also need localised enclosure and extraction to the odour abatement system. NIEA pointed out that the extraction system may need to be rebalanced/optimised with a fixed/adjustable damper to ensure that the extraction from the higher odorous waste intake building is increased/maximised and the lower odorous digestate building is reduced/minimised. NIEA pointed out that the waste intake building doors being open had resulted in unacceptable offsite odour impacts in the past and referred to a Olfasense document "*A new approach for assessing fugitive odour emissions from buildings*", (which has been attached for

information and review/consideration). NIEA also pointed out that continuous flow/building pressure monitoring should be investigated and is expected to be proposed. [redacted] confirmed that these would form part of his review, odour impact assessment and recommendations in the final report. [redacted] had noted that the vibrating screens for digestate are located in the open, without enclosure, extraction or abatement, which will be included as an odour source in the impact assessment/improvement options.

ii. Point source emissions – Silsoe stated they would undertake a full review of the odour control unit including leak detection and flow measurements. Silsoe stated that they will check the pasteurisation units as part of their investigation. NIEA highlighted that the CHP stacks and the biogas upgrading/CO_2 stripper plant vent are of concern as odour sources and Silsoe took this under consideration. Silsoe said it was unlikely they would be able to do any odour monitoring of the flare due to the operating conditions associated with it.

3. NIEA stated that the plant must be operating as normal (i.e. at 90% capacity of waste intake or more) during the odour survey. Granville Eco Park and Silsoe agreed to record the waste throughputs during the monitoring to include type of waste and weight. The operator will also provide information on total biogas generation, CHP operation (i.e. gas throughput), biogas upgrading volume, gas to grid export volume, gas to tankers export volume, digestate export volume, operation of flare and all extraction running under normal conditions.
4. Silsoe's concern about $98^{\%le}$ <1 OU_E/m^3 at the site boundary on the enforcement notice, (as an example of an acceptable odour impact level), was discussed. NIEA pointed out that this criterion had been taken from the EA's H4 Odour Management Guidance. NIEA explained the reasoning behind this criterion was to protect the Operators investment/future proofing and to ensure that the cumulative impact from all of the odorous facilities in the Granville Industrial Estate was acceptable as the overall odour impact experienced by local residents, (who have been sensitised to same), which has been an ongoing concern for them and their elected representatives for several years.

Recorded by [redacted] 17 May 2024

Note of meeting held between NIEA and Granville Eco Park on 10 September 2024

Meeting to discuss provision of Technically Competent Person at the Granville Ecopark LTD, Granville Industrial Estate, Dungannon and required attendance hours.

Attendees: [redacted], [redacted] ***and*** [redacted] ***(Biocapital),*** [redacted] ***and*** [redacted] ***(Granville Eco Park), Helen Lewis,*** [redacted] ***and*** [redacted] ***(NIEA).***

1. Welcome and introductions. [redacted] introduced as general manager Northern area (including Granville Ecopark LTD (GECO)).
2. Following the revision of the OMP V8, and NIEA notifying GECO of the intention to impose 50% TCP attendance at the site, due to the site's complexity and recent compliance and operational issues at the site, this meeting was requested by GECO to discuss that requirement and how the TCP cover could be provided by GECO to provide assurance to the regulator that TCP cover is adequate at the site.
3. The group discussed the 50% requirement, and GECO requested that his figure be 40%.
4. NIEA requested that a document be provided by GECO to NIEA to outline the rational and measures to be put in place to provide assurance to the regulator that 40% will provide an adequate level of cover, along with the rationale, highlighting additional measures that will be put in place by GECO, along with timeframes for implementation – such as updated procedures, in-process control measures, audible alarms to help prevent overtopping, alarm alerts to TCP/suitably qualified person, for on call attendance at the site to provide an

adequate level of oversight when a trend is developing that may escalate into an unplanned event.

5. NIEA agreed to GECO request to have the paper submission date within 4 weeks of the date of this meeting, for review. NIEA will put into V3 as an IC, and will share the wording with GECO next week. NIEA will then reconsider requirement for 50% attendance in light of the submission.
6. It was noted at the meeting that the CO_2 upgrading plant and amine stripper did not appear to be mentioned in OMP V8, GECO to check. NIEA content that this is added in in support of the variation application for the CO2 plant and will request this on a Schedule 7 Notice once the review of the variation application is complete.
7. GECO confirmed that OMP V9 contains the minimum 25% TCP cover required, and that the new appointment has the appropriate TCP qualification.
8. NIEA thanked GECO for the latest revision of the OMP, a lot of work has gone into it.
9. The odour complaints from today were discussed, NIEA to forward detail of complaints to GECO for investigation.

Recorded by Helen Lewis 10/09/24

Northern Ireland Environment Agency
www.daera-ni.gov.uk

IPRI PPC Part A Compliance Assessment Report

IPRI Report No.	**2023/24-4**	**Permit Number**	**P0413/12A**
Inspector	[redacted]	**Date**	**22/2/2024 11am**
	Unannounced inspection – reacting to odour complaints	**Operator**	**Granville Eco Park**
		Installation	**Granville**

Core areas covered (with sections in permit)

[C = Compliant, NA = Not Assessed, NR = Not Regulated, NC = Non Compliance identified. Where NC, enter number under each Category: **M** (Minor), **I** (Intermediate), **S** (Substantial)]

	C/NA/NR	M-NC	I-NC	S-NC
Other (1, 2.1, 2.12 & 7)	C			
Air emissions (2.2.1)	C			
Water emissions (2.2.2)	C			
Sewer emissions (2.2.3)	NA			
Soil and Groundwater protection (2.2.4 & 2.2.5)	NA			
Odour (2.2.6)	C			
Environmental Management system (2.3, 2.8, 2.11)	NA			
Resource Efficiency (2.4 & 2.7)	NA			
Waste Management (2.5 & 2.6)	C			
Noise (2.9)	C			
Monitoring, Reporting and Notifying (2.10, 3, 4 & 5)	NA			
Improvement programme status (6)	NA			

Overall Comments: (Note: Include reference to any NC. Substantial Non compliances require a case review to be carried out as per procedure QA042)

Unannounced inspection completed in reaction to odour complaints from local residents on 22/2/24.

Operator met IPRI inspector at the gate, they were already aware of the complaints and had been in contact with one of the local residents.

IPRI inspector was allowed access to all areas of the site.

Housekeeping was noted to be very good, all doors were shut and the engines and odour control plant were in normal operation at the time of the visit.

Reason why I-NC not escalated to S-NC:

LM Approval: Helen Lewis	Date: 27/2/24

Response to Non Compliances	**Mark one box only**
No non-compliances were identified.	X
The non-compliances identified will be adequately addressed by the actions listed below.	

