

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Whiteshore cockles - pollution prevention control permit  
**Date:** 08 June 2022 13:29:46

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Hello [REDACTED]

The linked document should provide you will some information on the proposal for the meeting on the 15th at 11am.

<https://erdms.nature.scot/documents/A3750053/details>

Thanks

[REDACTED]  
[REDACTED] **Operations officer, Outer Hebrides**

**NatureScot** | Stilligarry | South Uist | Outer Hebrides | HS8 5RS | [REDACTED]

[nature.scot](https://nature.scot) | [@nature\\_scot](https://twitter.com/nature_scot) | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

**From:** [REDACTED]  
**To:** [REDACTED] <[\[REDACTED\]@sepa.org.uk](mailto:[REDACTED]@sepa.org.uk)>; [REDACTED]; [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** Whiteshores Cockles, Paible, North Uist  
**Date:** 25 May 2022 16:07:27  
**Attachments:** [20220513\\_PPC-A-5001983\\_AS\\_response\\_LA\\_consultee\\_comments.pdf](#)  
[220503 - Consultee Response - LA.pdf](#)

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Good afternoon

I am contacting you to share the response recently received from SEPA to the consultation comments submitted by the planning authority to the PPC Part A Permit application (both documents attached). In addition, the planning authority have yet to discharge conditions on the recent planning permissions granted, as the amount and type of information provided has not been satisfactory and, in some respects, differs significantly from the details provided as part of those applications.

In particular, rather than on-site treatment and discharge to the sea under a Marine Licence, as was previously proposed, it is currently proposed that waste would be removed from site by tanker, with 75% of the condensate effluent taken to the mainland for use in an anaerobic digester and 25% spread on Vallay.

The volume of waste involved would be significant. The Permit application estimates that a typical week's processing would yield 97,500 litres of condensate and proposes a 50,000 litres condensate storage tank on site (amongst other storage). The condensate would be removed in 25,000 litre collections by tanker. This removal would be in addition to the removal of fish oil, excess meal and wastewater, which would also be removed by tanker, for off-site use in anaerobic digesters or treatment.

We have concerns about the potential environmental impacts and community implications of such an approach, and its longer-term feasibility and viability. However, from the response provided by SEPA, some of these matters would not be within the control of the permitting process, but may be subject to other controls, such as an 'Exempt' activity under the WML process.

In light of this, having regard to the outstanding planning conditions requirements and as the PPC application moves to the next stage of assessment, we would find it very helpful to have a short Teams meeting with those that may be involved in different aspects of the overall process.

If you could you indicate your availability over the next 2-3 weeks, I will try to find a mutually convenient time and send a meeting invitation.

With thanks and kind regards

[REDACTED]



## **Whiteshore Cockles:**

### **PPC/A/5001983 – New Permit Application – consultation**

Re. [REDACTED] (SEPA) response to [REDACTED] (Planning Officer) COMHAIRLE NAN EILEAN SIAR, letter dated 03 May 2022.

1. *It is noted that in the application submissions (IPPC Technical Report Supporting Document) Table 1 on page 7 refers to the storage, handling and dispatch of by-products and waste as a directly associated activity. However, in column 3 of the table, which identifies the details of the activity, the removal of effluent and wastewater from the facility by tanker is not detailed, nor is the subsequent intended disposal of those waste products to land and to AD plant elsewhere.*

Response: The activities listed in Table 1 (pg7) are for those that shall be regulated under the proposed PPC Permit for the installation. These are activities that SEPA would be the competent authority to regulation under the PPC 2012 Regulation.

The activities you mention (*removal of effluent and wastewater from the facility by tanker; intended disposal of those waste products to land and to AD plant elsewhere*) are not activities that would be regulated under the proposed PPC Permit, primarily as they would be undertaken outwith the permitted boundary of the installation.

Any environmental or other nuisance or concerns from tanker movements on the public highway would not be under SEPA's regulatory role in the scope of this application.

Waste to land applications would also not fall directly under the scope of this application. These are traditionally regulated by SEPA, under the Waste Management Licensing Regulations 2011 and any proposed activity would require an appropriate authorisation and review from SEPA before being permitted (normally WML 'Exemption' for the materials in question). Despite this regulatory difference the assessment application and SEPA assessment of it will need to consider the viability of such a proposed outlet for the waste stream, it is an essential requirement to ensure the process can be operated in a sustainable and environmentally responsible manner.

2. *Reference is made throughout the report to the island's (North Uist) wastewater treatment works. Beyond small package treatment works serving a small number of houses, no such treatment works exist and the location of the intended site for the disposal and treatment of wastewater (human waste) is queried. It is also questioned whether Scottish Water have indicated that sufficient capacity exists at an identified suitable wastewater treatment facility, through their PDE process, and whether written agreement has been provided by Scottish Water and SEPA to such an approach?*

The application does refer to a double skinned welfare tank (2000l) and that effluent from the welfare unit being removed *by tanker for treatment at the Islands sewage treatment*

works. I note your information that a treatment works does not exist on the island and it shall be put to the applicant for further clarification and understanding if there has discussion with Scottish Water around this matter.

3. *It should be noted that details of the intended surface water drainage for the site have been requested, as part of the planning conditions discharge process. Given the nature of the process, it is considered necessary for these details to be provided at this stage, prior to the operation of the facility.*

*The application states 'Surface water drainage from the concrete pad is currently not served by any sub-surface drainage system' 'The roof water will be harvested for use in the process for cleaning. Further investigation will be undertaken by the operator during 2022 to consider all surface site drainage at the facility, however a scheme will be drawn up and implemented'.*

Point source emissions to surface water and water efficiency is an essential part of the PPC Permit assessment process, the application does not suitably consider this matter and SEPA shall be requesting further information to ensure appropriate techniques are in place.

4. *In terms of Appendix 6 (the Blackwell Water Consultancy Ltd Technical Report for treating fish rendering effluent), it is noted that removing effluent by tanker is not recommended to be considered further, due to it being highly expensive and onerous. However, the removal of effluent by tanker formed part of the details recently submitted by the applicant in respect of discharging the conditions applied to one of the recent planning permissions for the facility (Ref 20/00007/PPD).*

SEPA notes the proposed methodology for effluent treatment and disposal contradicts the information given by the appointed consultant undertaking the effluent optioneering assessment. SEPA shall be investigating this matter further as part of the permit assessment. It has however been noted on initial review that the recommended methodology for disposal within the report (Rapid infiltration for untreated effluent) would not meet the requirements of BAT for the industry or the prescribed emission limit values for effluent before discharging to the water environment. This is not a treatment process and would not be approved by SEPA.

*It did not, however, form part of the application proposals that were the subject of that planning permission, or the permission reference 19/00288/PPD. These applications indicated an intention to dispose of effluent to sea, which would be controlled by a Marine Licence. As a result, the applications were screened for EIA and assessed under the HRA regime on the basis of materially different impacts to those currently proposed.*

Any discharge to the water environment, marine or surface water would require the appropriate treatment of effluent prior to discharge and assessment that the risk to the environment would not be significant and controlled. SEPA is has not been informed that marine discharge including appropriate onsite treatment has been considered by the applicant at this stage.

*Further information in this regard has been requested from the applicant and none of the planning permission conditions has been discharged, to date. A copy of the planning authority's response to the applicant has previously been provided to SEPA. It remains unclear at this stage whether the relevant conditions of the planning permissions will be able to be*

*discharged as requested. As these are suspensive conditions, this calls into question whether the planning permissions previously granted will be able to be implemented.*

SEPA recognises that applicant will require to satisfy the noted planning permission requirements and conditions in order to lawfully operate the proposed activity at the site.

- 5. The information provided within Appendix 7 (the Ricardo report) focusses on the potential for agricultural benefit to Vallay by the proposed discharge to land of some 25% of the condensate from the proposed facility. However, overall and given the conclusion within the report, it is not clear that the potential environmental impacts have been appropriately assessed.*

*The report highlights the potential for impact pathways to lead to significant effects on the qualifying habitats of the SAC, the qualifying species of the SPA, and the features of the SSSI. Consequently, the planning authority expresses strong concerns about such an approach and would query whether consent from NatureScot has been sought and obtained, or confirmation received that consent is not necessary. It is noted that the final row of Table 17 'Risk Mitigation and Score' of the application Technical Report does not consider the potential impact on these sensitive sites.*

SEPA will be seeking further information on this proposal in order to assess if a high level of environmental protection from the activities can be met. Nature Scot have also been consulted as a statutory consultee. In cases where sensitive designations are likely to be impacted, any assessment under the previously mentioned WML 2011 regulated activities will also require a separate & further detailed assessment consultation before any approval can be granted.

- 6. It is also queried whether the odour impact reasonably likely to result from the proposed disposal of 25% of the effluent to Vallay has been adequately assessed? The Ricardo report (Appendix 13) focusses on odour impact from the plant itself, with the subsequent method of waste disposal to land only considered briefly. However, Appendix 7 notes that, in respect of the character of the odour, processes involving septic effluent are considered to be the most offensive. The comparison of the resulting odour to that of seaweed is also queried. Whilst seaweed has a distinctive odour, there is no substantive evidence within the report of the current extent of seaweed fertilisation on Vallay, or a robust comparison with the likely resulting odour from the application proposals.*

The provided odour assessment would require that odour from the permitted PPC activity would require consideration. Waste to land as mentioned above would be considered under WML 2011 'Exempt' activities and require that 'relevant objectives' for environmental impact be met, this would include that offensive odour from any applications to land not be approved to go ahead.

- 7. The limitations on the potential for this means of disposal to be feasible on the site identified, including for reasons of soil depth, amongst other reasons, are also of concern. The crop requirement for proposed treatment is also queried. It is noted that the Executive Summary of*

*the report concludes that, under a next phase of the investigation, further consideration may be given to alternative sites and crops for agricultural benefit assessment.*

*It is therefore considered that further assessment should be undertaken to establish whether the proposed means of waste disposal to land is sustainable in this location in the long term and what impacts are likely to result to ecological features and nearby sensitive receptors. It is considered that any 'agricultural benefit assessment' should be undertaken by persons qualified in that science and the timing of that assessment should be established prior to it being undertaken.*

Under WML Exemption application the applicant would require to demonstrate that agricultural or ecological benefit to the environment would be achieved from the proposed application of waste to land. This would require soil samples analyses (for the land in question), land use information, waste laboratory analyses and assessment from an agronomist or appropriately qualified individual to demonstrate application rates and consideration for the environment in question. The application would need to suitably demonstrate that the waste to land activity would not pose any risk to the environment and would be assessed by SEPA specialists prior to any approval being made.

8. *The figures given within the Blackwell report are such that the removal of effluent by tanker option is considered unlikely to be financially viable for the facility. There would therefore appear to be a disconnect between the recommendations within the supporting documentation and the proposed course of action. This raises some serious concerns about whether the preferred effluent disposal system (with 75% of the total effluent removed by tanker for treatment at an AD plant on the mainland) would be sustainable in the long term and, if not, what the resulting outcome may be, particularly given the history and continued use of the wider site for waste disposal.*

As per point 4 above SEPA shall be reviewing this matter further and seeking further justification for the proposed tankering, this will include detailed consideration for the sustainability of the methodology over potential onsite treatment, volumes of traffic movement and their frequency and contingency in event of transport delays.

9. *In addition to the above, it is considered that the removal of all effluent and wastewater from the site (with the exception of wash down water) would result in significantly greater volumes of HGV movements to and from the site than previously indicated. It is anticipated that a typical processing of 150 tonnes of fish morts per week would result in 97,500 litres of condensate being produced. The on-site condensate storage capacity is intended to be 50,000 litres. Removal from the site is stated to be in 25,000 litres tanker loads. This would therefore appear to require 4 tanker loads of condensate removed per week, with storage capacity on site for only half a week's typical production. In addition, the removal of fish oil would also be regularly required, with sufficient storage capacity on site for 10 days production. Notwithstanding the conditions imposed on the planning permissions, it is considered that the level and type of traffic generation could result in detriment to the amenity of nearby residential occupiers.*

SEPA shall be seeking more detailed and accurate information on this matter and agree it requires full consideration.

SEPA recognises that the applicant will require to satisfy any planning permission requirements around traffic movements at the site in order to lawfully operate the proposed activity at the site.

10. *Furthermore, in addition to the concerns raised above concerning the viability of such a waste disposal regime and the feasibility of disposing of 25% of this waste by disposal to land in Vallay, it is also queried whether consideration has been given to the practicalities of removing this quantity of waste product from North Uist on a weekly basis? Restrictions on ferry capacity, particularly during busy summer months, can limit availability, as can technical faults or weather conditions, which regularly results in the cancellation of services at other times of the year. Consequently, it is questioned whether the condensate (and fish oil) storage capacity on site would be sufficient, given the intended method of removal and disposal.*

SEPA shall be seeking more detailed and accurate information on this matter and agree it requires full consideration, including potential storage capacities.

11. *The process whereby non-conforming loads of fish would be removed from the site is queried. The supporting report does not make clear where quarantined loads would be stored prior to removal from site or the length of time the loads would be anticipated to remain on site before removal. Nor is the end location of the quarantined loads provided, or the method proposed to be used to transfer the loads out from the reception pit, if intercepted during unloading. In the absence of details to the contrary, this aspect of the proposal would appear to have the potential to result in unacceptable odour emissions.*

Any quarantined waste loads not suitable to be processed at the site would require to be stored in line with BAT, and this would include appropriate odour control measures. It is noted that planning condition 6 states that no fish morts shall be stored outwith the reception pit, within the reception building. Any wastes removed from the site would require to be disposed of at an appropriately licenced waste installation.

12. *The location of the intended disposal facility for the resulting bottom ash from the boiler/incinerator is also queried. This does not appear to have been provided and the waste concerned is not identified in Table 15 – Waste streams within the Technical Report.*

Any wastes removed from the site would require to be disposed of at an appropriately licenced waste installation. SEPA shall require a full and detailed assessment of all potential raw materials and anticipated wastes use / produced at the installation.

13. *The planning authority has no comments to make on the competency or otherwise of the proposed operator, apart to note that this is a novel process and it is hoped that a suitable level of skill and expertise would be expected to be demonstrated by the permit operator, in order for SEPA to be satisfied that they are technically competent.*

Noted.

14. *We have no comments to make in respect of the noise impact assessment, except to note that the provision of a noise barrier (identified as a potential BAT in section 4 of the Atmos Consulting report) along the north western edge of the boundary of a minimum of 2.8m in height would require planning permission and did not form part of either of the recently*

*approved schemes. Whilst this could be the subject of a separate application, given the topography of the site and the local climatic conditions, it is considered unlikely that such a barrier (a close-boarded fence was suggested within the report) would represent an effective means of mitigation in the longer term.*

SEPA recognises that the applicant will require to satisfy any planning permission requirements around the erection of noise barrier (including timber fence 2.8m high) in order to lawfully operate the proposed activity at the site.

