**Document 2:** **Information required for Variation Application**

**As provided by email from Mahmud Hussein, EA Mobile Plant Permitting Officer on 12/05/2025**

**The following additional documents and supporting information will be required as part of your application:**

1. **Application Forms Part A, C1 and F1: Completed & included.**

   **Part A - Application for an environmental permit: part A about you - GOV.UK**

   **Part C2 - Form EPC: Application for an environmental permit – Part C2 general – varying a bespoke permit**

   **Part F1 - Application for an environmental permit (charges and declarations): part F1 - GOV.UK**

2. **A non-technical summary describing the changes to the SR 2010 No4 permit and why a bespoke is needed. Mahmud Hussein, EA Mobile Plant Permitting Officer, informed the business on 09/05/2025 via a Teams video call that the incorrect EWC waste code had been used in the deployment application and that code 19 11 06 was the correct code and as such the business needed to apply for a permit variation for landspreading. The same code had been used for many years for deployment applications as advised by the EA. Nothing has changed regarding the activity or process or permit other than the code change.**

3. **A new EMS summary. See Point 6.**

4. **Describe how you have coded the additional waste and how you want the wastes described in the new permit, demonstrate how you followed the guidance in WM3 to ascertain the correct coding/description. As per Point 1.**

5. **Full details of the waste producer sites including name and addresses: Included in application forms & Document 1: Landspreading Deployment Benefit Statement.**

6. **The treatment processes must be fully described including details of all the inputs that would make up the waste: Used cooking oil is the only input. Containers of used cooking oil are placed in a steam heated tank so the oil liquefies and can be emptied from the containers and pumped through Filter 1 (to capture solid matter) and into the heating tanks. The oil is heated to boiling point to separate the heavier water from the lighter oil component and then cooled overnight. The water is then drained through Filter 2 into a holding tank and then through Filter 3 into a second holding tank. The water then passes through 4 interceptors & tanks to remove any oil and/or physical matter remaining. The water then stays in the final holding tank before being pumped to the lagoons prior to landspreading. The oil is pumped to a storage tank before being**

taken away by bulk tanker to another processor for recycling into biofuel. The solid matter retained by the filters is taken away by waste contractor to an AD plant.

7. We would expect see at least 3-4 years of analysis, which is itself assessed, reviewed, and discussed. We expect to see a breakdown about which determinants are being analysed and why. Justification as to why others haven't been analysed and assessed. Review & discussion of the 2025 analysis results can be found in Appendix 1 of Document 1: Landspreading Deployment Benefit Statement and previous results in Appendix 1 of this document (2021-2024 results). The determinants analysed and assessed are those relevant:
    - to the primary waste of used cooking oil (oils, fats & grease).
    - the intended use as a direct replacement of inorganic fertiliser (macro and micro crop nutrients including nitrogen, phosphorus, potassium, magnesium, sulphur & calcium).
    - to soil health (Potentially Toxic Elements: chromium, zinc, copper, nickel, cadmium, lead, mercury, molybdenum, selenium, arsenic & fluoride).
    - to crop growth, health & palatability (pH, sodium & chloride).
    - to water quality (Biological Oxygen Demand & Chemical Oxygen Demand).

8. A sample agronomic assessment should be included; this would be similar to the benefit statement we would assess at deployment stage: This is detailed in Document 1: Landspreading Deployment Benefit Statement.

9. Demonstrate how the use of these wastes will satisfy the recovery principles, specifically would a farmer/landowner use these materials as a direct replacement for fertiliser if the fertiliser wasn't available: This is detailed in Document 1: Landspreading Deployment Benefit Statement.

10. Demonstrate how you have followed the Waste Hierarchy, can the wastes be reused or recycled as opposed to be recovered to land? Explain why recovering these wastes to land is the most appropriate route. There is no suitable reuse or recycling opportunity for the waste water so recovery to land is the most appropriate options as a direct replacement for inorganic fertiliser in the production of grass forage crops for livestock.

## Appendix 1: Analysis Results

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MEL HOLLOWAY

LIQUID WASTE

# SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

NO. 1

Sample Matrix : SLURRY/SLUDGE

| Laboratory References | |
|---|---|
| Report Number | 23833 |
| Sample Number | 148938 |

| | |
|---|---|
| Date Received | 26-FEB-2024 |
| Date Reported | 28-MAR-2024 |

The sample submitted was small and made it difficult to complete all analysis requested.
The sample will be kept under refrigeration for at least 3 weeks.

ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand | Value | Units |
|---|---|---|
| Oven Dry Solids | 0.410 | % |
| Total Kjeldahl Nitrogen | 0.01 | % w/w |
| Nitrate Nitrogen | <10 | mg/kg |
| Ammonium Nitrogen | 26.2 | mg/kg |
| Total Phosphorus (P) | 30.2 | mg/kg |
| Total Potassium (K) | 93.2 | mg/kg |
| Total Magnesium (Mg) | 10.4 | mg/kg |
| Total Copper (Cu) | <0.2 | mg/kg |
| Total Zinc (Zn) | <0.5 | mg/kg |
| Total Sulphur (S) | 26.2 | mg/kg |

Released by *Gabrielle Parkes* Date *28/03/24*

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LIQUID WASTE

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The sample will be kept under refrigeration for at least 3 weeks.