Action Summary: (Note: cross out any date missed deadline and insert a new date)

No.	Details	By	Date

NIEA Officer: [redacted]	**Date: 26/2/24**

[redacted]	26/2/2024

Report
(Note: include both progress achieved and problems identified as well as permit condition reference and action against which any non-conformance applies)

Air emissions
IPRI inspector checked for fugitive emissions to air across the site related to open doors, spills and failure of abatement equipment – no obvious odour sources were noted.

The stack emissions on site for the CHPs, biogas upgrading unit and odour abatement scrubber were viewed from the top of the digestate tanks and no unusual odours or visible emissions were noted at the time of inspection.

IPRI inspector requested sight of the live monitoring data for the biogas pressure and flows across the site (photo 1). The gas pressure is represented by the pink line on the photo and it stays within the safe pressure allowed by the system i.e. below 34mbar. Staying within the safe pressure limit means that the pressure release valves situated across the site do not open and allow fugitive emissions of biogas.

The flare was operating as normal to burn off any excess gas.

Water emissions
The final discharge to surface water was checked after the inspection (photo 8). The operator does not normally discharge any surface water off site and there was clearly no flow from the final discharge valve on the day of inspection. The area below the valve was clean, dry and free from debris.

Odour
The odour abatement plant (consisting of a chemical scrubber and carbon filter) was noted to be operating normally at the time of inspection, the fans could be heard in operation and no alarms were showing or sounding in the area.

The doors to the intake bays were all closed at the time of inspection (photos 2,3 & 5).

The outdoor areas were clean and there were no signs of spillage (photos 4,6 & 7).

Waste Management
At the time of inspection there were no open sources of food waste noted on the site.

All food waste was either inside a tanker / lorry or within the designated intake bays where odour abatement measures are applied.

Noise
There were no unusual or very loud noises noted at the site during the inspection.

The CHP engines were running but not creating excess noise.

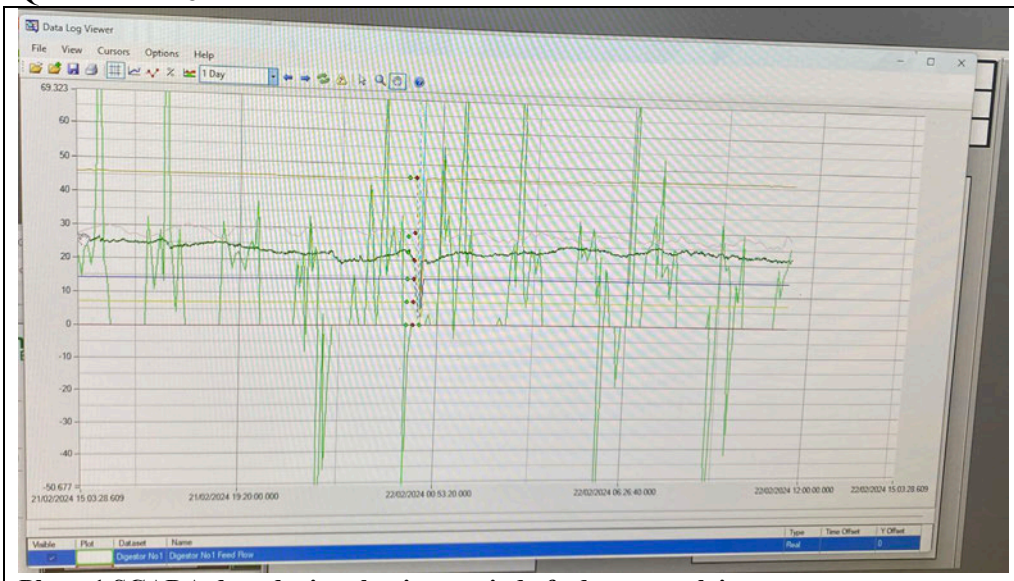

Photo 1 SCADA data during the time period of odour complaints

Photo 2 Outdoor area

Photo 3 Doors all closed on intake bays

Photo 4 Outdoor area

Photo 5 Outdoor area

Photo 6 Outdoor area

Photo 7 Digestate tanks and gas balloon

Photo 8 Surface water discharge point

Supervisory Check

LM Comments: LM: Helen Lewis	Date: 27/2/24

CHIEF INDUSTRIAL POLLUTION INSPECTOR

THE POLLUTION PREVENTION AND CONTROL (INDUSTRIAL EMISSIONS) REGULATIONS (NORTHERN IRELAND) 2013

ENFORCEMENT NOTICE

Serial No. P0413/12A – EN-400-2024

Name: Granville Anaerobic Digestion and Biogas Plant

Address: Granville Industrial Estate, Granville, Dungannon, BT70 1NJ

Trading as: Granville Eco Park

I, [redacted] being an Inspector appointed by an instrument in writing made pursuant to Regulation 8 (1) of the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013 (the 2013 Regulations) and empowered to serve this notice on behalf of the Chief Inspector hereby give you notice that I am of the opinion that as a person operating an installation or mobile plant for which a permit has been granted at

Granville Industrial Estate,
Granville,
Dungannon,
BT70 1NJ

under permit number P0413/12A issued under the 2013 Regulations you have contravened the following conditions of that permit:

Condition 4.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an Authorised Officer of the Chief Inspector, unless the Operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise odour, and that the matters constituting the contravention are specified in the attached Schedule which forms part of this Notice, and I hereby require you to remedy the said contraventions or, as the case may be, the matters likely to give rise to the contraventions by taking the steps specified in the said Schedule.

Signature [redacted] Date 07/03/2024

of Northern Ireland Environment Agency, 17 Antrim Road, Tonagh, Lisburn, County Antrim, BT28 3AL

CHIEF INDUSTRIAL POLLUTION INSPECTOR
THE POLLUTION PREVENTION AND CONTROL (INDUSTRIAL EMISSIONS)
REGULATIONS (NORTHERN IRELAND) 2013