- 15. In summary, the planning authority object to the proposed means of disposal of effluent and wastewater from the proposed facility as proposed, pending receipt of the points of clarification/further information, for the reasons given above.*

As part of the assessment process for the proposed activities at Whiteshore, I hope that the above responses to you points demonstrate that the considerations and concerns you raise shall be assessed by SEPA when undertaking it's role as the regulatory authority for PPC listed activities. With regard to any planning specific requirements the applicant will be made aware of these in further communication, and would be expected to liaise with the planning authority directly on any of these matters they chose to pursue or as you state have not been satisfied to date.



# COMHAIRLE NAN EILEAN SIAR

Balivanich, Isle of Benbecula HS7 5LA

Bail' a'Mhanaich, Beinn na Faoghla HS7 5LA

██████████  
██████████  
Permitting Service  
SEPA

Telephone direct line : 01870 ██████████  
e-mail : ██████████@cne-siar.gov.uk  
Writer : ██████████  
Our reference : 22/00165/CONSEP  
Your reference : PPC/A/5001983  
Date : 3 May 2022

By email to: [registry@sepa.org.uk](mailto:registry@sepa.org.uk)

Dear ██████████

## WHITESHORE COCKLES: CONSULTATION RESPONSE TO PART A PPC PERMIT APPLICATION

Thank you for the opportunity to comment on the Part A Pollution Prevention and Control application submitted by Whiteshore Cockles.

It is noted that in the application submissions (IPPC Technical Report Supporting Document) Table 1 on page 7 refers to the storage, handling and dispatch of by-products and waste as a directly associated activity. However, in column 3 of the table, which identifies the details of the activity, the removal of effluent and wastewater from the facility by tanker is not detailed, nor is the subsequent intended disposal of those waste products to land and to AD plant elsewhere.

Reference is made throughout the report to the island's (North Uist) wastewater treatment works. Beyond small package treatment works serving a small number of houses, no such treatment works exist and the location of the intended site for the disposal and treatment of wastewater (human waste) is queried. It is also questioned whether Scottish Water have indicated that sufficient capacity exists at an identified suitable wastewater treatment facility, through their PDE process, and whether written agreement has been provided by Scottish Water and SEPA to such an approach?

It should be noted that details of the intended surface water drainage for the site have been requested, as part of the planning conditions discharge process. Given the nature of the process, it is considered necessary for these details to be provided at this stage, prior to the operation of the facility.

In terms of Appendix 6 (the Blackwell Water Consultancy Ltd Technical Report for treating fish rendering effluent), it is noted that removing effluent by tanker is not recommended to be considered further, due to it being highly expensive and onerous. However, the removal of effluent by tanker formed part of the details recently submitted by the applicant in respect of discharging the conditions applied to one of the recent planning permissions for the facility (Ref 20/00007/PPD).

It did not, however, form part of the application proposals that were the subject of that planning permission, or the permission reference 19/00288/PPD. These applications indicated an intention to dispose of effluent to sea, which would be controlled by a Marine Licence. As a result, the applications were screened for EIA and assessed under the HRA regime on the basis of materially different impacts to those currently proposed.

Further information in this regard has been requested from the applicant and none of the planning permission conditions has been discharged, to date. A copy of the planning authority's response to the applicant has previously been provided to SEPA. It remains unclear at this stage whether the relevant conditions of the planning permissions will be able to be discharged as requested. As these are suspensive conditions, this calls into question whether the planning permissions previously granted will be able to be implemented.

The information provided within Appendix 7 (the Ricardo report) focusses on the potential for agricultural benefit to Vallay by the proposed discharge to land of some 25% of the condensate from the proposed facility. However, overall and given the conclusion within the report, it is not clear that the potential environmental impacts have been appropriately assessed.

The report highlights the potential for impact pathways to lead to significant effects on the qualifying habitats of the SAC, the qualifying species of the SPA, and the features of the SSSI. Consequently, the planning authority expresses strong concerns about such an approach and would query whether consent from NatureScot has been sought and obtained, or confirmation received that consent is not necessary. It is noted that the final row of Table 17 'Risk Mitigation and Score' of the application Technical Report does not consider the potential impact on these sensitive sites.

It is also queried whether the odour impact reasonably likely to result from the proposed disposal of 25% of the effluent to Vallay has been adequately assessed? The Ricardo report (Appendix 13) focusses on odour impact from the plant itself, with the subsequent method of waste disposal to land only considered briefly. However, Appendix 7 notes that, in respect of the character of the odour, processes involving septic effluent are considered to be the most offensive. The comparison of the resulting odour to that of seaweed is also queried. Whilst seaweed has a distinctive odour, there is no substantive evidence within the report of the current extent of seaweed fertilisation on Vallay, or a robust comparison with the likely resulting odour from the application proposals.

The limitations on the potential for this means of disposal to be feasible on the site identified, including for reasons of soil depth, amongst other reasons, are also of concern. The crop requirement for proposed treatment is also queried. It is noted that the Executive Summary of the report concludes that, under a next phase of the investigation, further consideration may be given to alternative sites and crops for agricultural benefit assessment.

It is therefore considered that further assessment should be undertaken to establish whether the proposed means of waste disposal to land is sustainable in this location in the long term and what impacts are likely to result to ecological features and nearby sensitive receptors. It is considered that any 'agricultural benefit assessment' should be undertaken by persons qualified in that science and the timing of that assessment should be established prior to it being undertaken.

The figures given within the Blackwell report are such that the removal of effluent by tanker option is considered unlikely to be financially viable for the facility. There would therefore appear to be a disconnect between the recommendations within the supporting documentation and the proposed course of action. This raises some serious concerns about whether the preferred effluent disposal system (with 75% of the total effluent removed by tanker for treatment at an AD plant on the mainland) would be sustainable in the long term and, if not, what the resulting outcome may be, particularly given the history and continued use of the wider site for waste disposal.

In addition to the above, it is considered that the removal of all effluent and wastewater from the site (with the exception of wash down water) would result in significantly greater volumes of HGV movements to and from the site than previously indicated. It is anticipated that a typical processing of 150 tonnes of fish morts per week would result in 97,500 litres of condensate being produced. The on-site condensate storage capacity is intended to be 50,000 litres. Removal from the site is stated to be in 25,000 litres tanker loads.

This would therefore appear to require 4 tanker loads of condensate removed per week, with storage capacity on site for only half a week's typical production. In addition, the removal of fish oil would also be regularly required, with sufficient storage capacity on site for 10 days production. Notwithstanding the conditions imposed on the planning permissions, it is considered that the level and type of traffic generation could result in detriment to the amenity of nearby residential occupiers.

Furthermore, in addition to the concerns raised above concerning the viability of such a waste disposal regime and the feasibility of disposing of 25% of this waste by disposal to land in Vallay, it is also queried whether consideration has been given to the practicalities of removing this quantity of waste product from North Uist on a weekly basis? Restrictions on ferry capacity, particularly during busy summer months, can limit availability, as can technical faults or weather conditions, which regularly results in the cancellation of services at other times of the year. Consequently, it is questioned whether the condensate (and fish oil) storage capacity on site would be sufficient, given the intended method of removal and disposal.

The process whereby non-conforming loads of fish would be removed from the site is queried. The supporting report does not make clear where quarantined loads would be stored prior to removal from site or the length of time the loads would be anticipated to remain on site before removal. Nor is the end location of the quarantined loads provided, or the method proposed to be used to transfer the loads out from the reception pit, if intercepted during unloading. In the absence of details to the contrary, this aspect of the proposal would appear to have the potential to result in unacceptable odour emissions.

The location of the intended disposal facility for the resulting bottom ash from the boiler/incinerator is also queried. This does not appear to have been provided and the waste concerned is not identified in Table 15 – Waste streams within the Technical Report.

The planning authority has no comments to make on the competency or otherwise of the proposed operator, apart to note that this is a novel process and it is hoped that a suitable level of skill and expertise would be expected to be demonstrated by the permit operator, in order for SEPA to be satisfied that they are technically competent.

We have no comments to make in respect of the noise impact assessment, except to note that the provision of a noise barrier (identified as a potential BAT in section 4 of the Atmos Consulting report) along the north western edge of the boundary of a minimum of 2.8m in height would require planning permission and did not form part of either of the recently approved schemes. Whilst this could be the subject of a separate application, given the topography of the site and the local climatic conditions, it is considered unlikely that such a barrier (a close-boarded fence was suggested within the report) would represent an effective means of mitigation in the longer term.

In summary, the planning authority object to the proposed means of disposal of effluent and wastewater from the proposed facility as proposed, pending receipt of the points of clarification/further information, for the reasons given above.

Yours sincerely

██████████  
██████████  
Communities Department

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** Fwd: FW: RE: Soil Analysis  
**Date:** 21 September 2022 12:00:44  
**Attachments:** [image001.png](#)  
[WS Condensate 2020.09.16 \(SW Rep. 00991038\).PDF](#)  
[Condensate Nutrient Plan.pdf](#)

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Good morning [REDACTED]

Please see attached nutrient plans for spreading application rates etc.

You will see that it is our intention to use the land at Kyles - Vally Island would only be used as a last resort. Will explain when we see you.

[REDACTED]

----- Forwarded message -----

**From:** [REDACTED]@macphailconsulting.co.uk>  
**Date:** 21 Sept 2022, 11:26 +0100  
**To:** [REDACTED]  
**Subject:** FW: RE: Soil Analysis

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**From:** [REDACTED]  
**Sent:** 31 August 2022 10:20  
**To:** [REDACTED]  
**Cc:** [REDACTED]@owenfarmsservices.co.uk>  
**Subject:** RE: RE: Soil Analysis

Hi [REDACTED],

Appendix 1 & 3 will be embedded in the document so please see them attached separately.

Kind Regards

[REDACTED]

Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED]@macphailconsulting.co.uk

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**From:** [REDACTED]  
**Sent:** 31 August 2022 10:04  
**To:** [REDACTED] [macphailconsulting.co.uk](mailto:macphailconsulting.co.uk)>  
**Cc:** [REDACTED] [@owenfarmservices.co.uk](mailto:@owenfarmservices.co.uk)>  
**Subject:** RE: RE: Soil Analysis

Good morning [REDACTED]

I am downloading the file on my phone to read it but is appendix 1 and 3 missing?

Looks good so far. I have forwarded it to [REDACTED] and we can have a chat later and get back to you.

Thanks again for dealing with this so promptly.

Will be in touch.

[REDACTED]  
On 30 Aug 2022, 17:54 +0200, [REDACTED] [macphailconsulting.co.uk](mailto:macphailconsulting.co.uk)>, wrote:

Afternoon Both,

Please see attached draft of the Agricultural Benefit Report for review.

I am not quite sure exactly what we require here but we have tried to cover as much as possible from an agricultural perspective without going into the content of the Ricardo report. I know we are not qualified to get involved in some of the technical environmental discussions in that report and we have made our assumptions that we are dealing with a fertiliser product similar to cattle slurry or digestate. The condensate is not that potent which is good, in terms of diffused pollution and being able to spread it during winter months.

We have tried to make the case for all year round spreading with as much as possible on Kyles. Also, the recommended spread volumes will meet the maximum permitted annual Nitrogen applications (250kg/ha). If we have all year-round applications, the opportunity to spread at Kyles will always be there.

I have also attached the Paragraph 7 application and I will need your input to complete the gaps on the form. I have entered the fields to match [REDACTED] nutrient plan but you may need to check the detail of each field.

I have embedded [REDACTED] nutrient plan PDF in the Appendix but just let me know if it doesn't open and I can send it through.

Once you have a chance to review both documents, we can adjust as required.

Kind Regards

[REDACTED]

Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED]@macphailconsulting.co.uk

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**From:** [REDACTED]

**Sent:** 26 August 2022 15:48

**To:** [REDACTED]@macphailconsulting.co.uk>

**Cc:** [REDACTED]@owenfarmsservices.co.uk>

**Subject:** RE: RE: Soil Analysis

Hi [REDACTED]

This sounds good.

We gave 2 x 45000 litre tanks for storing the condensate.

Regards

[REDACTED]

On 26 Aug 2022, 14:04 +0100, [REDACTED]@macphailconsulting.co.uk>, wrote:

[REDACTED]

We are getting there with the report and [REDACTED] has done a standard nutrient management plan and it looks fine for the available land etc.

However, the plan has 4 x applications per year, similar to slurry applications. I am assuming you will have no storage and we need to change the plan to more applications, little and often, mostly on Kyles and no applications on the cropped areas in July and August.

Does this sound accurate?

Kind Regards

[REDACTED]

Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED]@macphailconsulting.co.uk

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**From:** [REDACTED]

**Sent:** 23 August 2022 10:23

**To:** [REDACTED]@macphailconsulting.co.uk>

**Cc:** [REDACTED]@owenfarmservices.co.uk>

**Subject:** RE: RE: Soil Analysis

Now attached.

[REDACTED]

On 23 Aug 2022, 10:22 +0100, [REDACTED] wrote:

Good morning [REDACTED]

Please see attached field data.

Am I correct in thinking that if we can get away with the same spread rate as Slurry ( maybe even more hopefully ) then we would only require about 50 Ha to spread about 3800 tons of condensate which is approximately what we would have for 7000 tons of morts.? It works out about 55% of the volume.

Regards

[REDACTED]

On 23 Aug 2022, 09:04 +0100, [REDACTED]

[REDACTED]@macphailconsulting.co.uk>, wrote:

Hi [REDACTED],

[REDACTED] will be better at answering this but down here is depends if you are in an NVZ or not.

In my previous job, we were out with an NVZ and would spread slurry in spring and then after every cut of silage. We might put on 3 or 4 applications of 2500gallon per acre or 28t/ha during the year. We could be spreading 75t/ha over the year. However, slurry isn't under a paragraph 7 exemption.

Kind Regards

[REDACTED]

[REDACTED]  
Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED]@macphailconsulting.co.uk

---

**From:** [REDACTED]

**Sent:** 23 August 2022 08:49

**To:** [REDACTED]@macphailconsulting.co.uk>

**Cc:** [REDACTED]@owenfarmsservices.co.uk>

**Subject:** RE: RE: Soil Analysis

[REDACTED]  
Will send them through today.

One question - when you say 18tons per hectare how often can that be done per year on the one piece of ground?

Regards

[REDACTED]  
On 23 Aug 2022, 08:45 +0100, [REDACTED]@macphailconsulting.co.uk>, wrote:

[REDACTED]  
Okay, once we have them, we can work out the number of fields available, crop and spreadable area and we can hopefully produce a nutrient plan to help complete the Paragraph 7.

Kind Regards

[REDACTED]  
Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED]@macphailconsulting.co.uk

---

**From:** [REDACTED]

**Sent:** 22 August 2022 15:02

**To:** [REDACTED]@macphailconsulting.co.uk>

**Cc:** [REDACTED]@owenfarmervices.co.uk>

**Subject:** RE: RE: Soil Analysis

Thanks [REDACTED]

I have forwarded it on to [REDACTED] to match up.

Will be in touch.

[REDACTED]  
On 22 Aug 2022, 11:36 +0100, [REDACTED]  
[REDACTED]@macphailconsulting.co.uk>, wrote:

[REDACTED],

Please attached spreadsheets with the Field Identifier numbers for the land at Kyles Paible and Vallay. Note the field numbers for Vallay are the blue ones and not the purple numbers on the maps sent through from the college.