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand | Value | Units |
|---|---|---|
| Total Calcium (Ca) | 26.7 | mg/kg |
| Nitrite Nitrogen | <1 | mg/kg |
| Total Molybdenum (Mo) | <0.05 | mg/kg |
| Total Lead (Pb) | <0.5 | mg/kg |
| Total Cadmium (Cd) | <0.01 | mg/kg |
| Total Mercury (Hg) | <0.05 | mg/kg |
| Total Nickel (Ni) | <0.2 | mg/kg |
| Total Chromium (Cr) | 0.26 | mg/kg |
| Total Sodium (Na) | 443 | mg/kg |
| pH 1:6 [Fresh] | 7.46 | |

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LIQUID WASTE

# SLURRY/SLUDGE ANALYSIS RESULTS

Sample Reference :

NO. 1

Sample Matrix : SLURRY/SLUDGE

| Laboratory References | |
|---|---|
| Report Number | 23833 |
| Sample Number | 148938 |

| | |
|---|---|
| Date Received | 26-FEB-2024 |
| Date Reported | 28-MAR-2024 |

The sample submitted was small and made it difficult to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand | Value | Units |
|---|---|---|
| Chloride | 204 | mg/kg |
| Fluoride [100:1 H2S04 Soluble] | <10 | mg/kg |
| Total Arsenic (As) | <0.5 | mg/kg |
| Total Selenium (Se) | <0.02 | mg/kg |
| B.O.D. [fresh] | 575 | mg/l |
| C.O.D. [fresh] | 2460 | mg/kg |
| Oils,Fats and Grease | <200 | mg/kg |

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LIQUID WASTE

# LIQUID WASTE ANALYSIS RESULTS (Metric Units)

Sample Reference : 1

Sample Matrix : LIQUID WASTE

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

| Laboratory References | |
|---|---|
| Report Number | 17400 |
| Sample Number | 122474 |

| | |
|---|---|
| Date Received | 11-MAY-2022 |
| Date Reported | 19-MAY-2022 |

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand on a fresh weight basis | Units | Result | Amount per fresh tonne or m3 | Amount applied at an equivalent total Nitrogen application of 250 kg N/ha | Units |
|---|---|---|---|---|---|
| pH 1:6 [Fresh] | | 8.48 | | | |
| Oven Dry Solids | % | 0.570 | 5.70 | 14250 | kg DM |
| Total Kjeldahl Nitrogen | % w/w | 0.010 | 0.10 | 250 | kg N |
| Ammonium Nitrogen | mg/kg | 39.0 | 0.04 | 97.50 | kg NH4-N |
| Nitrate Nitrogen | mg/kg | <10 | < 0.01 | | kg NO3-N |
| Total Phosphorus (P) | mg/kg | 45.7 | 0.10 | 261.63 | kg P2O5 |
| Total Potassium (K) | mg/kg | 215 | 0.26 | 645.00 | kg K2O |
| Total Magnesium (Mg) | mg/kg | 26.2 | 0.04 | 108.73 | kg MgO |
| Total Sulphur (S) | mg/kg | 48.1 | 0.12 | 300.63 | kg SO3 |
| Total Copper (Cu) | mg/kg | <0.2 | < 0.01 | | kg Cu |
| Total Zinc (Zn) | mg/kg | <0.5 | < 0.01 | | kg Zn |
| Total Sodium (Na) | mg/kg | 959 | 1.29 | % 3231.83 | kg Na2O |
| Total Calcium (Ca) | mg/kg | 33.6 | 0.03 | 84.00 | kg Ca |
| Equivalent field application rate | | ------ | 1.00 | 2500.00 | tonnes or m3 / ha |

The above equivalent field application rate for total nitrogen of 250 kg/ha has been provided purely for guidance purposes only. Organic manures should be used in accordance with the Defra Code of Good Agricultural Practice and where required within the specific regulatory guidance for the spreading of that material to land. To get the most benefit from your organic manures it is recommended that you follow the principles as set out in Defra's Fertiliser Manual (RB209) or as directed by a FACTS qualified adviser.