Schedule attached to Enforcement Notice

Serial No. P0413/12A EN-400-2024

Permit Condition	Matters constituting the contravention or making it likely that contravention will arise	Steps to be taken to remedy the said contravention or to remedy matters likely to give rise to said contravention	Steps to be taken within period ending (end date)
Condition 4.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an Authorised Officer of the Chief Inspector, unless the Operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise odour.	Local residents frequently complain about odour related to the installation, on this occasion the complaint of 27/2/24 was substantiated by IPRI inspectors conducting an odour impact assessment in the area on the morning of 28/2/24. IPRI inspectors detected an offensive odour associated with the installation at an unacceptable level approximately 280m offsite. No odour was detected at point 11 on the odour impact assessment which is to the SW (upstream of the wind on that day) of the installation. The IPRI inspectors then entered the installation and confirmed the odour detected off site, was the same odour that could be detected on site.	The Operator shall review and update the odour management plan accordingly for approval by the Chief Inspector. Operator to provide a proposal (who, what and when) of a review by an independent odour control and anaerobic digestion expert to ensure all the requirements of the enforcement notice are addressed. Operator to provide a report by the independent odour control and anaerobic digestion expert of the characterisation and quantification of all major point and fugitive odour sources* (NB * details needed on precisely what characterisation and quantification of all major point and fugitive odour sources means) Operator to provide a report by the independent odour control and anaerobic digestion expert of the odour impact	30 April 2024 30 April 2024 30 June 2024 31 August 2024

		assessment from all major point and fugitive odour sources with options for reducing the impact to an acceptable level (e.g. 98%le <1 OU/m3 at the site boundary) from the significant contributors*. (NB * details of the odour modelling requirements to be provided)	
		Operator to provide a proposal with timescales with justification for remedial actions to ensure an acceptable odour impact (e.g. 98%le <1 OU/m3 at the site boundary), which will include process and emissions monitoring.	31 October 2024
		Operator to provide an updated odour management plan to include proposed remedial actions.	31 December 2024

Signature [redacted] (Name in capitals [redacted]) **Date** 07/03/2024

1.0 Procedure Purpose

To define the process control used to prevent, identify, and control foaming in the AD tanks.

2.0 References

Best Available Techniques (BAT) Waste Treatment

PPC Waste Treatment Permit under the Pollution and Control (Northern Ireland) Regulations 2013 – P0413/12A v2

3.0 Terminology & Definitions

SHEQ Safety, Health, Environmental & Quality

AD Tank Anaerobic Digestion Tanks

SCADA Supervisory Control and Data Acquisition

4.0 Responsibility

General Operatives to implement actions, monitor and report any issues.

Plant Manager to ensure foaming incidents are prevented and where not possible to prevent, identify and control.

Engineer to clean and check functionality of PRV's in the event of foam reaching these levels.

SHEQ to ensure compliance with the procedure.

5.0 Procedure

5.1 Preventative Measures

- Granville has got strict intake controls in place to ensure the feed stock is suitable and as identified on the permit.
- There is equipment and a procedure in place to remove non-conforming feed stock and a reject load procedure.

- Anti-foaming agents are used to eliminate or reduce foam inside the tanks. Chemicals such as antifoam and vegetable oil (depending on availability).
- Hydraulic tank mixing is in place including top and bottom mixing on the AD tanks.

5.2 Identification

- Sight glasses are located at the top of the AD tanks and are part of the routine checks. This allows for physical identification of foam.

The site has a SCADA system which includes the following monitoring points;

- Radar level sensors on the AD tanks. Foaming identifying measure is comparison of Radar level sensor vs Pressure Pad level sensor. Rapid increase of Radar Level or noticeable higher reading at radar vs pressure pad indicate foaming.
- Gas pressure monitoring at the AD tanks and Balloon. A rise in gas levels can indicate foaming specifically if the pressure across the two AD tanks and the Balloon doesn't rise in sync. An increase in gas pressure in one tank would indicate foaming.
- Digestate outfeed pipe temperature sensor. If the tank is in feeding stage but the outfeed pipe temperature drops, then this suggests that the outfeed is not flowing. This may identify foam forming vs liquid digestate at the top of the tank.
- SCADA control includes a foam detection warning. If the system identifies that there may be foam, then a visual warning on the SCADA control screen and an alert message sent.

5.3 Control

Foaming is controlled in a number of ways. We use some or all of these in combination to control the level of foam in the AD tanks.

- Anti-foaming agents - although used as a preventative measure, where we have identified that foaming has already begun to occur then we can dose the tanks with Anti Foam or vegetable oil to bring the levels of foam down.
- Dosing control – dosing is recorded within the daily site diary completed by Site Supervisor and/or other operatives including quantity, antifoam agent type, and dosing time. Dosage levels are also communicated with Site Manager. Antifoam is dosed where required during levels of potential foaming as indicated by the SCADA system.
- Stock level control – Levels of antifoaming agents are recorded during a weekly stock take by the Performance & Asset Technician and recorded in an online

SharePoint system. Stock levels are monitored against daily dosing levels and are kept accordingly. GECO also have contracts with main suppliers of antifoaming agents to ensure a supply is readily available.

- Hydraulic Mixing. If we have identified that foaming has begun, then switching mixing on or off to change or switching to top mixing only can be methods used to reduce foam levels.
- Altering feed rate, frequency or skipping feeds. If the AD tanks are active and foam or the potential for foam to generate has been identified then reducing the feed rate, skipping a feed or reducing the frequency of feeds can be used individually or in combination to bring the foaming under control.

5.4 Post foam

In the event of a foaming event occurring then the operations team will discuss the event with the Plant Manager. This is to analyse if everything was done to prevent, identify and control the incident. Depending on the nature of the foaming event information can be reviewed such as SCADA data history, weighbridge information for incoming feedstock loads, CCTV to review the loads tipping, the timeliness of the identification measures and the effectiveness of the control measures. The purpose of this informal review is to continually improve our foam prevention and control measures. Where new information is gained it will be added to this foaming process control document.

In the event of foam not being controlled and it reaches the PRV's then the spill will be dealt with following EP2 Spillage Response and the PRV's will be checked and inspected to confirm correct functionality by the site engineer. Uncontrolled releases of foam will be reported as an environmental incident.

6.0 Relevant Documents

EP2 Spillage Response

7.0 Document History

Version:	Changes made:	By:	Date:
0	Draft	[redacted] / [redacted]	30/01/2023
1	Document Controlled and issued reference in IMS	[redacted]	01/02/2023

From: [redacted]
To: [redacted]
Cc:
Subject: Re: Report of Odour - 28-29/10/25
Date: 06 November 2025 09:18:26
Attachments: image001.png

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investigation.

Hi [redacted]

Apologies on the slow reply I have been off for a few days, I got contacted directly from [redacted] about this on the day of the complaint likely just after he contacted yourselves and conducted an odour survey myself . There was no noticeable odour coming from us that day but was an odour from other parts of the estate which I assume to have been where the smell was emanating from. I attempted to call [redacted] back that evening after the odour survey to let him know where the smell was coming from and that it wasn't from us, but he didn't answer the call.

I'm only back today so will check if anything has been sent over to you and if not get it sent across today.