Could you have a look at the spreadsheet and match the fields to the soil samples and let me know which fields would be available for spreading condensate at Kyles and Vallay. Could you also provide approximate cropping areas on each field, specifically the large fields on Vallay and also what percentage of each field would be available for spreading on grassland.

We have approximately 50acres of machair at Kyles and 550acres on Vallay but not all that will be available for cropping or for spreading by tanker.

As I mentioned on the phone last week, we would spread slurry at 2500 gallons or 11t per acre per application. So, [REDACTED] and I will base our assumptions on something similar. [REDACTED] will put the details into his nutrient budgeting programme, and we can produce a report to accompany the Paragraph 7 application and support our main report.

Kind Regards

[REDACTED]

[REDACTED]  
Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12  
6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e:  
[REDACTED]@macphailconsulting.co.uk

---

**From:** [REDACTED]

**Sent:** 19 August 2022 11:39

**To:** [REDACTED]@macphailconsulting.co.uk>

**Subject:** RE: RE: Soil Analysis

See attached

[REDACTED]  
On 19 Aug 2022, 11:34 +0100, [REDACTED]  
[REDACTED]@macphailconsulting.co.uk>, wrote:

Okay, thanks [REDACTED], I have the Paragraph 7 document, but the  
soil samples didn't seem to be attached.

Kind Regards

[REDACTED]  
Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12  
6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e:  
[REDACTED]@macphailconsulting.co.uk

---

**From:** [REDACTED]  
**Sent:** 19 August 2022 11:27  
**To:** [REDACTED] <[\[REDACTED\]@macphailconsulting.co.uk](mailto:[REDACTED]@macphailconsulting.co.uk)>  
**Subject:** RE: RE: Soil Analysis

[REDACTED]

See attached soil samples again.

The first five of the first batch are from Vallay and the last one from Kyles.

The second batch of three are all from fields in Kyles.

Would there be enough land with any four fields for spreading at Kyles that we could match these samples to? If not then we could use the extra land required at Vallay as we have five samples for fields.

Hope this makes sense as I am sure a sample is required for each field - we have one field that we have a paragraph 7 exemption for the sludge from Scottish Water and we have to provide a soil sample when we renew the licence. I will check with SEPA to see exactly what is required.

I have attached a renewal form that I did for the sludge field for reference.

[REDACTED]

On 19 Aug 2022, 10:45 +0100, [REDACTED] <[\[REDACTED\]@macphailconsulting.co.uk](mailto:[REDACTED]@macphailconsulting.co.uk)>, wrote:

Hi [REDACTED]

Just having a look at this with [REDACTED] my colleague and given the Condensate provides 0.62kg/N/t and as we can compare it to slurry 2.6kg/N/t we think we can write a report to help justify the agricultural benefit and also add in all the BAT assessment reasons. We would usually apply 2500 gallons of slurry per acre to a grass which is 11.36t/acre of 28t/ha. This compares with a spread rate for the condensate is 1.8t/ha, however, there seems to be a bit of confusion on how much you will actually be spreading per ha.

Please see attached Paragraph 7 Exemption guidance. This is the first time I've seen a paragraph 7 application, but I notice in the technical notes 2.3 that we require a soil sample for every field? How much experience do you have of paragraph 7 exemptions, and do you think we will require a soil sample for each field which condensate is to be applied to? In my experience with AD plants and digestate, they seem to require a soil sample for each field, particularly if the source

material is non-agricultural. Having not done a paragraph 7 application previously we will need input from you, but we can submit it as us and not you or [REDACTED]

Kind Regards

[REDACTED]

Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [REDACTED]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [REDACTED][@macphailconsulting.co.uk](mailto:[REDACTED]@macphailconsulting.co.uk)

---

**From:** [REDACTED]  
**Sent:** 19 August 2022 09:09  
**To:** [REDACTED] [@macphailconsulting.co.uk](mailto:[REDACTED]@macphailconsulting.co.uk)>  
**Subject:** RE: RE: Soil Analysis

Hi [REDACTED]

Some of the soil samples I sent were from Vallay.

I am back in the office later on this morning and will look at them to determine which ones are Vallay.

I kust forwarded the results from SAC without looking at them.

[REDACTED]

On 19 Aug 2022, 07:57 +0100, [REDACTED] [@macphailconsulting.co.uk](mailto:[REDACTED]@macphailconsulting.co.uk)>, wrote:

Morning [REDACTED]

Just back into the office this morning and looking through all the docs. I have spoken with one of my colleagues and we would look to put the soil samples through Planet Scotland or our Hutchisons programme to provide recommendations for the crop/fields. Do you have any

soil samples for Vallay or for the Vallay ground on North Uist (fields 13, 2, 3, 18, 9, 16, 19 etc) as I would imagine they will have lower pH than the Machair ground.

I am working on the report now and working towards having a draft to next week.

Will be in touch to discuss the inaccuracies in the SEPA report.

Kind Regards



Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [redacted]

a: The Paddock, Over Abington Farm, Abington, Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e: [redacted]@macphailconsulting.co.uk

---

**From:** [redacted]

**Sent:** 18 August 2022 09:35

**To:** [redacted]@macphailconsulting.co.uk>

**Subject:** RE: RE: Soil Analysis

Good morning [redacted]

Have you enough info yet? Anything you need just give me a call.

Million dollar question - any idea how long it will take to produce the report etc?

Regards

[redacted]

On 17 Aug 2022, 09:05 +0100, [redacted]@macphailconsulting.co.uk>, wrote:

[redacted]

That's great and I will speak with my 5Agri  
Colleagues to see what we can pull together. Do you  
have any soil sample results for the fields?

Kind Regards



Agricultural Consultant

C A MacPhail Consulting Ltd

(5Agri Consultancy Group)

t: [Redacted]

a: The Paddock, Over Abington Farm, Abington,  
Biggar, ML12 6SF

w [www.macphailconsulting.co.uk](http://www.macphailconsulting.co.uk) e:  
[Redacted]@macphailconsulting.co.uk

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**From:** [Redacted]  
**Sent:** 17 August 2022 08:34  
**To:** [Redacted]  
[Redacted]@macphailconsulting.co.uk>  
**Subject:** Fwd: RE: Soil Analysis

Good morning [Redacted]

Please see attached maps.

I am back in the office this afternoon if you want a  
chat to go over anything.

Regards

[Redacted]

----- Forwarded message -----

**From:** [Redacted]@sac.co.uk>  
**Date:** 16 Aug 2022, 14:45 +0100  
**To:** [Redacted]  
**Subject:** RE: Soil Analysis

Hi [Redacted]h

Maps for relevant Kyles and Vally areas attached.

[REDACTED]

---

**From:** [REDACTED]  
[REDACTED]

**Sent:** 16 August 2022 11:47

**To:** [REDACTED] <[\[REDACTED\]@sac.co.uk](mailto:[REDACTED]@sac.co.uk)>

**Subject:** Re: Soil Analysis

**[NOTE] This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender email address and know the content is safe.**

Thanks [REDACTED]

Could you also send me the maps showing the land we intend to use I.e. Kyles and Vallay.

SEPA are pushing us for the report so our main consultant has found a company that will do it. We cant wait for three / four weeks I am afraid.

All the best

[REDACTED]

On 16 Aug 2022, 11:21 +0100, [REDACTED] <[\[REDACTED\]@sac.co.uk](mailto:[REDACTED]@sac.co.uk)>, wrote:

Morning [REDACTED]

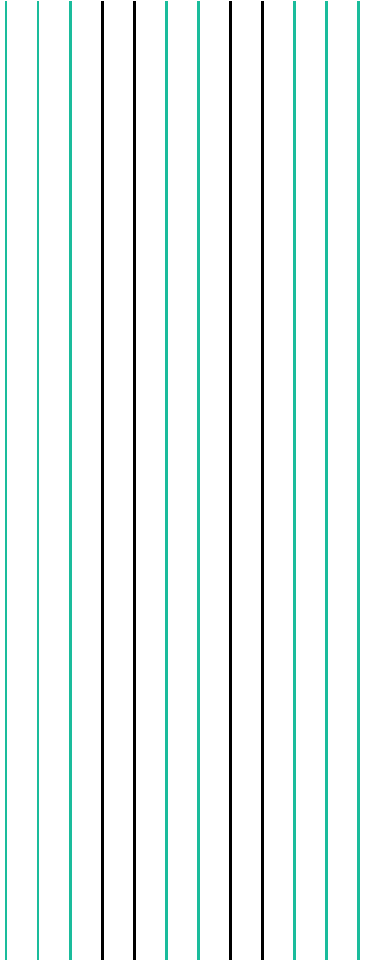
Attached are the soil results of the samples I took when out with Angus on Vallay. Apologies for not being able to get this done for you, I hadn't realised the work was so specialised. Have you got someone else to do this, or do you want to wait for the SAC specialist?

Give me a shout if there is anything else you need.

[REDACTED]

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# Test Report

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 Email: [ScientificServicesProjects@scottishwater.co.uk](mailto:ScientificServicesProjects@scottishwater.co.uk)

**Inverness Laboratory**  
 31 Henderson Drive  
 Longman North  
 Inverness  
 IV1 1TR

# Scottish Water

Trusted to serve Scotland

Report Version : 1  
 Report Date : 29-Sep-2020  
 Report No. : 991038

Customer: [REDACTED]

Matrix: Final Trade Effluent  
 Date Sampled: 16-Sep-2020 Time: 8:00 am  
 Date Received: 16-Sep-2020 Time: 6:31 pm  
 Laboratory Ref.: 14238765  
 Sampler ID: Customer

Customer Ref. No.: Condensate, Kyles, North Uist, HS6 5DY

F.A.O.:

Sampling Location: CONDENSATE FRM THERMAL PRCSNG

Method	Determinand	Result Value	Test Started	Out of Spec	Specification
E/GIC007	Ammonia	42.92 mg/l as N	18-Sep-2020		
E/IC006	Anionic Detergents	<0.12 mg/l SDS	19-Sep-2020		
E/IC075A	Biochemical oxygen demand	646 mgO <sub>2</sub> /l	18-Sep-2020		
E/IC087 (#)	Cationic surfactants	0.6 mg/l	18-Sep-2020		
E/IC071/72	Total Chemical Oxygen Demand	995 mgO <sub>2</sub> /l	18-Sep-2020		
E/IC015 (#)	Nonionic Detergents	6.30 mg/l as P40	22-Sep-2020		
E/IC073/IC078	Hydrogen ion	9.7 pH value	18-Sep-2020		
E/IC019 (#)	Sulphide	0.39 mg/l	19-Sep-2020		
E/IC074	Suspended solids	13 mg/l	18-Sep-2020		
E/IC036	Cadmium	<0.005 mgCd/l	19-Sep-2020		
E/IC036	Chromium	<0.08 mgCr/l	19-Sep-2020		
E/IC036	Copper	3.48 mgCu/l	19-Sep-2020	☒	< 2 - Trade Effluent Consent
E/IC043	Mercury	0.00114 mgHg/l	18-Sep-2020		
E/IC036	Nickel	<0.08 mgNi/l	19-Sep-2020		
E/IC036	Phosphorus	0.22 mgP/l	19-Sep-2020		
E/IC036	Lead	<0.08 mgPb/l	19-Sep-2020		
E/IC037 (#)	Tin	<0.025 mgSn/l	22-Sep-2020		
E/IC036	Zinc	1.0 mgZn/l	19-Sep-2020		
E/O028	Solvent Extractable Material (Hexane )	15.7 mg/l	21-Sep-2020		
E/O030	Sulphate	11.2 mgSO <sub>4</sub> /l	20-Sep-2020		
E/OC024 (#)	Chloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Vinyl chloride	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Chloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Trichlorofluoromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1-Dichloroethene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Diethyl ether	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Acrylonitrile	<40 µg/l	21-Sep-2020		
E/OC024 (#)	Dichloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	trans 1,2-Dichloroethene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Methyl tert-butyl ether	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1-Dichloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Hexane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Iso propyl ether	<10 µg/l	21-Sep-2020		
E/OC024 (#)	cis 1,2-dichloroethene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Bromochloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Trichloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	2,2-Dichloropropane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2-Dichloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	2-Methyl-1,3-dioxolane	<1.0 mg/l	21-Sep-2020		
E/OC024 (#)	1,1,1-Trichloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1-Dichloropropene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Cyclohexane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Tetrachloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Benzene	<10 µg/l	21-Sep-2020		

KEYS Method :- Testing laboratory - E = EDINBURGH

(#) = Non UKAS Accredited (\*) = Accredited under flexible scope (\*) = Sub Contracted (~) = Sampling / On- Site Testing

Specification :- Internal Consent Limits set by Scottish Water under Section 29 of the Sewerage (Scotland) Act 1968.



# Test Report

**Edinburgh Laboratory**  
 Juniper House  
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 Tel: 01382 933889  
 Email: [ScientificServicesProjects@scottishwater.co.uk](mailto:ScientificServicesProjects@scottishwater.co.uk)

**Inverness Laboratory**  
 31 Henderson Drive  
 Longman North  
 Inverness  
 IV1 1TR

# Scottish Water

Trusted to serve Scotland

Report Version : 1  
 Report Date : 29-Sep-2020  
 Report No. : 991038

Laboratory Ref.: 14238765

Method	Determinand	Result Value	Test Started	Out of Spec	Specification
E/OC024 (#)	Dibromomethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2-Dichloropropane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Trichloroethene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Bromodichloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	trans 1,3-Dichloropropene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	cis 1,3-Dichloropropene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1,2-Trichloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Toluene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,3-Dichloropropane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Octane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Dibromochloromethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2-Dibromoethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Tetrachloroethene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1,1,2-Tetrachloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Chlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Ethylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	m,p-Xylene	<20 µg/l	21-Sep-2020		
E/OC024 (#)	Tribromomethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Styrene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,1,2,2-Tetrachloroethane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	o-Xylene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Total xylene	<30 µg/l	21-Sep-2020		
E/OC024 (#)	1,2,3-Trichloropropane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Isopropylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Bromobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	n-Propylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	2-Chlorotoluene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	4-Chlorotoluene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,3,5-Trimethylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	tert-Butylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2,4-Trimethylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	sec-Butylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,3-Dichlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,4-Dichlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	4-Isopropyltoluene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2-Dichlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	n-Butylbenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2-Dibromo-3-chloropropane	<10 µg/l	21-Sep-2020		
E/OC024 (#)	N,N-Dimethylaniline	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,3,5-Trichlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2,4-Trichlorobenzene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Naphthalene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	Hexachlorobutadiene	<10 µg/l	21-Sep-2020		
E/OC024 (#)	1,2,3-Trichlorobenzene	<10 µg/l	21-Sep-2020		
E/O051	Propetamphos	<0.030 µg/l	19-Sep-2020		
E/O051	gamma-HCH	<0.030 µg/l	19-Sep-2020		
E/O051	Diazinon	<0.060 µg/l	19-Sep-2020		
E/O051 (#)	PCB 18	<0.0030 µg/l	19-Sep-2020		
E/O051 (#)	PCB 28+31	<0.0065 µg/l	19-Sep-2020		
E/O051 (#)	Fenitrothion	<0.025 µg/l	19-Sep-2020		
E/O051	Malathion	<0.040 µg/l	19-Sep-2020		
E/O051 (#)	PCB 52	<0.0050 µg/l	19-Sep-2020		
E/O051 (#)	PCB 44	<0.0035 µg/l	19-Sep-2020		
E/O051	Chlorfenvinphos	<0.020 µg/l	19-Sep-2020		
E/O051 (#)	PCB 101	0.0038 µg/l	19-Sep-2020		

KEYS Method :- Testing laboratory - E = EDINBURGH

(#) = Non UKAS Accredited (\*) = Accredited under flexible scope (\*) = Sub Contracted (-) = Sampling / On- Site Testing

Specification :- Internal Consent Limits set by Scottish Water under Section 29 of the Sewerage (Scotland) Act 1968.