Released by *Nina Mansfield* Date *19/05/22*

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MEL HOLLOWAY

LIQUID WASTE

# LIQUID WASTE ANALYSIS RESULTS (Metric Units)

Sample Reference : 1

Sample Matrix : LIQUID WASTE

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

| Laboratory References | |
|---|---|
| Report Number | 17400 |
| Sample Number | 122474 |

| | |
|---|---|
| Date Received | 11-MAY-2022 |
| Date Reported | 19-MAY-2022 |

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand on a fresh weight basis | Units | Result |
|---|---|---|
| Nitrite Nitrogen | mg/kg | <1 |
| Total Molybdenum (Mo) | mg/kg | <0.05 |
| Total Lead (Pb) | mg/kg | <0.5 |
| Total Cadmium (Cd) | mg/kg | <0.01 |
| Total Mercury (Hg) | mg/kg | <0.05 |
| Total Nickel (Ni) | mg/kg | <0.2 |
| Total Chromium (Cr) | mg/kg | 0.236 |
| Chloride | mg/kg | 558 |
| Fluoride [100:1 H2S04 Soluble] | mg/kg | <10 |
| Total Arsenic (As) | mg/kg | <0.5 |
| Total Selenium (Se) | mg/kg | <0.02 |
| B.O.D. [fresh] | mg/l | 495 |
| C.O.D. [fresh] | mg/kg | 1725 |
| Oils,Fats and Grease | mg/kg | <200 |

Released by *Nina Mansfield* Date *19/05/22*

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REBECCA KLEIN

LIQUID WASTE

# LIQUID WASTE (Metric Units)

Sample Reference : LAGOON 2

Sample Matrix : LIQUID WASTE

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

| Laboratory References | |
|---|---|
| Report Number | 51154 |
| Sample Number | 107565 |

| | |
|---|---|
| Date Received | 04-MAY-2021 |
| Date Reported | 13-MAY-2021 |

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand on a fresh weight basis | Units | Result | Amount per fresh tonne or m3 | Amount applied at an equivalent total Nitrogen application of 250 kg N/ha | Units |
|---|---|---|---|---|---|
| pH 1:6 [Fresh] | | 8.15 | | | |
| Oven Dry Solids | % | 0.350 | 3.50 | 8750 | kg DM |
| Total Kjeldahl Nitrogen | % w/w | 0.010 | 0.10 | 250 | kg N |
| Ammonium Nitrogen | mg/kg | 32.0 | 0.03 | 80.00 | kg NH4-N |
| Nitrate Nitrogen | mg/kg | <10 | < 0.01 | | kg NO3-N |
| Total Phosphorus (P) | mg/kg | 65.4 | 0.15 | 374.42 | kg P2O5 |
| Total Potassium (K) | mg/kg | 223 | 0.27 | 669.00 | kg K2O |
| Total Magnesium (Mg) | mg/kg | 33.2 | 0.06 | 137.78 | kg MgO |
| Total Sulphur (S) | mg/kg | 17.2 | 0.04 | 107.50 | kg SO3 |
| Total Copper (Cu) | mg/kg | <0.2 | < 0.01 | | kg Cu |
| Total Zinc (Zn) | mg/kg | <0.5 | < 0.01 | | kg Zn |
| Total Sodium (Na) | mg/kg | 957 | 1.29 | % 3225.09 | kg Na2O |
| Total Calcium (Ca) | mg/kg | 30.3 | 0.03 | 75.75 | kg Ca |
| Equivalent field application rate | | ------ | 1.00 | 2500.00 | tonnes or m3 / ha |

The above equivalent field application rate for total nitrogen of 250 kg/ha has been provided purely for guidance purposes only. Organic manures should be used in accordance with the Defra Code of Good Agricultural Practice and where required within the specific regulatory guidance for the spreading of that material to land. To get the most benefit from your organic manures it is recommended that you follow the principles as set out in Defra's Fertiliser Manual (RB209) or as directed by a FACTS qualified adviser.

Released by *Myles Nicholson* Date *13/05/21*

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LIQUID WASTE

# LIQUID WASTE (Metric Units)

Sample Reference : LAGOON 2

Sample Matrix : LIQUID WASTE

The sample submitted was of adequate size to complete all analysis requested.

The sample will be kept under refrigeration for at least 3 weeks.

| Laboratory References | |
|---|---|
| Report Number | 51154 |
| Sample Number | 107565 |

| | |
|---|---|
| Date Received | 04-MAY-2021 |
| Date Reported | 13-MAY-2021 |

## ANALYTICAL RESULTS *on 'as received' basis.*

| Determinand on a fresh weight basis | Units | Result |
|---|---|---|
| Nitrite Nitrogen | mg/kg | <1 |
| Total Molybdenum (Mo) | mg/kg | <0.05 |
| Total Lead (Pb) | mg/kg | <0.5 |
| Total Cadmium (Cd) | mg/kg | <0.01 |
| Total Mercury (Hg) | mg/kg | <0.05 |
| Total Nickel (Ni) | mg/kg | <0.2 |
| Total Chromium (Cr) | mg/kg | <0.2 |
| Chloride | mg/kg | 654 |
| Fluoride [100:1 H2S04 Soluble] | mg/kg | <10 |
| Total Arsenic (As) | mg/kg | <0.5 |
| Total Selenium (Se) | mg/kg | <0.02 |
| B.O.D. [fresh] | mg/l | 79 |
| C.O.D. [fresh] | mg/l | 691 |
| Oils,Fats and Grease | mg/kg | <200 |

Released by *Myles Nicholson* Date *13/05/21*

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