Many Thanks

[redacted]
Site Manager
Granville Ecopark
BIO CAPITAL LIMITED

T: [redacted]
E: [redacted]
A: Granville Industrial Estate, Granville Rd, Granville, Dungannon BT70 1NJ

From: [redacted]
Sent: 05 November 2025 14:25
To: [redacted]
Cc: [redacted]
Subject: FW: Report of Odour - 28-29/10/25

Caution: This email originated from outside of your organisation. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi

Please see below.

Anything to report?

Thanks

[redacted]

From: [redacted]
Sent: 29 October 2025 09:43
To: [redacted]
Cc: [redacted]
Subject: Report of Odour - 28-29/10/25

Hi

We have received reports of offensive odour emanating from the Granville Industrial Estate.

The odour was first reported at 6.20pm 28th October 2025 and is still noticeable this morning 8.30am 29th October 2025.

Has your facility had any malfunction, maintenance or other issue which could have caused odour issues for the time in question?

Please investigate and report back your findings and include any odour assessment or other relevant information.

Regards
[redacted]

[redacted]
Industrial Pollution and Radiochemical Inspectorate
Northern Ireland Environment Agency
17 Antrim Road
Lisburn
BT28 3AL
Tel: [redacted]

From: [redacted]
To: [redacted]
Cc: [redacted]
Subject: Re: Report of odour 28.07.25
Date: 29 July 2025 17:02:12
Attachments: image001.png
image004.png
image005.png

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investigation.

Hi [redacted]

I spoke to [redacted] last night at approx 23.00 , he had previously reported an odour a few weeks back and I took a trip out to his house and spoke with him and gave him my personal number to contact me directly if he had any concerns.

He spoke to me and said that there was a strong smell of gas coming from our site. i informed him that we had been doing some work during the day but that the work was not still ongoing but that i would get the operators on site to do a walk around and check for anything that might be causing an odour and check the gas detection alarms on site and also carried a gas monitor with him

My operator on site did a walk around , conducted an odour assessment and confirmed that there was no sign of odour coming from us specifically. The only thing he could notice was the stack from Linergy blowing in that direction.

I spoke to [redacted] after having the operator do his checks and explained all the checks that I had the guys do and he confirmed at that time that the gas smell seemed to have gone again.

I will continue to liase with [redacted] and will go out and visit him again in the next day or two and address any further concerns he may have.

I also raised this internally on Ecoonline today with the same actions that ive listed in this email and will follow up accordingly.

Many Thanks

[redacted]
Site Manager
Granville Ecopark
BIO CAPITAL LIMITED

T: [redacted]
E [redacted]
A: Granville Industrial Estate, Granville Rd, Granville, Dungannon BT70 1NJ

From: [redacted]
Sent: 29 July 2025 16:39
To: [redacted]
Cc: [redacted]
Subject: FW: Report of odour 28.07.25

[redacted]

Please see below

Kind Regards,

[redacted]

SHEQ Manager Northern Ireland
BIO CAPITAL LIMITED
T: [redacted]
E [redacted]

[redacted]: The Corn Store, Hyde Hall Farm, Buntingford, Hertfordshire, SG9 0RU

From: [redacted]
Sent: 29 July 2025 16:27
To: [redacted]
Cc: [redacted]
Subject: Report of odour 28.07.25

Hi [redacted] / [redacted]

We have been informed that a resident has contacted yourselves regarding odour emissions on the night of 28.07.25.

Please keep us updated to as your investigations and actions in response to this report.

Regards
[redacted]

[redacted] [redacted]
Industrial Pollution and Radiochemical Inspectorate
Northern Ireland Environment Agency
17 Antrim Road
Lisburn
BT28 3AL
Tel: [redacted]

From: [redacted]
To: [redacted]
Cc: Lewis, Helen
Subject: RE: Schedule 6 notification for overflowing AD tanks on 5th August 2024
Date: 07 August 2024 20:34:51
Attachments: image001.jpg
image002.png
image003.png
05-08-2024 Schedule 6 Notification - PART A.pdf

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investiga ion.

Good evening, [redacted]

Please find attached the Schedule 6 as requested.

Kind Regards

[redacted]
Interim Plant Manager
GRANVILLE ECO PARK LIMITED
T: [redacted]
E: [redacted]
<!--[if !vml]--><!--[endif]-->A: Granville Industrial Estate Granville Rd Granville Dungannon BT70 1NJ

Graphical user interface Description automatically generated with medium confidence

From: [redacted]
Sent: Wednesday, August 7, 2024 11:46 AM
To: [redacted]
Cc: Lewis, Helen [redacted]
Subject: Schedule 6 notification for overflowing AD tanks on 5th August 2024
Importance: High

Good morning

A reminder that your Schedule 6 Part A notification is supposed to be submitted within 24 hours of the incident occurring – can you please get that through to us.

Please ensure you provide us with full details on how the breakdown occurred and your proposed method of preventing recurrence.

Thanks

[redacted]
Principal Inspector
Industrial Pollution and Radiochemical Inspectorate
17 Antrim Road
Lisburn
BT28 3AL
T: [redacted]
E: [redacted]

A close-up of a logo Description automatically generated

From: [redacted]
To: [redacted]
Subject: RE: update on carbon exchange
Attachments: image001.png

Hi [redacted]

Hope all is well, just wanted to let you know the carbon exchange was successful.

Speak soon

[redacted]
Environmental & Sustainability Manager
BIO CAPITAL LIMITED
T: [redacted]
E: [redacted]
A: The Corn Store, Hyde Hall Farm, Buntingford, Hertfordshire, SG9 0RU

From: [redacted]
Sent: Thursday, August 15, 2024 4:52 PM
To [redacted]
Subject: RE: update on carbon exchange

Thanks [redacted]

From: [redacted]
Sent: Thursday, August 15, 2024 4:50 PM
To: [redacted]
Subject: update on carbon exchange

Hi [redacted]

Hope all is well. Thank you for your time yesterday. Just to keep you updated on the site's activities, I have been informed by the GECO team that we will be exchanging the Carbon on the OCU this Sunday (18th of august).
As agreed previously in the short term proposals issued to NIEA team, extract below:

The team will monitor activities and in order to prevent and minimize the uncontrolled release of emissions, the following considerations will be taken into account prior to the commencing of any work and during the window where activities related with the OCU maintenance take place:

1. *Waste handling activities inside Reception Building to be minimized, this will allow for odour abatement needs to be minimal for the duration of the Carbon exchange activities; This will allow us to keep doors closed on the reception building as much as possible.* Update: minimal volume of waste in the building as it has been processed already, there will be no vehicle movement so doors will be kept closed at all times
2. *Waste deliveries to be minimized to allow for the odour abatement needs for the soup room to be minimal for the duration of the Carbon exchange activities;* Update: no waste is accepted on Sundays
3. *Limit the activities in the dewatering building;* Update: no activities in the dewatering building
4. *Introduce site routine walk arounds focused on odour monitoring with supporting information being collated (wind direction, description of operating facilities eg all doors are closed);* Update: hardcopies of site notes & inspections will be generated by the team