# Test Report

**Edinburgh Laboratory**  
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**Inverness Laboratory**  
 31 Henderson Drive  
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**Scottish Water**  
 Trusted to serve Scotland

Report Version : 1  
 Report Date : 29-Sep-2020  
 Report No. : 991038

Laboratory Ref.: 14238765

Method	Determinand	Result Value	Test Started	Out of Spec	Specification
E/O051 (#)	PCB 149	<0.0070 µg/l	19-Sep-2020		
E/O051 (#)	PCB 118	<0.0045 µg/l	19-Sep-2020		
E/O051 (#)	PCB 153	0.0089 µg/l	19-Sep-2020		
E/O051 (#)	PCB 138	0.0078 µg/l	19-Sep-2020		
E/O051	Bifenthrin	<0.020 µg/l	19-Sep-2020		
E/O051 (#)	PCB 180	<0.0050 µg/l	19-Sep-2020		
E/O051 (#)	PCB 170	<0.0045 µg/l	19-Sep-2020		
E/O051	cis-Permethrin	<0.065 µg/l	19-Sep-2020		
E/O051	trans-Permethrin	<0.035 µg/l	19-Sep-2020		
E/O051	Permethrin - all isomer total	<0.100 µg/l	19-Sep-2020		
E/O051 (#)	PCB 194	<0.0180 µg/l	19-Sep-2020		
E/O051	Cyfluthrin	<0.035 µg/l	19-Sep-2020		
E/O051	Cypermethrin	<0.035 µg/l	19-Sep-2020		
E/O051 (#)	PCB 209	<0.0085 µg/l	19-Sep-2020		
E/O051 (#)	PCB Total	<0.0790 µg/l	19-Sep-2020		

Comment: Q051 W\_PEST\_PCB: UKAS accreditation removed from Fenitrothion due to AQC failure 11% from target. Please treat results with caution.

Details of the test method(s) used and performance characteristics of the method(s) are available on request.

Authorising Signature:



Laboratory Manager

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All microbiological parameters are confirmed results unless stated otherwise.  
 Opinions, interpretations and comments expressed herein are outwith the scope of UKAS accreditation.  
 Unless otherwise stated - condition of the sample on receipt was satisfactory  
 Results relate only to the items tested.  
 The customer is not permitted to reproduce this report except in full without the approval of the laboratory.  
 Sample matrix information and date and time of sampling provided by customer. Incorrect information can affect the validity of the results. The results quoted apply to the sample as received.

Uncertainty of Measurement information relating to UKAS accredited sample results can be supplied upon request. Uncertainty is an estimation that is based on the principle described in ISO 11352:2012 Water quality - Estimation of measurement uncertainty based on validation and quality control data.

END OF TEST REPORT

KEYS Method :- Testing laboratory - E = EDINBURGH  
 (#) = Non UKAS Accredited (\*) = Accredited under flexible scope (\*) = Sub Contracted (~) = Sampling / On- Site Testing  
 Specification :- Internal Consent Limits set by Scottish Water under Section 29 of the Sewerage (Scotland) Act 1968.



Cropping year  
**2022/2023**



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Client **Whiteshore Cockles**

FACTS number

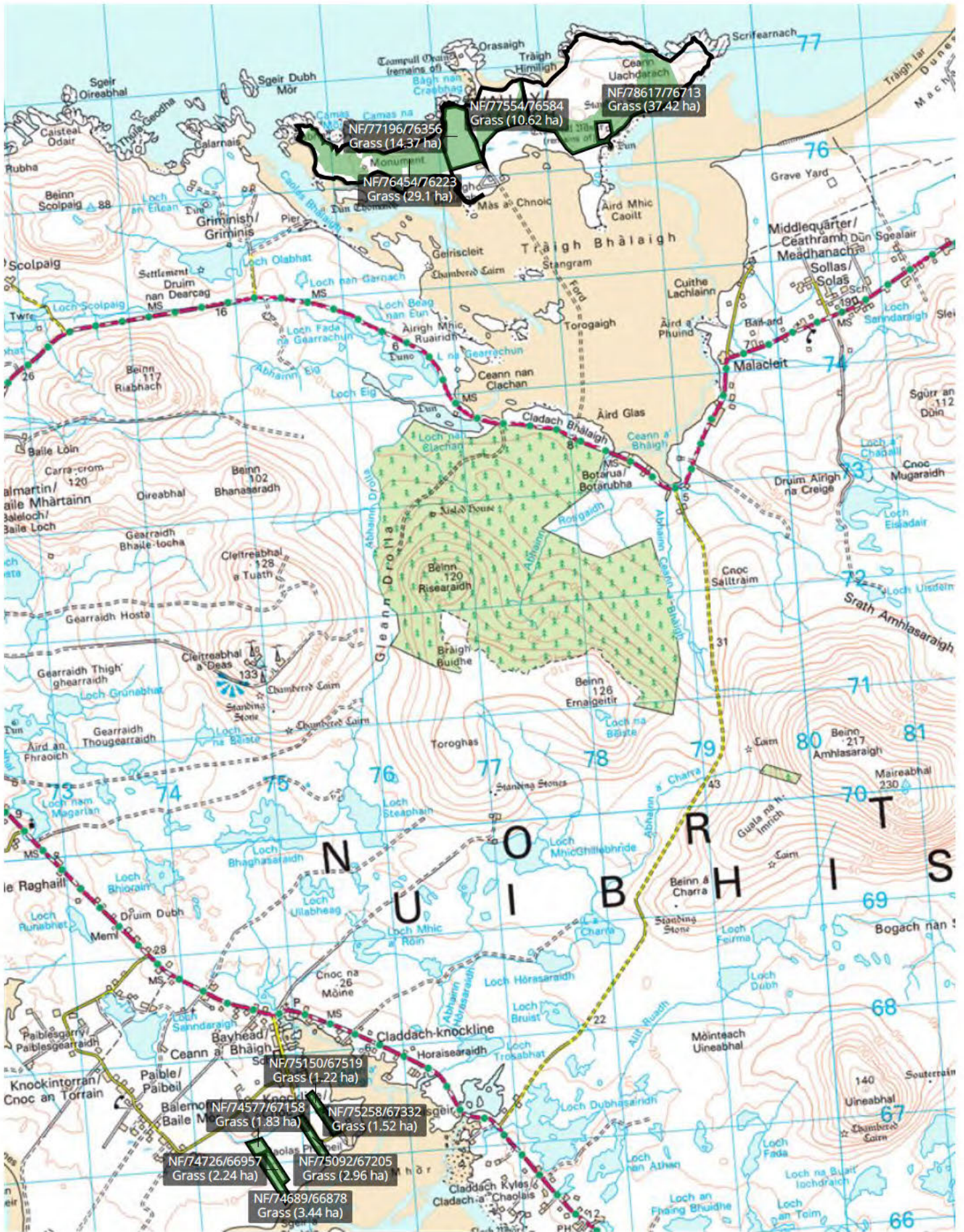
Address **26 Lewis Street  
Stornoway  
Isle Of Lewis  
HS1 2JF**


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## Condensate Nutrient Plan

This report includes the following documents:

- Cropping map
- Stocks (overview)
- Soil analysis
- Nutrient application plans



 Grass  
(104.7 ha, 100%)

## Seeds





























Stock	Crop	Variety	Required	Available	Balance
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## Fertilisers

Stock	Custom	Standard product	Required	Available	Balance
Condensate	✓		3,799,861 kg	3,800,000 kg	139 kg

## Manure

Stock	Custom	Manure type	Required	Available	Balance
-------	--------	-------------	----------	-----------	---------

Field	Analysis number	Analysis date	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	pH	Organic matter
			ppm	ppm	ppm		%
NF/74689/66878 (3.44 ha)	21007245	18/10/2021	 13.7	 11	 63.5	 8.4	
NF/74726/66957 (2.24 ha)	21007246	18/10/2021	 13.3	 10	 64	 8.3	
NF/75092/67205 (2.96 ha)	21007247	18/10/2021	 14.7	 10.2	 63.9	 8.2	
NF/75258/67332 (1.52 ha)	22006129	18/07/2022	 17.1	 39.9	 86.7	 8.1	
NF/77196/76356 (14.37 ha)	22006124	18/07/2022	 3.77	 28.4	 94.9	 8.1	
NF/77554/76584 (22.46 ha)	22006125	18/07/2022	 3.46	 25.3	 109	 8.1	
NF/78617/76713 (104.43 ha)	22006128	18/07/2022	 7.92	 17.1	 89.2	 8.2	3.7
NF/74577/67158 (1.83 ha)							
NF/75150/67519 (1.22 ha)							
NF/76454/76223 (43.42 ha)							

## Product application plan – Spread Plan 1

Product	Date	Quantity	Comments
Condensate	13/11/2022	67,980 kg	
Condensate	15/01/2023	43,260 kg	
Condensate	19/03/2023	43,260 kg	
Condensate	17/09/2023	86,520 kg	

## ● Grass

## Nutrient requirements

## Application

	N kg/ha	SO <sub>3</sub> kg/ha	P <sub>2</sub> O <sub>5</sub> kg/ha	K <sub>2</sub> O kg/ha	MgO kg/ha	Date	Total product	Operator
NF/74689/66878 (3.44 ha)	234 / 250	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	13/11/2022	11,000 kg/ha	37,840 kg					
Condensate	15/01/2023	7,000 kg/ha	24,080 kg					
Condensate	19/03/2023	7,000 kg/ha	24,080 kg					
Condensate	17/09/2023	14,000 kg/ha	48,160 kg					
NF/75150/67519 (1.22 ha)	234 / 250	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	13/11/2022	11,000 kg/ha	13,420 kg					
Condensate	15/01/2023	7,000 kg/ha	8,540 kg					
Condensate	19/03/2023	7,000 kg/ha	8,540 kg					
Condensate	17/09/2023	14,000 kg/ha	17,080 kg					
NF/75258/67332 (1.52 ha)	234 / 250	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	13/11/2022	11,000 kg/ha	16,720 kg					
Condensate	15/01/2023	7,000 kg/ha	10,640 kg					
Condensate	19/03/2023	7,000 kg/ha	10,640 kg					
Condensate	17/09/2023	14,000 kg/ha	21,280 kg					

## Product application plan – Spread Plan 2

Product	Date	Quantity	Comments
Condensate	18/12/2022	49,210 kg	
Condensate	12/02/2023	42,180 kg	
Condensate	16/04/2023	42,180 kg	
Condensate	20/08/2023	77,330 kg	
Condensate	22/10/2023	77,330 kg	

## ● Grass

	Nutrient requirements					Application		
	N kg/ha	SO <sub>3</sub> kg/ha	P <sub>2</sub> O <sub>5</sub> kg/ha	K <sub>2</sub> O kg/ha	MgO kg/ha	Date	Total product	Operator
NF/74577/67158 (1.83 ha)	<u>246 / 250</u>	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	18/12/2022	7,000 kg/ha	12,810 kg					
Condensate	12/02/2023	6,000 kg/ha	10,980 kg					
Condensate	16/04/2023	6,000 kg/ha	10,980 kg					
Condensate	20/08/2023	11,000 kg/ha	20,130 kg					
Condensate	22/10/2023	11,000 kg/ha	20,130 kg					
NF/74726/66957 (2.24 ha)	<u>246 / 250</u>	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	18/12/2022	7,000 kg/ha	15,680 kg					
Condensate	12/02/2023	6,000 kg/ha	13,440 kg					
Condensate	16/04/2023	6,000 kg/ha	13,440 kg					
Condensate	20/08/2023	11,000 kg/ha	24,640 kg					
Condensate	22/10/2023	11,000 kg/ha	24,640 kg					
NF/75092/67205 (2.96 ha)	<u>246 / 250</u>	0 / 40	0 / 20	0 / 60	0 / 0			
Condensate	18/12/2022	7,000 kg/ha	20,720 kg					
Condensate	12/02/2023	6,000 kg/ha	17,760 kg					
Condensate	16/04/2023	6,000 kg/ha	17,760 kg					
Condensate	20/08/2023	11,000 kg/ha	32,560 kg					
Condensate	22/10/2023	11,000 kg/ha	32,560 kg					

## Product application plan – Spread plan 3

Product	Date	Quantity	Comments
Condensate	21/05/2023	1,047,600 kg	

## ● Grass

## Nutrient requirements

## Application

	N kg/ha	SO <sub>3</sub> kg/ha	P <sub>2</sub> O <sub>5</sub> kg/ha	K <sub>2</sub> O kg/ha	MgO kg/ha	Application		
						Date	Total product	Operator
NF/76454/76223 (29,1 ha)	216 / 250	0 / 40	0 / 20	0 / 60	0 / 0			

Condensate	21/05/2023	36,000 kg/ha	1,047,600 kg
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## Product application plan – Spread Plan 4

Product	Date	Quantity	Comments
Condensate	18/06/2023	517,320 kg	

### ● Grass

	Nutrient requirements					Application		
	N kg/ha	SO <sub>3</sub> kg/ha	P <sub>2</sub> O <sub>5</sub> kg/ha	K <sub>2</sub> O kg/ha	MgO kg/ha	Date	Total product	Operator
NF/77196/76356 (14,37 ha)	216 / 250	0 / 40	0 / 20	0 / 60	0 / 0			

Condensate	18/06/2023	36,000 kg/ha	517,320 kg
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## Product application plan – Spread Plan 5

Product	Date	Quantity	Comments
Condensate	23/07/2023	382,320 kg	

## ● Grass

## Nutrient requirements

## Application

	N	SO <sub>3</sub>	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	MgO	Date	Total product	Operator
	kg/ha	kg/ha	kg/ha	kg/ha	kg/ha			
NF/77554/76584 (10.62 ha)	216 / 250	0 / 40	0 / 20	0 / 60	0 / 0			

Condensate	23/07/2023	36,000 kg/ha	382,320 kg
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## Product application plan – Spread Plan 6

Product	Date	Quantity	Comments
Condensate	27/08/2023	1,249,641 kg	

## ● Grass

## Nutrient requirements

## Application

	N kg/ha	SO <sub>3</sub> kg/ha	P <sub>2</sub> O <sub>5</sub> kg/ha	K <sub>2</sub> O kg/ha	MgO kg/ha	Application		
						Date	Total product	Operator
NF/78617/76713 (37.42 ha)	200 / 250	0 / 40	0 / 20	0 / 60	0 / 0			

Condensate	27/08/2023	33,395 kg/ha	1,249,641 kg
------------	------------	--------------	--------------

**From:** [REDACTED]  
**Subject:** FW: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment  
**Date:** 28 September 2022 10:36:00  
**Attachments:** [Whiteshore Agricultural Benefit Report.docx](#)  
[WS Condensate 2020.09.16 \(SW Rep. 00991038\).PDF](#)  
[Condensate Nutrient Plan \(002\).pdf](#)

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[REDACTED] Outer Hebrides

**NatureScot** | Stilligarry | South Uist | HS8 5RS | 0131 [REDACTED]

**NatureScot** | Stadhlaigearraidh | Uibhist a Deas | HS8 5RS | 0131 [REDACTED]

[nature.scot](#) | [@nature\\_scot](#) | *Scotland's Nature Agency* | *Buidheann Nàdair na h-Alba*

---

**From:** [REDACTED]@sepa.org.uk>

**Sent:** 08 September 2022 12:15

**To:** [REDACTED]@nature.scot>

**Cc:** [REDACTED]@sepa.org.uk>; [REDACTED]  
[REDACTED]@SEPA.org.uk>

**Subject:** 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

OFFICIAL

Hello [REDACTED],

I have been given your contact details from my colleague [REDACTED]. I understand you were involved in a recent meeting with SEPA and the Local Authority for North Uist, concerning the Whiteshore Cockles fish waste disposal and treatment site.

