

# **SR2010No4 Mobile Plant for Land-spreading Deployment Application**

**Ffynnoncyff Farm & Troedyrhiw Farm**

**Applicant:**

**Stepside Agri Contractors (Gwbert Road, Cardigan,  
SA43 1PH)**

**Permit Number: EPR/AB3891CX**

**Date: 14/04/2021**

# Application for an environmental permit:

## Part LPD1 – Application for a deployment

**Use this form for deployments for the landspreading of waste where the operator holds a permit for any of the following standard rules:**

- SR2010No4 Mobile plant for landspreading (land treatment resulting in agricultural or ecological benefit);
- SR2010No5 Use of mobile plant for land reclamation, restoration or improvement of land;
- SR2010No6 Mobile plant for landspreading of sewage sludge; or a
- Bespoke mobile plant permit for landspreading or land reclamation.

Please check that this is the latest version of the form available from our website.

Please read through this form and the guidance notes that

come with it. All relevant guidance documents can be found on our website.

Where you see the term 'document reference' on the form, give the document references and send the documents with the application form when you've completed it.

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## 1 About the permit

### 1a Discussions before your application

If you have had discussions with us before your application, give us the case reference or details on a separate sheet.

Case or document reference

### 1b Permit number

Permit number this application relates to

EPR/AB3891CX

### 1c What type of permit do you want to deploy under? (Please tick)

- SR2010No4 Mobile plant for landspreading (land treatment resulting in agricultural or ecological benefit) ☒
- SR2010No5 Use of mobile plant for land reclamation, restoration or improvement of land ☐
- SR2010No6 Mobile plant for landspreading of sewage sludge ☐
- Bespoke mobile plant permit for landspreading or reclamation, restoration or improvement of land ☐

## 2 About you

Please give us details of the permit holder. For companies, the details must match Companies House.

Organisation name (if relevant)

Stepside Agri

Title

Mr

First name

Daniel

Last name

James

Address

Stepside Farm

|                    |                        |
|--------------------|------------------------|
|                    | Gwbert Road            |
|                    | Cardigan               |
|                    |                        |
| Postcode           | SA43 1PH               |
| Telephone - mobile | 07966521386            |
| Telephone - office | 01239621354            |
| Email address      | enquiries@stepside.biz |

If you are applying as an organisation of individuals, every partner needs to give us their details, including their title. If necessary, continue on a separate sheet and tell us the reference you have given the sheet.

|                    |  |
|--------------------|--|
| Document reference |  |
|--------------------|--|

### 3 Contact details

Who can we talk to about your application? This can be someone acting as a consultant or 'agent' for you.

|                    |                       |  |
|--------------------|-----------------------|--|
| Title              | Mr                    |  |
| First name         | David                 |  |
| Last name          | Powell                |  |
| Telephone - mobile | 07968 496178          |  |
| Telephone - office |                       |  |
| Email address      | dave.purlon@gmail.com |  |

### 4 About the deployment

#### 4a Multiple deployments for one area of land

You may spread more than 10 waste streams on the same area of land, provided you submit additional fully completed deployment forms listing the additional wastes. Your benefit statement must take into account the total benefit to the land of all wastes to be spread.

Is this deployment one of a batch (multiple deployments) for the same area of land?

No ☒ Go to section 4b

Yes ☐ How many deployments are in the batch?

#### 4b Nominated competent person

**4b1** Give us details of the nominated competent person. This is the person who will be responsible for compliance with the permit for this deployment. See the guidance notes on LPD1 for further details.

|            |        |  |
|------------|--------|--|
| Title      | Mr     |  |
| First name | David  |  |
| Last name  | Powell |  |

|                    |                       |
|--------------------|-----------------------|
| Telephone - mobile | 07968 496178          |
| Telephone - office |                       |
| Email address      | dave.purlon@gmail.com |

**4b2** What evidence are you using to show the nominated competent person has suitable technical skills and knowledge to manage the activity?

- An approved technical scheme ☒ *Go to section 4b3*
- Documented in-house training ☐ You must provide evidence – see below.

You must provide evidence to show the documented in-house training meets the requirements set out in technical guidance. See the guidance notes on LPD1 for further details and give us the document reference.