I will update you on Monday

Speak soon

[redacted]
Environmental & Sustainability Manager
BIO CAPITAL LIMITED
T: [redacted]
E: [redacted]
A: The Corn Store, Hyde Hall Farm, Buntingford, Hertfordshire, SG9 0RU

From: [redacted]
To: [redacted]
Cc: Lewis, Helen
Subject: RE: variation query
Date: 25 July 2024 15:16:00
Attachments: image002.png
image004.jpg
image001.png

Hi [redacted]

Thanks for the call. As discussed, we think the production of carbon dioxide may be a scheduled activity under PPC:

SECTION 4.2
INORGANIC CHEMICALS
Part A
(a)Producing inorganic chemicals such as—
(i)gases, such as ammonia, hydrogen chloride, hydrogen fluoride, hydrogen cyanide, hydrogen sulphide, oxides of carbon, sulphur compounds, oxides of nitrogen, hydrogen, oxides of sulphur, phosgene;

Can you please come back to us with your thoughts on that as soon as possible. We will put the variation application on hold for the time being so we can decided if the variation needs to be substantial or standard once we have all the evidence in front of us.

Thanks
[redacted]

From: [redacted]
Sent: Thursday, July 25, 2024 12:45 PM
To: [redacted]
Subject: RE: variation query

Hi [redacted]

I'm available for a call at anytime this afternoon if that works for you?

Kind regards

[redacted]
Head of SHEQ
BIO CAPITAL LIMITED
[redacted]
[redacted]
A: The Corn Store, Hyde Hall Farm, Buntingford, Hertfordshire, SG9 0RU

From: [redacted]
Sent: Wednesday, July 24, 2024 2:24 PM
To: [redacted]
Subject: variation query

Hi [redacted]

Would you have time for a quick chat about the variation this afternoon? Let me know a suitable time and I'll give you a quick call

Thanks
[redacted]

[redacted]
Senior Chemicals Inspector
Chemicals Team
Industrial Pollution and Radiochemical Inspectorate
17 Antrim Road
Lisburn
BT28 3AL
T: [redacted]
E [redacted]

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IMS level 2 –

SP02 Planning & Operational Control

Operator Name: Granville Ecopark Limited

Installation address: Granville Anaerobic Digestion and Biogas Plant
Granville Industrial Estate
Dungannon
County Tyrone
BT70 1NJ

Permit number
P0413/12A

Variation number
P0413/12A/V3

Table of Contents

1. Objective

To establish and maintain a system of identifying, analysing and controlling all processes and risks to processes related to the GECO Integrated Management System (IMS).

2. Scope

The requirements of this procedure apply to all GECO activities with regards to Health & Safety, the Environment and Quality. This document outlines the process of planning and developing the Integrated Management System.

3. Responsibility

The **Plant Manager** has overall responsibility to ensure the IMS is adequately planned, procedures developed and subsequently carried out.

It is the responsibility of the **SHEQ Officer** to ensure the IMS is effectively planned, implemented and that the procedures are adequately audited.

The responsibility for each aspect of operational control is designated in the specific procedure.

4. Procedure

a. IMS Planning

The planning stage of the IMS is used to identify the objectives, risks, aspects and legal obligations of GECO. The subsequent IMS documents are produced based on the findings of the planning stage. Planning is a continuous process meaning these registers are live documents and will be reviewed and updated on a regular basis as new details become apparent or changes occur.

i. OH&S Planning

Hazard Identification, Risk Assessment & determining controls
GECO establish the health & safety hazards of all processes on an activity by activity basis. Guidance from ISO 45001 (Clause 4.3.1) is used to ensure all possible hazards are identified. From these hazards a likelihood and risk rating are issued. Based on the risk rating, the SHEQ Officer & Plant Manager determine the control measures to be put in place and what H&S documentation is required. This process is documented in SR03 – Health & Safety

Hazards Risks Assessment Register. This document is reviewed on at least a yearly basis or when new hazards/risks are identified on site.
Legal and other requirements
GECO has established and will maintain the Legislation Register (SR05) to include all applicable health and safety legislation. The document outlines the requirements of the legislation including how and if GECO currently comply with the legislation.
H&S Objectives
Taking into account both the legal register and the hazards risk register the GECO management establishes H&S objectives including a timeline for when these are to be achieved. The objectives are continuously monitored by the Plant Manager and reviewed and updated during **Management Review** on an yearly basis.

ii. Environmental Planning

Environmental Objectives
The management of GECO have and will continue to set Environmental Objectives and targets. These are related to the Environmental Aspects & Legislation and the procedures put in place in the IMS will help GECO to measure and monitor progress towards these objectives.
Environmental Management System Planning
The **SHEQ Officer** is responsible for establishing, implementing and maintaining EMS processes and reporting on these issues to GECO Management.
GECO have established and will maintain a document that outlines all identified environmental aspects (**SR02**) that can have significant impacts on the environment as a result of GECO's activities. Aspects are identified under key environmental areas including Atmospheric & Air Quality, Water, Natural Resources, Local Environment, Abnormal/Emergency and Waste. The aspects are rated according to likelihood and severity using a matrix as outlined in the document. Considering the potential environmental impact, GECO proposes further control measures and references the evidence of these control measures within the IMS.
Environmental Legislation
GECO has established and will maintain the **Legislation Register (SR05)** to include all applicable environmental legislation. The document outlines the requirements of the

legislation including how and if GECO currently comply with the legislation. It also links each piece of legislation to the applicable Environmental Aspect.
Waste Summary Register
A **Waste Summary Register (SR09)** is maintained by GECO. This document identifies all waste streams from GECO activities and outlines the method dealing with it. The document also aids to place corrective actions in accordance with the waste hierarchy to reduce, reuse or recycle the waste in a commitment by GECO to be a zero waste company.

iii. Quality Planning

Quality Objectives
GECO Management set, monitor and review quality objectives which are to include product requirements, process capability, plant availability, financial, HR and customer satisfaction. These goals are monitored by the **Plant Manager** with the aid of IMS documentation and reviewed and updated at **Management Review**.
Quality Management System Planning
The **SHEQ Officer** is responsible for establishing, implementing and maintaining QMS processes and reporting on these issues to GECO Management. To adequately design an effective system of monitoring and improving quality performance the **Quality KPI's Register (SR04**) document was created. This document analyses Key Performance Indicators (KPI's) in relation to the quality objectives and the risks of not achieving them. The register rates the risks to determine the level of control measures and monitoring required in a QMS to ensure these objectives are met. It is from this register that the latter Quality Procedures are produced.

b. Core System Procedures

The Core System Procedures are procedures that are mandatory under the ISO & OHSAS standards and include OH&S, Environmental and Quality documents. These procedures include:

- Document & Record Control;
- Planning & Operational Control;
- Competence, Training & Awareness;
- Communication;
- Emergency Preparedness & Response;
- Performance, Measurement & Monitoring;

- Non-conformance & Improvement;
- Internal Audit;
- Management Review;

c. Operational Controls

i. OH&S Operational Controls

The need for OH&S operational controls and procedures has been identified in the **H&S Hazards Risk Register**. This register will be reviewed and updated on a regular basis. Other H&S procedures are developed in accordance with complying with the legislation as set out in the **Legislation Register**.