I am currently dealing with an application to Permit a waste treatment process at the site, under the Pollution Prevention and Control Regulations 2012 (PPC).

Nature Scot were contacted back in April as a statutory consultee for such developments, due to the location being situated with the relevant screening distances for a number of SPA, SSSI and SAC's. SEPA did not receive a response at the time, within the standard 28 days of contact, or since then.

The reasoning I am contacting you now, is that the applicant (Whiteshore Cockles) has notified SEPA that it would be their intention (pending appropriate approval) to apply some waste from the treatment process to land on North Uist.

The process waste is a liquid 'condensate' and this would require authorisation from SEPA under the Waste Management Licensing Regulations and would typically be considered a Paragraph 7 'Exemption' from the regulations – if the application of the waste is justified and can be demonstrated to provide agricultural or ecological benefit (i.e. not cause any harm) and ensure no other environmental impacts were to occur, such as pollution of the water environment or offensive odour etc.

The applicant has been asked to pull together the necessary information SEPA would require to grant a Paragraph 7 Exemption and our own soil scientists are in the process of assessing the suitability of this information (there will be a requirement for further information as some technical aspects are lacking at this hypothetical stage, see their [comments below](#)). As part of their [comments](#) they also recommend that we consult with Nature Scot in case of any potential impacts or concerns of the above mentioned SAC's etc.

Would you or a colleague be able to look at the attached documents and provide an assessment on the proposal?

If you think a tele call would be helpful then please let me know.

Regards,

Waste & Industry Unit

### Waste Analysis

- *The supplied waste analysis (from September 2020) is not recent enough to support a para 7 application. It's currently just within the allowable timeframe for para 7 waste analysis, by a week or so (waste analysis should be no more than 2 years old – see [WMX-TG7 section 2.6](#)), but once they've actually completed and submitted the application, it will almost certainly be more than 2 years old. Furthermore, given that the operator has been developing and expanding their process over the last few years, there's a significant question about how representative a 2 year old waste analysis is likely to be of the material that will be actually spread. If there's a significant change in a process between renewals of a para 7, we normally ask the operator to provide new waste analysis data on renewal.*
- *There's also a further issue potential issue with the September 2020 waste analysis. The applicant will need to confirm this, but I suspect that that the material has been analysed as a liquid, as results are expressed in units of mg/l, not mg/kg, and there's no dry matter content/moisture content result given. Analysis as a liquid means that the lab has filtered the sample, removing the solid fraction, and then analysed the filtrate. That is not best practise for waste spread to land – instead, they should have requested that the lab determine a dry solids content and then dry the sample and analyse the solid fraction, because nutrients and contaminants tend to accumulate in the solid phase of these wastes, so results from analysis of the liquid phase are likely to underestimate both the agricultural benefit potential of the material and the risk to the environment from spreading it.*
- *The waste analysis results supplied don't contain a value for total nitrogen, total potassium, total magnesium or dry matter content. These are all vital to determining whether the material is likely to deliver agricultural benefit on spreading, so a new analysis of the waste is required. It's not clear where the total nitrogen addition figure given in the benefit statement supplied (0.62 kg/m<sup>3</sup>) has been derived from. It doesn't appear to be in the September 2020 analysis results. The applicant should note that the waste should be analysed for all parameters listed in Table 2, Annex 3 of Technical Guidance Note [WMX-TG7](#), except physical contaminants and plastic contaminants, which can be left out as they are unlikely to occur in this waste stream. The applicant should also note that it is not necessary to analyse the waste for organic contaminants (PCBs, pesticides etc) as these contaminants are highly unlikely to be found in their waste stream at levels significant to result in environmental impacts. In their 2020 analysis results, this includes chloromethane and all determinands listed below this on page 1 of the test report they've supplied, plus all determinands listed on pages 2 and 3 of this report. The lack of relevance of these results is supported by the fact that almost of the results for these are reported as below detection limits.*
- *I would also like to see some assessment made of how chemically variable the waste stream is – at least 3 analyses of separate batches of waste with at least a 6 week interval between them (see [WMX-TG7 section 2.6](#)), but I appreciate that this might be impractical as it could delay granting of the exemption by around 22-24 weeks (3 \* 6 weeks for the*

sampling, plus time to get the results back, put in the para 7 application and SEPA to check and approve it). So, if the applicant provides a single full waste analysis for now, I'd be prepared to make assessment on the basis of that, as long as 2 further analyses were done before the exemption is renewed 12 months later.

#### Soil analysis and planned spread rates

- It's currently not clear which fields the soil analysis results provided refer to as the map supplied labels these with a grid reference, not a field number.
- The soil samples from Vallay Island each cover a larger area than specified in the Paragraph 7 Technical Guidance Note ([WMX-TGZ](#) section 2.3), which notes that soil samples should cover an area of 10 hectares maximum – 'where fields are greater than 10 hectares, we require a sample for each 10 hectare or part thereof'. The applicant has provided 6 samples for a total area of 91.51 ha, an average area of 15.25 ha per sample. Consequently, new soil samples that meet the requirement to divide each field into sections less than 10 ha each are needed from Vallay Island if the applicant wishes to spread the waste there, as follows:
  - Field NF 77196/76356 (14.37 ha) – 2 samples needed, each covering <10 ha
  - Field NF 76454/76223 (29.1 ha) – 3 samples needed, each covering <10 ha
  - Field NF 77554/76584 (10.62 ha) – 2 samples needed, each covering <10 ha
  - Field NF 78617/76713 (37.42 ha) – 4 samples needed, each covering <10 haThat is a total of 11 samples.
- The applicant should note that it is NOT acceptable to divide the entire 91.51 ha on the island into a series of 10 ha blocks that cut across the boundaries of the fields, as this leads to unrepresentative sampling because different fields usually have different cropping and management histories and frequently also different soil types. Instead, each individual field should be split into sections of <10 ha for sampling, with no sampling across field boundaries.
- After they've been resampled, the soils from Vallay Island should be analysed for cadmium, chromium, copper, mercury, lead, nickel and zinc, as well as pH and extractable phosphorus, potassium and magnesium. These parameters are listed as required soil data in [WMX-TGZ](#), Annex 3, Table 1.
- Taking both the fields at Kyles Paible and Vallay, there is a total landbank for spreading of 104.7 ha. The applicant's benefit statement notes that they plan to spread the waste at a rate of 28 t/ha per year, which means that they can spread a total of 2,931.88 t of per year. However, the benefit statement also says that estimated waste production is 3,850 tonnes per year. This means that they either need to identify more land to spread the waste upon (and carry out soil analysis for this land to determine its suitability for spreading), or increase the spread rate and provide justification for doing so, in terms of agricultural benefit delivered.

#### Additional comments

- I agree that it is concerning that the benefit statement refers to the spreading of waste on land as 'disposal' and that other potential risks from spreading, particularly odour, have not been considered.
- Storage will need consideration. I am not convinced that year round spreading will be viable, due to fields potentially being waterlogged during winter and there being no/limited crop requirement for nutrients during winter. Storage for extended periods could also pose a potential odour risk.
- **NatureScot will need to be consulted on this, particularly on whether they have any objections to spreading the waste on Vallay Island, as it's part of an SAC designated for**

*various vegetation types – in particular, I suspect that adding more nutrients to soil from the waste spreading could potentially have a negative impact on dune grassland and machair vegetation on the island. However, some expert ecological opinion is going to be needed to check this.*

OFFICIAL



# Whiteshore Condensate Agricultural Benefit Report

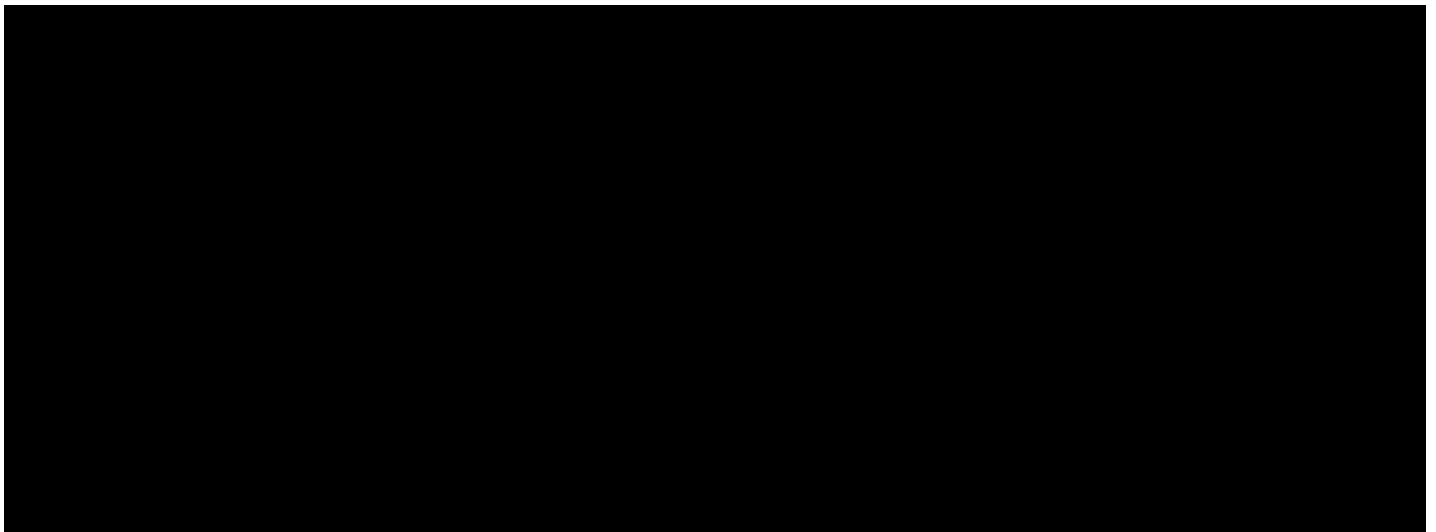
**Client –** [REDACTED]  
[REDACTED] Whiteshore Cockles  
and having place of business  
at Whiteshore, Bayhead  
North Uist, HS6 5DY

**Report Detail –** Condensate Agricultural Benefit report

**Prepared by:** [REDACTED]

**Contact:** C A MacPhail Consulting Ltd (part of the 5Agri group)  
The Paddock  
Over Abington Farm  
Abington  
Biggar  
Lanarkshire  
ML12 6SF

**Experience/Qualifications**



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## Instruction

Whiteshore Cockles have engaged C A MacPhail Consulting Limited to independently review the agricultural benefit of applying condensate to grassland and arable crops in North Uist. CA MacPhail Consulting have been tasked with generating a management plan which identifies suitable fields and recommends appropriate application rates to support the Paragraph 7 exemption application.

The report looks solely at the best possible solution for disposing of condensate from an agricultural benefit perspective. It will assess the possible solutions of moving the condensate or applying it to land. The previous condensate spreading investigation report carried out by Ricardo Energy and Environment has covered the environmental considerations associated with the handling and disposal of condensate.

## Introduction

██████████ and his team have been working on developing the Whiteshore Cockles fish mort processing facility for the last eight years. The processing of the fish mort produces a liquid condensate waste product which has to be disposed of back to the environment in a safe and efficient manner. This report will assess the best available technique to dispose of the condensate and measure the agricultural benefit of spreading this to land.



## Background

The Whiteshore cockles currently handles 4,200t of fish morts and the new processing facility is expected to increase through put to 7,000t of fish morts per annum within the next 2-3 years. Once at full output, this will produce 3,850t of condensate which is the water fraction left over after the drying process. This condensate will require to be disposed of with careful consideration to any environmental impacts.

Th fish morts are a by- product of the fish farming industry which is an important industry in the Western Isles. The new processing facility will generate significant further local employment with 15 full-time processing and management roles and an additional 5 full-time jobs in the transport department and 1 full time employee on spreading/disposal of condensate. This project is of significant importance to the local economy on North Uist, Berneray and Benbecula, therefore finding a safe disposal method for the condensate is a priority for this project.

There has been some work done on the condensate analysis by Ricardo Energy and Environment and this has generated a product analysis which shows low levels of Nitrogen which will provide some agricultural benefit if applied to land.



## Condensate Management/disposal options

There are various options for dealing with the condensate waste material and these options have been considered to establish the Best Available Technique (BAT) to minimise emissions and environmental impact when disposing the condensate. An analysis of the condensate has been provided and all agricultural recommendations are based on the analysis in Appendix 3.

### Disperse to sea

The option of dispersing the condensate to sea has been investigated but to meet with the required standard as set out under the European directives would require further processing through a treatment plant. The cost of building a treatment plant would be in excess of £800k which makes the whole project unviable.

### Transport to the Mainland

Transporting the waste to the mainland has been considered but there are number of barriers which would not make this option possible. The current ferry service is often at capacity with significant reliability issues and the waste product would require more than 150 artic loads to shift the annual output. Also, the transporting, storing, and spreading cost on the mainland are prohibitive due to the double or treble handling of the product. Also, this option would generate a significant carbon footprint per ton of condensate which does not fit with the low carbon approach associated with the project.

### Spread on Land

The spreading to land would appear to be the most appropriate option for the safe disposal of the condensate as this would also provide an agricultural benefit. The condensate provides a modest level of Nitrogen at 0.62kg/t which is relatively low in comparison to other organic agricultural fertilisers. The condensate is produced all year round and on Uist, soil temperatures will rarely fall below 4 degrees which means the machair grassland will have demand for the product during the winter months. The condensate production peaks from July through to October when there is higher grass growth and demand for nutrients at Kyles post-harvest. The spreading plan will also take into account the additional land requirement during this period to dispose of the increased condensate volumes and extra land on Vallay



will be factored into the plan to accommodate this. With all of this in mind, there is an opportunity to apply the product little and often throughout the year.

Condensate is a new waste product and from an agricultural perspective, the closest comparison would be livestock slurry and it would be assumed that the application rates for condensate would be similar to cattle slurry at 2,500 -3,000 gallons per acre or 28m<sup>3</sup>/Ha. Cattle slurry has 2.6kg/N/m<sup>3</sup>, pig slurry 3.6kg/N/m<sup>3</sup> whereas condensate has 0.62kg/N/m<sup>3</sup> which makes it less potent in terms of the nitrogen levels being applied at 2,500gallons/acre. At the 2,500gallons per acre or 28m<sup>3</sup> per hectare spread rate, each condensate application would provide 17kg/N/ha which is relatively low in comparison to cattle slurry at 73kg/N/ha. Condensate appears to be a milder product which will provide Nitrogen to the crop and still deliver agricultural benefit but have less environmental risk from diffused pollution.

The soil samples, condensate analysis, land areas and cropping plans for Kyles and Vallay have been run through the OMNIA digital farming nutrient management software. OMNIA is an online platform which is subscription based. The soil samples available have been entered as a base for this plan. A nutrient plan is only the starting point to nutrient management, and advice should be sought throughout the year so growing conditions can be assessed and changes made to the advice. The Omnia software has produced a spreading plan which limits the nitrogen applications to the standard maximum 250kg/ha for the land at Kyles and Vallay.

The condensate management plans has an all year round spread pattern to help manage condensate volumes and to provide low levels of nitrogen in the winter and early spring months. There are some winter applications which are permitted out with an NVZ area for slurry and would also be permitted for condensate. As mentioned, condensate has lower N levels and is less potent than slurry and would pose less of a diffused pollution risk.

The spread plan accounts for areas at Kyles which are under silage production from May to July and also looks to minimise haulage of digestate due to the financial implications and also to minimise the carbon footprint of spreading on Vallay. All fields at Kyles and Vallay are flat with minimum slope, out with 50m from any dwelling and are not close to water supplies, water courses or any other notable features. All land is owner occupied on the Single Application Form.

## Planning – Risk Assessment for Slurries and Condensate

A risk assessment is an important starting point for planning the application of FYM, slurry and other organic waste products. It identifies the area of land area on the farm that is available for spreading and provides a quick visual reference for farm staff and contractors employed in the spreading of condensate. A desktop risk assessment of the land has been carried out and the farm/crofts fall into the yellow and green category for all the land selected and available for spreading:

White areas	This includes steading areas, roads, yards etc., where spreading cannot be carried out.
Red areas	<p><b>No spread Zones</b></p> <ul style="list-style-type: none"> <li>• Land within 10 metres of any surface water i.e. ditch, stream, river, pond or loch</li> <li>• Land within 50 metres of a well or borehole or similar underground facility for the purpose of any water supply.</li> <li>• Areas that are very steeply sloping where the risk of run-off is high throughout the year.</li> <li>• Unimproved land that has not previously received slurry or manure.</li> </ul>
Orange areas	<p><b>High Risk Areas.</b></p> <p>Spreading in these areas presents a potentially high risk that pollution will occur as a direct result of spreading. These areas include:</p> <ul style="list-style-type: none"> <li>• Land that has a slope with a gradient of more than 12°.</li> <li>• Land that has a slope less than 12 degrees and where spreading would represent a high risk to the water environment.</li> <li>• Areas with a risk of flooding more often than one in five years</li> <li>• Fields with drainage installed in previous 12 months</li> <li>• Poorly drained, water-logged or severely compacted land</li> </ul>
Yellow areas	<p><b>Moderate Risk Areas.</b></p> <p>Care will still have to be taken in areas categorised as medium risk. Ground conditions should be checked before spreading. These areas include:-</p> <ul style="list-style-type: none"> <li>• Land that has a slope with gradients of between 4° and 12°</li> <li>• Land sloping towards watercourses or water supplies</li> <li>• Land that is Imperfectly drained or is saturated</li> </ul>
Green areas	<p><b>Low Risk Areas.</b></p> <p>This land presents a lower pollution risk and can be used throughout the year, depending on other factors that could change the spreading risk. These areas include:-</p> <ul style="list-style-type: none"> <li>• Land that has a slope with a gradient of up to 4°</li> <li>• Land with no artificial drainage.</li> </ul>

**The PEPFAA code also recommends leaving buffer zones near houses and alongside roads.** The risk assessment has taken this into account when calculating the spreadable areas.



## Soil Samples

Soils samples were taken by SAC Consulting and these have been included in Appendix 2. As mentioned, selection of fields were sampled and the actual values put through OMNIA.

## Current Status and Fertiliser Planning

### Current Situation

- [REDACTED] Consequently, there is limited FYM available and purchased fertiliser has to be applied to the silage, grazing and crops.
- This is an established business producing pedigree cattle, store and finished cattle. They operate a rotational grazing system. Silage is produced from surplus growth on the machair where grass cover cannot be fully utilised by the cattle fold.
- The business is not currently making use of the Condensate product which can provide Nitrogen to replace purchased fertilisers.

Soil Samples have been taken in 2021 to provide a baseline.

On the basis of the above information, a set of records and plans have been put together in OMNIA to show how nutrients could be applied. Key considerations are: -

1. Making best use of available N in the condensate
2. Targeting all year-round low-level applications to optimise grass growth

As a result, each field has individual recommendations (which can be found in appendix 2) showing a table for each field which takes account of the following:

1. The nutrient requirement of the planned crop in terms of Nitrogen (N)
2. The fertiliser (kg/ha) required to meet the requirements and optimise grass growth from condensate and reduce purchased inorganic fertiliser applications

Each managed field has recommendations generated based on the grassland requirements from RB209, with the soil results included for the fields sampled.



## Conclusion

The Whiteshore Cockles fish Mort processing facility offers significant benefits to the local community of North Uist and the disposal of the condensate is a critical part the process which requires a viable solution. The report has looked at the disposal options and it is evident that spreading to land is the only viable and practical option as the cost associated with haulage off island and discharge to the sea are prohibitive.

The justification for disposal to land as a product which can deliver agricultural benefit has been demonstrated in the report. The condensate is a low nitrogen fertiliser product which can deliver agricultural benefit if applied to grassland or crops. As the nitrogen level is relatively low at 0.62kg/m<sup>3</sup> compared to over livestock slurries, it also poses less of a threat in winter months from diffused pollution. It offers an alternative to purchased inorganic fertiliser and with multiple targeted applications can replace the need to apply purchased fertiliser.

The nutrient management recommendations (in Appendix 1) show a plan for land at Kyles and Vallay which allows for all year-round spreading. This also keeps transport to a minimum, delivers cost benefits and reduces the carbon footprint. The plan also shows a maximum of 250kg/N/ha applied to the land which is within the recommended guidelines for grassland.

The report demonstrates the agricultural benefit from applying condensate to the land and alongside Paragraph 7 exception approval, this should satisfy the necessary agricultural benefit and ecological improvement requirements.

## Appendix 1



Condensate  
Nutrient Plan.pdf



**Soil ADAS Report**



Farm Sampled:	
Your reference:	S54790
Last Crop:	Grass - grazing
Next Crop:	Grass - grazing
Soil Type:	Mineral

Sample ID :	1
Lab sample no:	21007245
Case no:	ASD-2021-5523
Date received:	07/10/2021
Date reported:	18/10/2021

Determination	Result	Units	Status
pH	8.4		
Lime req (Arable)	0.0	t/ha	
Lime req (Grass)	0.0	t/ha	
ADAS Extractable Phosphorus	13.7	mg/l	1
ADAS Extractable Potassium	11.0	mg/l	0
ADAS Extractable Magnesium	63.5	mg/l	2
Aqua Regia Zinc	26.0	mg/kg	
Aqua Regia Copper	13.2	mg/kg	
Aqua Regia Nickel	3.58	mg/kg	
Aqua Regia Cadmium	<0.0751	mg/kg	
Aqua Regia Lead	4.47	mg/kg	
Aqua Regia Chromium	9.21	mg/kg	
Aqua Regia Mercury	<0.0168	mg/kg	

Details of test methods, decision rules and locations can be provided on request. Samples tested as received.

Authorised by [Redacted] (Scientific Manager)



**Soil ADAS Report**




Farm Sampled:	
Your reference:	S54790
Last Crop:	Grass - grazing
Next Crop:	Grass - grazing
Soil Type:	Mineral

Sample ID :	2
Lab sample no:	21007246
Case no:	ASD-2021-5523
Date received:	07/10/2021
Date reported:	18/10/2021

Determination	Result	Units	Status
pH	8.3		
Lime req (Arable)	0.0	t/ha	
Lime req (Grass)	0.0	t/ha	
ADAS Extractable Phosphorus	13.3	mg/l	1
ADAS Extractable Potassium	7.41	mg/l	0
ADAS Extractable Magnesium	64.0	mg/l	2
Aqua Regia Zinc	15.8	mg/kg	
Aqua Regia Copper	<3.27	mg/kg	
Aqua Regia Nickel	3.09	mg/kg	
Aqua Regia Cadmium	<0.0751	mg/kg	
Aqua Regia Lead	2.56	mg/kg	
Aqua Regia Chromium	7.86	mg/kg	
Aqua Regia Mercury	<0.0168	mg/kg	

Details of test methods, decision rules and locations can be provided on request. Samples tested as received.



Authorised by  Scientific Manager) 



**Soil ADAS Report**



<b>Farm Sampled:</b>	
<b>Your reference:</b>	S54790
<b>Last Crop:</b>	Grass - grazing
<b>Next Crop:</b>	Grass - grazing
<b>Soil Type:</b>	Mineral

<b>Sample ID :</b>	3
<b>Lab sample no:</b>	21007247
<b>Case no:</b>	ASD-2021-5523
<b>Date received:</b>	07/10/2021
<b>Date reported:</b>	18/10/2021

Determination	Result	Units	Status
pH	8.2		
Lime req (Arable)	0.0	t/ha	
Lime req (Grass)	0.0	t/ha	
ADAS Extractable Phosphorus	14.7	mg/l	1
ADAS Extractable Potassium	10.2	mg/l	0
ADAS Extractable Magnesium	63.9	mg/l	2
Aqua Regia Zinc	22.8	mg/kg	
Aqua Regia Copper	<3.27	mg/kg	
Aqua Regia Nickel	3.56	mg/kg	
Aqua Regia Cadmium	0.0996	mg/kg	
Aqua Regia Lead	3.19	mg/kg	
Aqua Regia Chromium	8.83	mg/kg	
Aqua Regia Mercury	<0.0168	mg/kg	

Details of test methods, decision rules and locations can be provided on request. Samples tested as received.



Authorised by [Redacted] (Scientific Manager)





**Soil Report**



<b>Farm Sampled</b>	[Redacted]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	top 1	<b>Next Crop</b>		<b>Lab Sample No</b>	22006124
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.1			5.0	7.0 8.1
ADAS Extractable Phosphorus	3.77	mg/l			
ADAS Extractable Potassium	28.4	mg/l			
ADAS Extractable Magnesium	94.9	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

Details of test methods, decision rules and locations can be provided on request. Samples tested as received

[Redacted] Authorised by [Redacted] (Scientific Manager) [Redacted]



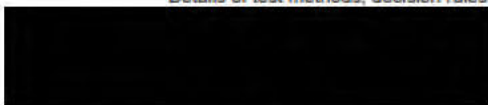
**Soil Report**



<b>Farm Sampled</b>	[Redacted]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	Top 2	<b>Next Crop</b>		<b>Lab Sample No</b>	22006125
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.1			5.0	7.0 8.1
ADAS Extractable Phosphorus	3.46	mg/l			
ADAS Extractable Potassium	25.3	mg/l			
ADAS Extractable Magnesium	109	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

Details of test methods, decision rules and locations can be provided on request. Samples tested as received.



Authorised by [Redacted] (Scientific Manager)





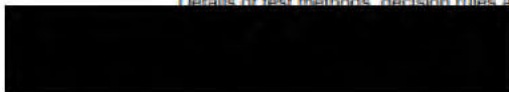
### Soil Report



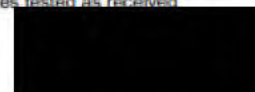
<b>Farm Sampled</b>	[Redacted]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	Middle	<b>Next Crop</b>		<b>Lab Sample No</b>	22006126
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.1				<div style="display: flex; justify-content: space-between;"> <span>5.0</span> <span>7.0</span> </div> <div style="display: flex; justify-content: space-between;"> <span>Very Low</span> <span>Low</span> <span>Moderate</span> <span>High</span> <span>Very High</span> </div> <div style="text-align: right; margin-top: 5px;">8.1</div>
Extractable Zinc	1.1	mg/l	1.6-10	M	<div style="width: 80%; height: 10px; background-color: orange;"></div>
Extractable Copper	0.0700	mg/l	1.6-8.4	M	<div style="width: 5%; height: 10px; background-color: red;"></div>
* Extractable Manganese	0.97	mg/l	2.6-20	M	<div style="width: 20%; height: 10px; background-color: red;"></div>
Extractable Sulphur	5.2	mg/l	6.1-10	M	<div style="width: 60%; height: 10px; background-color: orange;"></div>
Extractable Boron	1.3	mg/l	0.6-1.0	M	<div style="width: 100%; height: 10px; background-color: orange;"></div>
					<div style="display: flex; justify-content: space-between;"> <span>Low</span> <span>Moderate</span> <span>High</span> </div>
Organic Matter (LOI)	3.85	%	4-10	M	<div style="width: 30%; height: 10px; background-color: red;"></div>
ADAS Extractable Phosphorus	10.6	mg/l			
ADAS Extractable Potassium	74.3	mg/l			
ADAS Extractable Magnesium	104	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

Details of test methods, decision rules and locations can be provided on request. Samples tested as received



Authorised by [Redacted] (Scientific Manager)





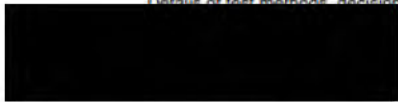
**Soil Report**



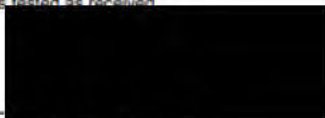
<b>Farm Sampled</b>	[Redacted]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	Lower	<b>Next Crop</b>		<b>Lab Sample No</b>	22006127
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.2				8.2
Extractable Zinc	1.9	mg/l	1.6-10	M	Very Low
Extractable Copper	0.0500	mg/l	1.6-8.4	M	Very Low
* Extractable Manganese	1.2	mg/l	2.6-20	M	Very Low
Extractable Sulphur	6.3	mg/l	6.1-10	M	Low
Extractable Boron	1.2	mg/l	0.6-1.0	M	Moderate
Organic Matter (LOI)	3.57	%	4-10	M	High
ADAS Extractable Phosphorus	10.8	mg/l			
ADAS Extractable Potassium	49.4	mg/l			
ADAS Extractable Magnesium	91.7	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

Details of test methods, decision rules and locations can be provided on request. Samples tested as received



Authorised by [Redacted] (Scientific Manager)





### Soil Report



<b>Farm Sampled</b>	[REDACTED]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	Lower Fallow	<b>Next Crop</b>		<b>Lab Sample No</b>	22006128
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.2				5.0 7.0 8.2 Very Low Low Moderate High Very High
Extractable Zinc	1.1	mg/l	1.6-10	M	[Yellow bar]
Extractable Copper	<0.04	mg/l	1.6-8.4	M	[Red bar]
* Extractable Manganese	1.2	mg/l	2.6-20	M	[Red bar]
Extractable Sulphur	2.0	mg/l	6.1-10	M	[Red bar]
Extractable Boron	1.0	mg/l	0.6-1.0	M	[Green bar]
Organic Matter (LOI)	3.66	%	4-10	M	[Red bar]
ADAS Extractable Phosphorus	7.92	mg/l			
ADAS Extractable Potassium	17.1	mg/l			
ADAS Extractable Magnesium	89.2	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

Details of test methods, decision rules and locations can be provided on request. Samples tested as received.