These operational controls include:

- H&S Handbook;
- Inductions;
- Contractor Management;
- Risk Assessments & Method Statements;
- COSHH Assessments;
- PPE Procedure;
- Permits to Work;
- Monitoring H&S Performance;
- Participation & Consultation.

These operational controls/procedures are outlined in Level 3 – IMS Implementation Documents.

ii. Environmental Operational Controls

By the use of the **Environmental Aspects & Impacts Register** and the **Environmental Legislation register**, a series of Environmental control procedures have been identified and are included in the level 3 documents. These include:

- EP01 – waste management, recycling & reuse procedure
- EP02 – Spillage response V 7
- EP03 – Emissions response V6
- EP04 – Noise management V6
- EP05 – Odour management V9
- EP06 Waste Pre acceptance V7
- EP07 waste acceptance
- EP08 waste rejection
- EP09 Environmental monitoring procedure
- EP10 Energy & water management v5
- EP11 environmental emergency
- EP12 waste contingency plan
- EP13 sampling protocol
- EP14 Site closure plan v7
- EP15 commissioning & decommissioning
- EP16 Leak Detection and repair (LDAR)

- EP17 Housekeeping procedure v1

These registers will be periodically updated, and the environmental procedures will be modified or added to as required. The **SHEQ Officer** is responsible for this update.

iii. Quality Control

The operational control procedures for quality are determined from the control measures and monitoring required to reach the KPI's set out in **SR04 – Quality KPI's**.
These KPI's are to be reviewed periodically by the **Plant Manager** and any modifications to the quality procedures implemented as required.

iv. Operation and maintenance of facilities, organizational assets and infrastructure;

A regular maintenance process for plant and equipment is important for preventing plant breakdown and failure, and associated releases of pollutants. It also ensures that the facility is operating effectively and efficiently.

A CMMS (Computerized Maintenance Management System) is the software being made bespoke to all BioC sites, this software will support GECO manage and optimize maintenance activities. Data from operational assets, work orders, preventive maintenance, will be readily available for analysis.

This software will allow to make bespoke:

- Asset Management, by helping track and manage information about assets, including their location, maintenance history, and specifications.
- Work Order Management, by streamlining the process of creating, assigning, and tracking work orders, ensuring tasks are completed efficiently.
- Preventive Maintenance Scheduling, by allowing the scheduling and track preventive maintenance activities based on the suppliers recommendations, therefore minimizing reducing the risk of breakdowns and extending the lifespan of assets.
- Inventory Management, by managing spare parts and other supplies needed for maintenance, ensuring they are readily available when needed.

The benefits expected from the CCMS include improve safety to the sites overall, reduce unexpected breakdowns, improved asset uptime, reduce maintenance costs and streamline maintenance activities saving effort to the maintenance team.

Sites team shall ensure that all monitoring and measuring equipment is fit for purpose, maintained, and calibrated to appropriate standards (following suppliers recommendations). The following maintenance schedule includes the recommended maintenance checks by the suppliers. Procedures and processes listed have been implemented to ensure continued maintenance of the sites. Maintenance procedures for the following key items of plant can be found in the site office.

By tracking maintenance activities and ensuring proper procedures are followed,

CMMS can make jobs safer. BioC approach to safety starts with ensuring staff are deemed trained for the task at hand and to avoid unplanned work. Accidents and incidents are minimized when RAMS are in place and details of the procedure are discussed with the team prior to any action taking place.

With the aim of minimizing all other than normal operating conditions BioC approach to the unexpected consists in: **making safe first then plan the intervention**. No work can go ahead without approved RAMS. Still, unexpected breakdowns can still occur (even though deemed unlikely) and for those situations here a breakdown of the associated documentation to ensure staff are competent:

- Emergency preparedness & response (provides instructions on what to do in case of a large gas release, fire or explosion, major spill, tank breach, major injury response plan, trespassers etc)
    - HSP16 Safe Isolation & LOTO procedure (instructions on how to make plant safe)
- HSP09 – fire preparedness & management procedure
- HSP01 - Incident reporting procedure v8 (includes instruction for internal reporting of near misses, incidents, accidents, positive observations and internal auditing)
- Odour management plan (with section dedicated to abnormal events)
- QP25 foaming process control (instruction on what to do in the case of foaming in the tanks)

d. IMS Scope

The scope of the integrated management system (IMS) at Granville Ecopark covers every requirement laid out in BS EN ISO 9001, ISO 14001 & ISO 45001 except for the following:

Exclusions from ISO 9001:2015

Clause	Reason for Exclusion	Related Subjects	How These Are Managed
8.3	Design and development does not take place.	Service provision.	Inspections, checks and measurements are made during waste acceptance and processing. The arrangements elsewhere cover the organization meeting requirements of customers.

The IMS scope at GECO involves the operation & maintenance of two organic waste anaerobic digesters processing approximately 80,000 tpa.

The following products and services provided by GECO are determined taking the internal/external issues and requirements of relevant interested parties into account (see IMS03 – Context of GECO for these details):

1) Acceptance of Organic Waste from waste producers/carriers

2) Treatment of waste as shown in the process flow diagram (SR15)

3) Generation of 5MW renewable electricity through 4 CHP engines at Granville site

4) Generation of renewable electricity for various customers across 10 remote CHP sites

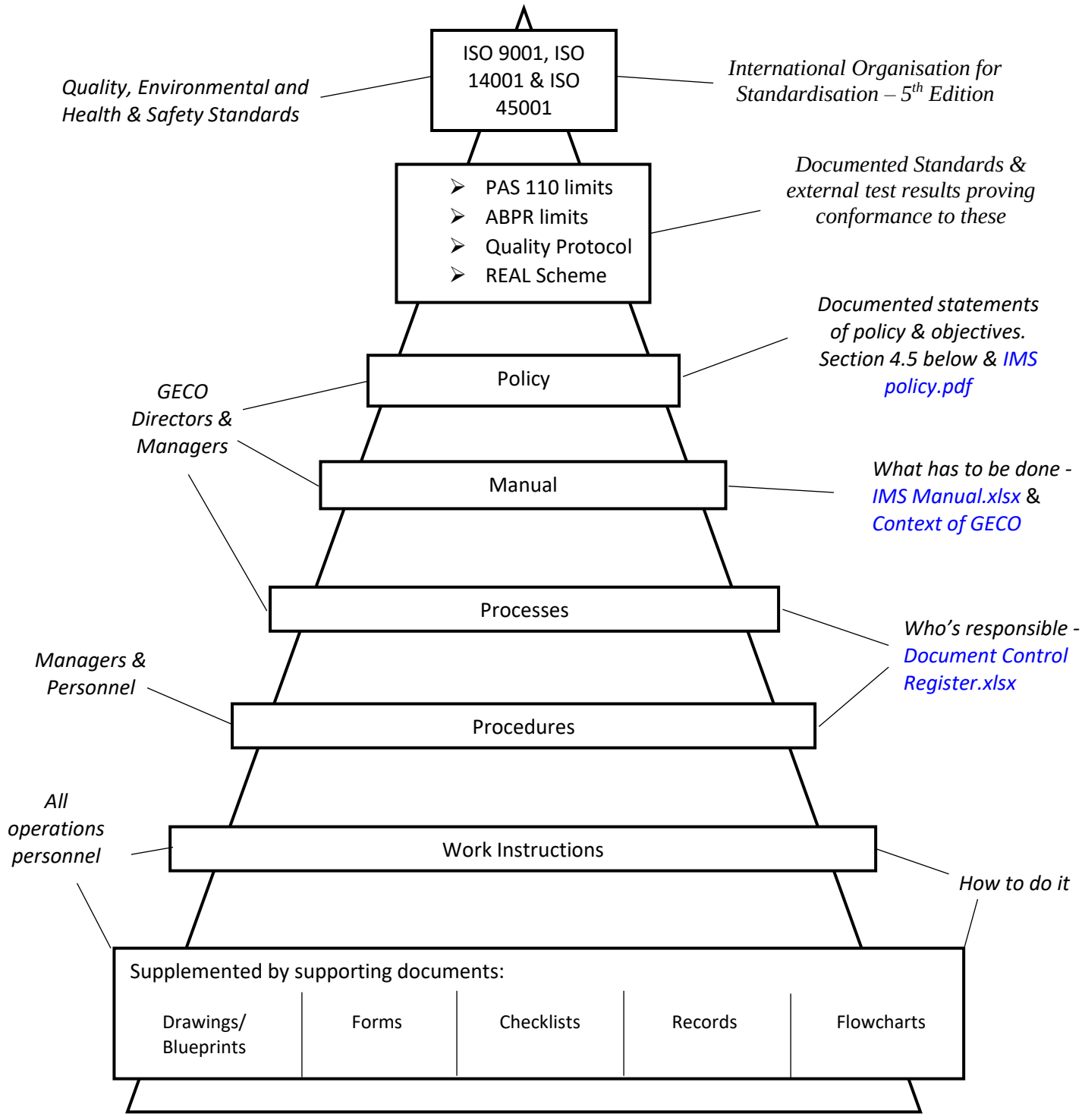
5) Production of Quality Digestate to PAS 110 Standard

A wide range of documents, registers and forms that are critical to the company's IMS can be found in the document control register (SR01) and these are fundamental when it comes to meeting the requirements under ISO 9001, ISO 14001 & ISO 45001. All these documents & records contribute towards the effective management of quality related issues at Granville.

The key boundaries for the scope of the IMS at GECO are basically summarised in the below categories and in the following IMS Hierarchy diagram:

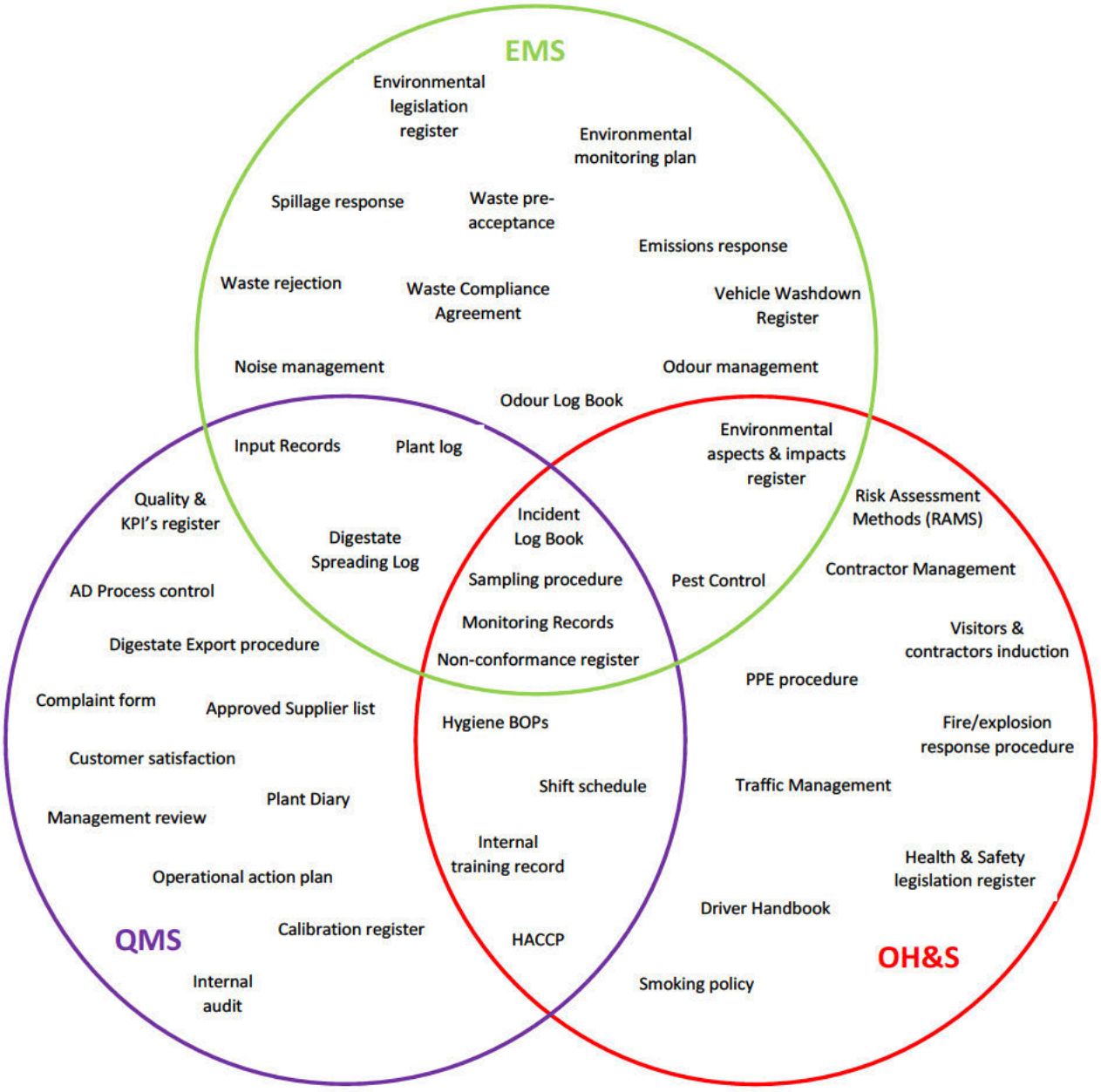
- Customer satisfaction
- Statutory/regulatory requirements
- Document control (register)
- Internal & External Issues
- Requirements of Interested Parties
- Organisational Structure & Responsibilities
- IMS Objectives/Manual
- Continuous Improvement