Authorised by [REDACTED] (Scientific Manager)

Page 5 of 6

SRUC Veterinary and Analytical Services,  
Pentlands Science Park,  
Bush Loan,  
Pericuik, Midlothian, EH26 0PZ

No other party may rely on the report and if they do so, then they rely on it at their own risk.  
All work undertaken is in accordance with our written Standard Terms and Conditions of  
Supply and Service.  
SAC Commercial Ltd (registered in Scotland, No 148684)

# Subcontracted

\* Not UKAS Accredited

\*\* Typical Value



**Soil Report**



<b>Farm Sampled</b>	[Redacted]	<b>Previous Crop</b>		<b>Batch Number</b>	S54795
<b>Field Name or ID</b>	Kyles	<b>Next Crop</b>		<b>Lab Sample No</b>	22006129
<b>FID Number</b>		<b>Date received</b>	07/07/2022	<b>Case No</b>	ASD-2022-3466
<b>Soil Type</b>	Mineral	<b>Date reported</b>	18/07/2022 14:43:0		

Determination	Result	Units	Target Value	Target Status	Status
pH	8.1			5.0	7.0 8.1
ADAS Extractable Phosphorus	17.1	mg/l			
ADAS Extractable Potassium	39.9	mg/l			
ADAS Extractable Magnesium	86.7	mg/l			
Lime req (Arable)	0.0	t/ha			
Lime req (Grass)	0.0	t/ha			

**Summary of Results**

**Farm Sampled:**

**Batch Number:**

**Report Date:** 18/07/2022

SAC	SAC Status	Extractable Phosphorus	Extractable Potassium	Extractable Magnesium
Scales of Interpretation, results in mg/l	VL	0 - 1.7	0 - 39	0 - 19
	L	1.8 - 4.4	40 - 75	20 - 60
	M-	4.5 - 9.4	76 - 140	61 - 200
	M+	9.50 - 13.4	141 - 300	61 - 200
	H	13.5 - 30.0	201 - 400	201 - 1000
	VH	> 30.0	> 400	> 1000

ASD Ref	Field Name/Ref	pH	Lime Required		Extractables		
			Arable	Grass	P	K	Mg
			t/ha		mg/l	mg/l	mg/l

Details of test methods, decision rules and locations can be provided on request. Samples tested

Authorised by [Redacted] (Scientific Manager)

## Appendix 3



WS Condensate  
2020.09.16 (SW Rep.)

**From:** [REDACTED]  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment  
**Date:** 12 October 2022 13:48:52

---

Hi [REDACTED] e

Good news about Vallay. One of the things I would find useful in respect of spreading it on machair to be used for crop is a comparison of the condensate content with the nutrient/alginate content of degraded *Laminaria hyperborea*. The condensate might even be more desirable than the seaweed as the seaweed is a bio-accumulator of heavy metals. In similar cases involving distillery waste, SEPA has taken the view that the waste is merely a substitute for mineral NPK. I am not convinced, hence the request here for a comparison with the usual organic fertiliser.

[REDACTED]  
[REDACTED]  
NatureScot | Great Glen House | Leachkin Road | Inverness | IV3 8NW | t: 01463 72 [REDACTED]  
[REDACTED]

During Covid, calls to my office number are forwarded to my work mobile, which is only answered Tue-Thur

*Scotland's Nature Agency | Buidheann Nàdair na h-Alba*

---

**From:** [REDACTED]@nature.scot>

**Sent:** 10 October 2022 15:58

**To:** [REDACTED]@nature.scot>; [REDACTED]

[REDACTED]@nature.scot>

**Subject:** RE: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

Hi Both

Just to let you know that I've just had an update from [REDACTED] and they plan to go ahead without using Vallay just now. With a view to expanding in the future if necessary once they have a few years trials from Paible.

That makes more sense and I said that we would have a think about what sorts of data/ soil samples would be useful for them to collect over the next few years.

No immediate rush but I'll set up a meeting for us to discuss later in October...

[REDACTED] Operations Manager, Outer Hebrides

NatureScot | Stilligarry | South Uist | HS8 5RS | 0131 314 [REDACTED]

NatureScot | Stadhlaigearraidh | Uibhist a Deas | HS8 5RS | 0131 314 [REDACTED]

[nature.scot](http://nature.scot) | [@nature.scot](mailto:@nature.scot) | *Scotland's Nature Agency | Buidheann Nàdair na h-Alba*

---

**From:** [REDACTED]

**Sent:** 28 September 2022 10:37

**To:** [REDACTED]@nature.scot>; [REDACTED]

[REDACTED]@nature.scot>

**Subject:** FW: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

[REDACTED] Operations Manager, Outer Hebrides

NatureScot | Stilligarry | South Uist | HS8 5RS | 0131 314 [REDACTED]

NatureScot | Stadhlaignearraidh | Uibhist a Deas | HS8 5RS | 0131 314 [REDACTED]

[nature.scot](http://nature.scot) | [@nature\\_scot](https://twitter.com/nature_scot) | Scotland's Nature Agency | Buidheann Nàdair na h-Alba

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**From:** [REDACTED] [@sepa.org.uk](mailto:[REDACTED]@sepa.org.uk)>

**Sent:** 08 September 2022 12:15

**To:** [REDACTED] [@nature.scot](mailto:[REDACTED]@nature.scot)>

**Cc:** [REDACTED] [@sepa.org.uk](mailto:[REDACTED]@sepa.org.uk)>, [REDACTED]

[REDACTED] [@SEPA.org.uk](mailto:[REDACTED]@SEPA.org.uk)>

**Subject:** 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

OFFICIAL

Hello [REDACTED]

I have been given your contact details from my colleague [REDACTED]. I understand you were involved in a recent meeting with SEPA and the Local Authority for North Uist, concerning the Whiteshore Cockles fish waste disposal and treatment site.

I am currently dealing with an application to Permit a waste treatment process at the site, under the Pollution Prevention and Control Regulations 2012 (PPC).

Nature Scot were contacted back in April as a statutory consultee for such developments, due to the location being situated with the relevant screening distances for a number of SPA, SSSI and SAC's. SEPA did not receive a response at the time, within the standard 28 days of contact, or since then.

The reasoning I am contacting you now, is that the applicant (Whiteshore Cockles) has notified SEPA that it would be their intention (pending appropriate approval) to apply some waste from the treatment process to land on North Uist.

The process waste is a liquid 'condensate' and this would require authorisation from SEPA under the Waste Management Licensing Regulations and would typically be considered a Paragraph 7 'Exemption' from the regulations – if the application of the waste is justified and can be demonstrated to provide agricultural or ecological benefit (i.e. not cause any harm) and ensure no other environmental impacts were to occur, such as pollution of the water environment or offensive odour etc.

The applicant has been asked to pull together the necessary information SEPA would require to grant a Paragraph 7 Exemption and our own soil scientists are in the process of assessing the suitability of this information (there will be a requirement for further information as some technical aspects are lacking at this hypothetical stage, see their [comments below](#)). As part of their [comments](#) they also recommend that we consult with Nature Scot in case of any potential impacts or concerns of the above mentioned SAC's etc.

Would you or a colleague be able to look at the attached documents and provide an assessment on the proposal?

If you think a tele call would be helpful then please let me know.

Regards,

[REDACTED]  
[REDACTED]  
Waste & Industry Unit

## Waste Analysis

- The supplied waste analysis (from September 2020) is not recent enough to support a para 7 application. It's currently just within the allowable timeframe for para 7 waste analysis, by a week or so (waste analysis should be no more than 2 years old – see [WMX-TG7 section 2.6](#)), but once they've actually completed and submitted the application, it will almost certainly be more than 2 years old. Furthermore, given that the operator has been developing and expanding their process over the last few years, there's a significant question about how representative a 2 year old waste analysis is likely to be of the material that will be actually spread. If there's a significant change in a process between renewals of a para 7, we normally ask the operator to provide new waste analysis data on renewal.
- There's also a further issue potential issue with the September 2020 waste analysis. The applicant will need to confirm this, but I suspect that that the material has been analysed as a liquid, as results are expressed in units of mg/l, not mg/kg, and there's no dry matter content/moisture content result given. Analysis as a liquid means that the lab has filtered the sample, removing the solid fraction, and then analysed the filtrate. That is not best practise for waste spread to land – instead, they should have requested that the lab determine a dry solids content and then dry the sample and analyse the solid fraction, because nutrients and contaminants tend to accumulate in the solid phase of these wastes, so results from analysis of the liquid phase are likely to underestimate both the agricultural benefit potential of the material and the risk to the environment from spreading it.
- The waste analysis results supplied don't contain a value for total nitrogen, total potassium, total magnesium or dry matter content. These are all vital to determining whether the material is likely to deliver agricultural benefit on spreading, so a new analysis of the waste is required. It's not clear where the total nitrogen addition figure given in the benefit statement supplied (0.62 kg/m<sup>3</sup>) has been derived from. It doesn't appear to be in the September 2020 analysis results. The applicant should note that the waste should be analysed for all parameters listed in Table 2, Annex 3 of Technical Guidance Note [WMX-TG7](#), except physical contaminants and plastic contaminants, which can be left out as they are unlikely to occur in this waste stream. The applicant should also note that it is not necessary to analyse the waste for organic contaminants (PCBs, pesticides etc) as these contaminants are highly unlikely to be found in their waste stream at levels significant to result in environmental impacts. In their 2020 analysis results, this includes chloromethane and all determinands listed below this on page 1 of the test report they've supplied, plus all determinands listed on pages 2 and 3 of this report. The lack of relevance of these results is supported by the fact that almost of the results for these are reported as below detection limits.
- I would also like to see some assessment made of how chemically variable the waste stream is – at least 3 analyses of separate batches of waste with at least a 6 week interval between them (see [WMX-TG7 section 2.6](#)), but I appreciate that this might be impractical as it could delay granting of the exemption by around 22-24 weeks (3 \* 6 weeks for the sampling, plus time to get the results back, put in the para 7 application and SEPA to check and approve it). So, if the applicant provides a single full waste analysis for now, I'd be prepared to make assessment on the basis of that, as long as 2 further analyses were done before the exemption is renewed 12 months later.

## Soil analysis and planned spread rates

*It's currently not clear which fields the soil analysis results provided refer to as the map supplied labels these with a grid reference, not a field number.*

- *The soil samples from Vallay Island each cover a larger area than specified in the Paragraph 7 Technical Guidance Note ([WMX-TGZ](#) section 2.3), which notes that soil samples should cover an area of 10 hectares maximum – ‘where fields are greater than 10 hectares, we require a sample for each 10 hectare or part thereof’. The applicant has provided 6 samples for a total area of 91.51 ha, an average area of 15.25 ha per sample. Consequently, new soil samples that meet the requirement to divide each field into sections less than 10 ha each are needed from Vallay Island if the applicant wishes to spread the waste there, as follows:*

- *Field NF 77196/76356 (14.37 ha) – 2 samples needed, each covering <10 ha*
- *Field NF 76454/76223 (29.1 ha) – 3 samples needed, each covering <10 ha*
- *Field NF 77554/76584 (10.62 ha) – 2 samples needed, each covering <10 ha*
- *Field NF 78617/76713 (37.42 ha) – 4 samples needed, each covering <10 ha*

*That is a total of 11 samples.*

- *The applicant should note that it is NOT acceptable to divide the entire 91.51 ha on the island into a series of 10 ha blocks that cut across the boundaries of the fields, as this leads to unrepresentative sampling because different fields usually have different cropping and management histories and frequently also different soil types. Instead, each individual field should be split into sections of <10 ha for sampling, with no sampling across field boundaries.*
- *After they've been resampled, the soils from Vallay Island should be analysed for cadmium, chromium, copper, mercury, lead, nickel and zinc, as well as pH and extractable phosphorus, potassium and magnesium. These parameters are listed as required soil data in [WMX-TGZ](#), Annex 3, Table 1.*
- *Taking both the fields at Kyles Paible and Vallay, there is a total landbank for spreading of 104.7 ha. The applicant's benefit statement notes that they plan to spread the waste at a rate of 28 t/ha per year, which means that they can spread a total of 2,931.88 t of per year. However, the benefit statement also says that estimated waste production is 3,850 tonnes per year. This means that they either need to identify more land to spread the waste upon (and carry out soil analysis for this land to determine its suitability for spreading), or increase the spread rate and provide justification for doing so, in terms of agricultural benefit delivered.*

#### Additional comments

- *I agree that it is concerning that the benefit statement refers to the spreading of waste on land as 'disposal' and that other potential risks from spreading, particularly odour, have not been considered.*
- *Storage will need consideration. I am not convinced that year round spreading will be viable, due to fields potentially being waterlogged during winter and there being no/limited crop requirement for nutrients during winter. Storage for extended periods could also pose a potential odour risk.*
- *NatureScot will need to be consulted on this, particularly on whether they have any objections to spreading the waste on Vallay Island, as it's part of an SAC designated for various vegetation types – in particular, I suspect that adding more nutrients to soil from the waste spreading could potentially have a negative impact on dune grassland and machair vegetation on the island. However, some expert ecological opinion is going to be needed to check this.*

**From:** [REDACTED]  
**To:** [REDACTED]  
**Cc:** [REDACTED]  
**Subject:** RE: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment  
**Date:** 02 November 2022 10:54:00

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Morning [REDACTED]

Since I met with [REDACTED] and [REDACTED] a few weeks ago, they got back in touch to say that they were removing Vallay Island from the application. Is that no longer the case?

Anyway, leaving that aside for the moment – we had gone through the report produced by [REDACTED] for the applicants. The concerns we had, broadly agreed with his own conclusions, regarding impacts on the natural heritage, in that, we thought spreading condensate on species rich machair grassland could have the potential to reduce the botanical diversity, changing the species composition. It wasn't clear to us initially that the spreading would be confined to cropped machair (but the applicants confirmed this would be the case), so if that's correct, then there shouldn't be any impacts on machair grassland. We suggested a similar buffer to that proposed for other habitats such as dunes and saltmarsh.