IMS Hierarchy



4.4.1 IMS Hierarchy

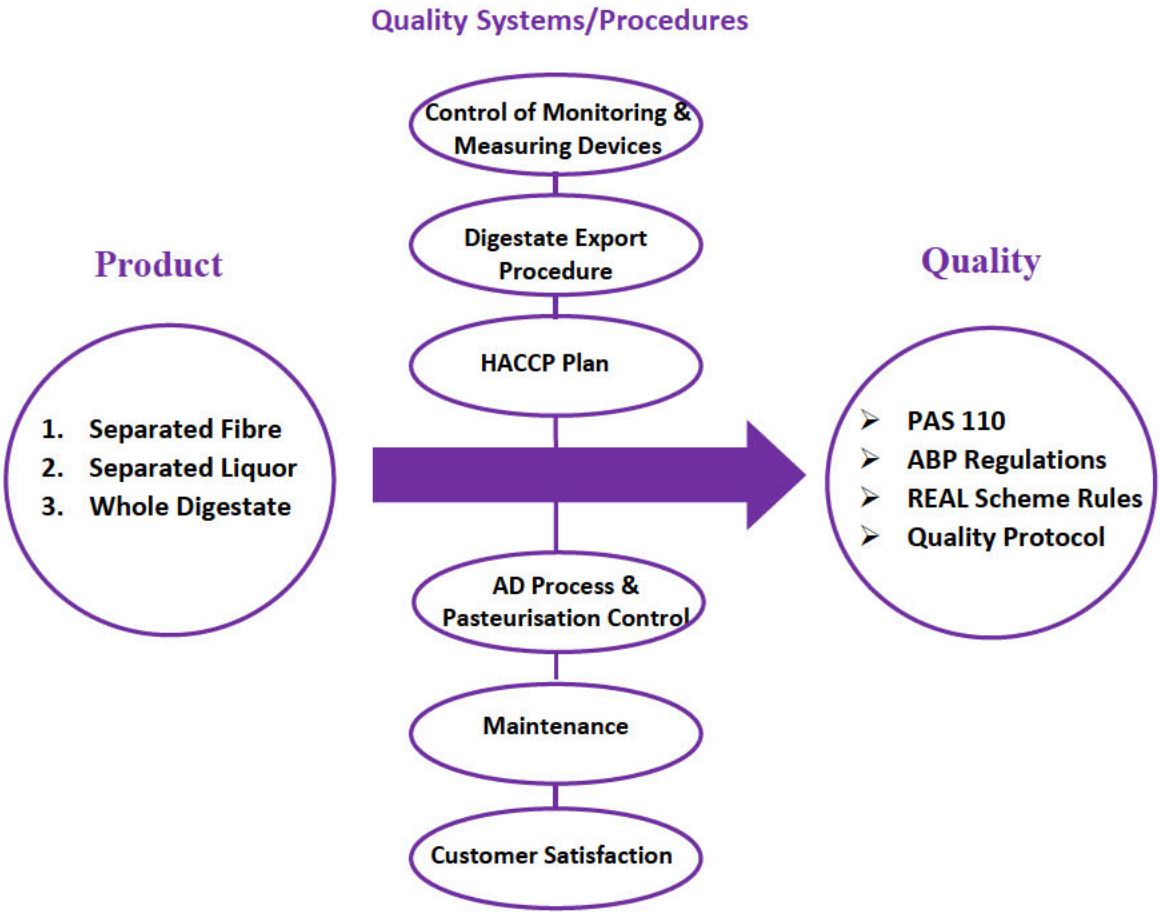
Certain documents under the 3 core management systems (EMS, QMS and OH&S) overlap as shown in the below diagram:



e. GECO Products & Quality Standards

A significant component of GECO's QMS includes regular sampling/inspection of input waste materials, process intermediates and final products. Through this we can verify that the input waste received meets certain quality requirements, the AD & pasteurisation processes are running properly and that the final products meet the appropriate/statutory requirements under the relevant Quality Standards.

The below system shows the three products produced at Granville Ecopark and the Quality Standards that these products must meet before they are allowed to be sent to customers:



4.5 Diagram showing GECO Products along with the key systems/procedures in place to ensure conformity to the Quality Standards

5. Associated Documents

SR01	Document Control Register
SR02	Environmental Aspects & Impacts
SR03	H&S Hazards Risk Register
SR04	Quality & KPI's Register
SR05	Legislation Register

6. Quality Standards

PAS 110 Specification

Anaerobic Digestate Quality Protocol

REAL Scheme Rules

From: [redacted]
To: [redacted]
Cc: [redacted]
Subject: update on procedures / information from odour monitoring days / enforcement notice
Date: 03 July 2024 16:36:00
Attachments: image001.jpg

Hi everyone,

I am following up on some information requests over the past few weeks, can you give me a date for when I will get the information through for the below:

1. Information regrading site operations on 18 and 19 June – discussed on 19 June at site meeting and followed up by an email dated 25 June.
2. Procedures related to OMP requested by email on 27 June.

And finally, the date the odour report by the independent expert on the characterisation and quantification of all major point and fugitive odour sources was due on 30 June as noted on the enforcement notice, we allowed an extension for the GCMS speciation to be submitted at a later date (19 July via email on 20 June) so we don't expect a finalised report but would appreciate seeing the first draft.

Thanks
[redacted]

[redacted]
Senior Chemicals Inspector
Chemicals Team
Industrial Pollution and Radiochemical Inspectorate
17 Antrim Road
Lisburn
BT28 3AL
T: [redacted]
E [redacted]

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