In terms of spreading on cropped machair, we would need to ensure that breeding birds weren't affected. Initially, we thought spreading was planned to be carried out weekly, but the applicants assured us that it was three or four times per year. As long as the spreading was done outwith the breeding bird season then there shouldn't be an issue in terms of disturbance to birds or destruction of nests.

In general, cultivation activities on machair should be completed by 15<sup>th</sup> May and this date is part of agri-environment schemes, SSSI consents etc. Whilst we accept that there will be some disturbance from cultivation before that date, our advice to crofters is to keep the cultivation activities as close together as possible (as opposed to weeks apart) so that the birds haven't had time to relay before the next activity – this avoids damage to subsequent nesting attempts. The applicants advised that they would plan the timing of any spreading of condensate to reduce disturbance to breeding birds and would consult us first.

In terms of spreading after harvesting, it is likely that this will increase the growth of foggage but we assume that the impacts/benefits are likely to be fairly short lived and any flush of growth would probably benefit wintering barnacle geese that arrive in October.

Some of the other things we discussed, included the potential for damage to the fabric of the machair from repeated tracking with large tankers. The applicants mentioned they would be using a special machine with low pressure tyres, having less impact than their existing large tractors.

Looking at some of the chemicals in the condensate we wondered if it would be sensible for the applicant to carry out testing of soil samples to ensure these chemicals didn't build up in the soil and accumulate in the food chain but that is your area of expertise – so, it would be useful to have a chat about the potential for pollution and how different the risk would be compared to the application of seaweed for instance?

In terms of spreading the condensate on non designated areas, we wouldn't usually comment on wider countryside cases but we would assume that if you thought there were likely to be impacts on the water table or diffuse impacts on freshwater features that you would let us know?

Happy for [REDACTED] and I to meet with you to chat through.

[REDACTED]  
**Operations Manager, Outer Hebrides**

---

**From:** [REDACTED]@sepa.org.uk>

**Sent:** 27 October 2022 16:58

**To:** [REDACTED]@nature.scot>

**Cc:** [REDACTED]sepa.org.uk>; [REDACTED]

[REDACTED]@SEPA.org.uk>

**Subject:** RE: 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

OFFICIAL

Hello [REDACTED]

I was wondering if you had a chance to see my email and have any comments or thoughts on the content? I was speaking with Whiteshore recently and they informed me that they had spoken with you a few weeks ago:

*We had a very constructive meeting on Wednesday with [REDACTED] who is the Operations Manager for Nature Scotland in the Outer Hebrides. [REDACTED] has a tremendous knowledge of the habitat and wildlife of our area and years of experience through her work with what was previously SNH, and we welcome her input and advice. She has not had a chance to study in detail our condensate spreading plan but we provided her with copies of the consultants report and proposed spreading programme. Obviously her final recommendations will be determined by the information in the report but our initial thoughts following the meeting are:*

- 1. If normal crofting practices are observed concerning bird nesting etc then spreading the condensate on the arable land at Kyles to provide agricultural benefit should not pose a problem.*
- 2. Vallay island due to its unique habitat and wildlife would require a much more rigid and monitored programme. Nature Scotland acknowledge that this habitat has been created by the crofting practices which [REDACTED] has followed over the past 20 years. The volume of condensate which would be produced based on our annual turnover of morts would mean that spreading on Vallay island could be kept to a minimum, [REDACTED] believes that spreading the condensate on the arable land immediately after harvesting would bring benefits. Before this would take place we would engage in consultation with Nature Scotland to determine where/ when and how this would be best achieved.*

I would be a happy to talk over the phone if preferred and keen to understand if Nature Scot would have any concerns with condensate spreading in the area and SEPA granting a WML Exemption to authorise this waste to land activity.

Please let me know,

Regards,

[REDACTED]  
Waste & Industry Unit

OFFICIAL

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**From:** [REDACTED]

**Sent:** 08 September 2022 12:15

**To:** [REDACTED]@nature.scot

**Cc:** [REDACTED]@sepa.org.uk>; [REDACTED]

[REDACTED]@SEPA.org.uk>

**Subject:** 20220908\_Whiteshore\_SEPA\_NatureScot\_Para7\_Assessment

OFFICIAL

Hello [REDACTED]

I have been given your contact details from my colleague [REDACTED]. I understand you were involved in a recent meeting with SEPA and the Local Authority for North Uist, concerning the Whiteshore Cockles fish waste disposal and treatment site.

I am currently dealing with an application to Permit a waste treatment process at the site, under the Pollution Prevention and Control Regulations 2012 (PPC).

Nature Scot were contacted back in April as a statutory consultee for such developments, due to the location being situated with the relevant screening distances for a number of SPA, SSSI and SAC's. SEPA did not receive a response at the time, within the standard 28 days of contact, or since then.

The reasoning I am contacting you now, is that the applicant (Whiteshore Cockles) has notified SEPA that it would be their intention (pending appropriate approval) to apply some waste from the treatment process to land on North Uist.

The process waste is a liquid 'condensate' and this would require authorisation from SEPA under the Waste Management Licensing Regulations and would typically be considered a Paragraph 7 'Exemption' from the regulations – if the application of the waste is justified and can be demonstrated to provide agricultural or ecological benefit (i.e. not cause any harm) and ensure no other environmental impacts were to occur, such as pollution of the water environment or offensive odour etc.

The applicant has been asked to pull together the necessary information SEPA would require to grant a Paragraph 7 Exemption and our own soil scientists are in the process of assessing the suitability of this information (there will be a requirement for further information as some technical aspects are lacking at this hypothetical stage, see their [comments below](#)). As part of their [comments](#) they also recommend that we consult with Nature Scot in case of any potential impacts or concerns of the above mentioned SAC's etc.

Would you or a colleague be able to look at the attached documents and provide an assessment on the proposal?

If you think a tele call would be helpful then please let me know.

Regards,

[REDACTED]

[REDACTED]

Waste & Industry Unit

[REDACTED]

Waste Analysis

- *The supplied waste analysis (from September 2020) is not recent enough to support a para 7 application. It's currently just within the allowable timeframe for para 7 waste analysis, by a week or so (waste analysis should be no more than 2 years old – see [WMX-TG7 section 2.6](#)), but once they've actually completed and submitted the application, it will almost certainly be more than 2 years old. Furthermore, given that the operator has been developing and expanding their process over the last few years, there's a significant question about how representative a 2 year old waste analysis is likely to be of the material that will be actually spread. If there's a significant change in a process between renewals of a para 7, we normally ask the operator to provide new waste analysis data on renewal.*
- *There's also a further issue potential issue with the September 2020 waste analysis. The applicant will need to confirm this, but I suspect that that the material has been analysed as a liquid, as results are expressed in units of mg/l, not mg/kg, and there's no dry matter*

content/moisture content result given. Analysis as a liquid means that the lab has filtered the sample, removing the solid fraction, and then analysed the filtrate. That is not best practise for waste spread to land – instead, they should have requested that the lab determine a dry solids content and then dry the sample and analyse the solid fraction, because nutrients and contaminants tend to accumulate in the solid phase of these wastes, so results from analysis of the liquid phase are likely to underestimate both the agricultural benefit potential of the material and the risk to the environment from spreading it.

- The waste analysis results supplied don't contain a value for total nitrogen, total potassium, total magnesium or dry matter content. These are all vital to determining whether the material is likely to deliver agricultural benefit on spreading, so a new analysis of the waste is required. It's not clear where the total nitrogen addition figure given in the benefit statement supplied (0.62 kg/m<sup>3</sup>) has been derived from. It doesn't appear to be in the September 2020 analysis results. The applicant should note that the waste should be analysed for all parameters listed in Table 2, Annex 3 of Technical Guidance Note [WMX-TG7](#), except physical contaminants and plastic contaminants, which can be left out as they are unlikely to occur in this waste stream. The applicant should also note that it is not necessary to analyse the waste for organic contaminants (PCBs, pesticides etc) as these contaminants are highly unlikely to be found in their waste stream at levels significant to result in environmental impacts. In their 2020 analysis results, this includes chloromethane and all determinands listed below this on page 1 of the test report they've supplied, plus all determinands listed on pages 2 and 3 of this report. The lack of relevance of these results is supported by the fact that almost of the results for these are reported as below detection limits.
- I would also like to see some assessment made of how chemically variable the waste stream is – at least 3 analyses of separate batches of waste with at least a 6 week interval between them (see [WMX-TG7 section 2.6](#)), but I appreciate that this might be impractical as it could delay granting of the exemption by around 22-24 weeks (3 \* 6 weeks for the sampling, plus time to get the results back, put in the para 7 application and SEPA to check and approve it). So, if the applicant provides a single full waste analysis for now, I'd be prepared to make assessment on the basis of that, as long as 2 further analyses were done before the exemption is renewed 12 months later.

#### Soil analysis and planned spread rates

- It's currently not clear which fields the soil analysis results provided refer to as the map supplied labels these with a grid reference, not a field number.
- The soil samples from Vallay Island each cover a larger area than specified in the Paragraph 7 Technical Guidance Note ([WMX-TG7 section 2.3](#)), which notes that soil samples should cover an area of 10 hectares maximum – 'where fields are greater than 10 hectares, we require a sample for each 10 hectare or part thereof'. The applicant has provided 6 samples for a total area of 91.51 ha, an average area of 15.25 ha per sample. Consequently, new soil samples that meet the requirement to divide each field into sections less than 10 ha each are needed from Vallay Island if the applicant wishes to spread the waste there, as follows:
  - Field NF 77196/76356 (14.37 ha) – 2 samples needed, each covering <10 ha
  - Field NF 76454/76223 (29.1 ha) – 3 samples needed, each covering <10 ha
  - Field NF 77554/76584 (10.62 ha) – 2 samples needed, each covering <10 ha
  - Field NF 78617/76713 (37.42 ha) – 4 samples needed, each covering <10 haThat is a total of 11 samples.

*The applicant should note that it is NOT acceptable to divide the entire 91.51 ha on the island into a series of 10 ha blocks that cut across the boundaries of the fields, as this leads to unrepresentative sampling because different fields usually have different cropping and management histories and frequently also different soil types. Instead, each individual field should be split into sections of <10 ha for sampling, with no sampling across field boundaries.*

- *After they've been resampled, the soils from Vallay Island should be analysed for cadmium, chromium, copper, mercury, lead, nickel and zinc, as well as pH and extractable phosphorus, potassium and magnesium. These parameters are listed as required soil data in [WMX-TGZ](#), Annex 3, Table 1.*
- *Taking both the fields at Kyles Paible and Vallay, there is a total landbank for spreading of 104.7 ha. The applicant's benefit statement notes that they plan to spread the waste at a rate of 28 t/ha per year, which means that they can spread a total of 2,931.88 t of per year. However, the benefit statement also says that estimated waste production is 3,850 tonnes per year. This means that they either need to identify more land to spread the waste upon (and carry out soil analysis for this land to determine its suitability for spreading), or increase the spread rate and provide justification for doing so, in terms of agricultural benefit delivered.*

#### Additional comments

- *I agree that it is concerning that the benefit statement refers to the spreading of waste on land as 'disposal' and that other potential risks from spreading, particularly odour, have not been considered.*
- *Storage will need consideration. I am not convinced that year round spreading will be viable, due to fields potentially being waterlogged during winter and there being no/limited crop requirement for nutrients during winter. Storage for extended periods could also pose a potential odour risk.*
- *NatureScot will need to be consulted on this, particularly on whether they have any objections to spreading the waste on Vallay Island, as it's part of an SAC designated for various vegetation types – in particular, I suspect that adding more nutrients to soil from the waste spreading could potentially have a negative impact on dune grassland and machair vegetation on the island. However, some expert ecological opinion is going to be needed to check this.*

OFFICIAL

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This email was Malware checked by UTM 9. <http://www.sophos.com>

**From:** [REDACTED]  
**To:** [REDACTED]  
**Subject:** FW: condensate spreading.  
**Date:** 22 March 2023 10:33:02

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[REDACTED]  
**Operations Manager, Outer Hebrides**

**NatureScot** | Stilligarry | South Uist | HS8 5RS | 0131 314 [REDACTED]

**NatureScot** | Stadhlaigearraidh | Uibhist a Deas | HS8 5RS | 0131 314 [REDACTED]

[nature.scot](https://www.nature.scot) | [@nature\\_scot](https://twitter.com/nature_scot) | Scotland's Nature Agency | Buidheann Nàdair na h-Alba

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**From:** [REDACTED]  
**Sent:** 22 September 2022 13:17  
**To:** [REDACTED]  
**Subject:** RE: condensate spreading.

That's fine [REDACTED]

[REDACTED]  
**Operations Manager, Outer Hebrides**

**NatureScot** | Stilligarry | South Uist | HS8 5RS | 0131 314 [REDACTED]

**NatureScot** | Stadhlaigearraidh | Uibhist a Deas | HS8 5RS | 0131 314 [REDACTED]

[nature.scot](https://www.nature.scot) | [@nature\\_scot](https://twitter.com/nature_scot) | Scotland's Nature Agency | Buidheann Nàdair na h-Alba

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**From:** [REDACTED]  
**Sent:** 22 September 2022 10:03  
**To:** [REDACTED] [@nature.scot](mailto:[REDACTED]@nature.scot)>  
**Subject:** condensate spreading.

Good morning [REDACTED]

Thanks again for coming to Kyles yesterday to discuss our proposed condensate spreading project.

I am preparing my reply to the queries that SEPA had and as explained they suggested getting an input from Nature Scotland. With this in mind I have written the following paragraph which I was going to include in my reply. Could you please have a look at it to make sure you are happy with the content - any changes etc that you wish to make please

just let me know. It will be tomorrow before I complete the reply.

“ We had a very constructive meeting on Wednesday with [REDACTED] who is the Operations Manager for Nature Scotland in the Outer Hebrides. [REDACTED] has a tremendous knowledge of the habitat and wildlife of our area and years of experience through her work with what was previously SNH, and we welcome her input and advice. She has not had a chance to study in detail our condensate spreading plan but we provided her with copies of the consultants report and proposed spreading programme. Obviously her final recommendations will be determined by the information in the report but our initial thoughts following the meeting are:

1. If normal crofting practices are observed concerning bird nesting etc then spreading the condensate on the arable land at Kyles to provide agricultural benefit should not pose a problem.
2. Vally island due to its unique habitat and wildlife would require a much more rigid and monitored programme. Nature Scotland acknowledge that this habitat has been created by the crofting practices which [REDACTED] has followed over the past 20 years. The volume of condensate which would be produced based on our annual turnover of morts would mean that spreading on Vally island could be kept to a minimum, [REDACTED] believes that spreading the condensate on the arable land immediately after harvesting would bring benefits. Before this would take place we would engage in consultation with Nature Scotland to determine where/ when and how this would be best achieved.”

Best regards as always.

[REDACTED]