Document reference  *Go to section 4c*

**4b3** Which approved scheme are you using to show you have the suitable technical skills and knowledge to manage your facility?

- CIWM / WAMITAB ☒
- ESA / EU ☐

**4b4** Tick to confirm you've included all original *and* continuing competence evidence. ☒

#### 4c Which risk band does the activity fall within?

Please complete Table 1 below to indicate which risk band your activity falls within. This is a combination of waste types and proximity to sensitive receptors.

Once you have selected the risk band your activity falls within, the form guidance tells you what additional information you need to send with the application.

The risk banding affects the fee you need to send with your deployment application. See section 6.

| Table 1 – risk band                      |                                                                                                               |                                                          |                                                                                                                                                                                                  |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Permit type                              | Lower risk location                                                                                           |                                                          | High risk location                                                                                                                                                                               |
|                                          | - Not in an SPZ 2, and/or<br>- Over 500 meters from:<br>• European site, and/or<br>• Ramsar, and/or<br>• SSSI |                                                          | - In a Source Protection Zone 2, and/or<br>- 500 meters or less from:<br>• European site, and/or<br>• Ramsar, and/or<br>• SSSI<br><b>You <i>must</i> submit a site specific risk assessment.</b> |
| SR2010No4 List A wastes<br>(Lower risk)  | Low risk deployment <input type="checkbox"/>                                                                  | Medium risk (2) deployment <input type="checkbox"/>      |                                                                                                                                                                                                  |
| SR2010No4 List B wastes<br>(Higher risk) | Medium risk (1) deployment <input type="checkbox"/>                                                           | High risk deployment <input checked="" type="checkbox"/> |                                                                                                                                                                                                  |
| SR2010No5<br>(Any waste listed)          | Medium risk (1) deployment <input type="checkbox"/>                                                           | High risk deployment <input type="checkbox"/>            |                                                                                                                                                                                                  |
| SR2010No6<br>(Any waste listed)          | Medium risk (1) deployment <input type="checkbox"/>                                                           | High risk deployment <input type="checkbox"/>            |                                                                                                                                                                                                  |
| Bespoke mobile plant permit              | Low risk deployment <input type="checkbox"/>                                                                  | Medium risk deployment <input type="checkbox"/>          | High risk deployment <input type="checkbox"/>                                                                                                                                                    |

#### 4d Additional information on sensitive receptors

Is the deployment within an SPZ 2 and/or 500m of a European site, Ramsar or SSSI, or being made under a bespoke permit?

No ☐

Yes ☒ You must submit a site specific risk assessment (see question 4e).

#### 4e Site specific risk assessment

Your site specific risk assessment must show how you intend to prevent any harm to any SPZ 2, European site, Ramsar or SSSI. For more information on risk-assessment please see the accompanying guidance to LPD1 and Technical Guidance Note 'TGN 8.01'.

Please tick a box below to indicate which type of risk-assessment you have submitted.

I have attached a site-specific risk-assessment as the deployment is within and SPZ 2 and/or 500m of a European site, Ramsar or SSSI. I have also addressed risks to other receptors in the risk assessment ☒

I am not within an SPZ 2 and/or 500 m of a European site, Ramsar or SSSI but have addressed risks to other receptors in my benefit statement. ☐

I am deploying under a bespoke permit and have attached a site-specific risk assessment (regardless of location). ☐

#### 4f About the waste

Please list all the individual waste streams you want to spread/use under this deployment, in Table 2 below. We've included an example to help you.

Please note: You can only spread/use 10 waste types per deployment.

| Table 2 – waste types |                              |                                      |               |                                            |                                         |
|-----------------------|------------------------------|--------------------------------------|---------------|--------------------------------------------|-----------------------------------------|
|                       | List of Waste code (6 digit) | Waste description                    | Physical form | Waste producer                             | Total amount being spread/used (tonnes) |
| e.g.                  | 03 03 05                     | De-inked paper                       | Sludge        | Smith's Newsprint                          | 500                                     |
| 1                     | 02 05 02                     | Sludge from dairy waste treatment    | Liquid sludge | Dairy Partners – Newcastle Emlyn           | 6100                                    |
| 2                     | 02 05 02                     | Sludge from dairy waste treatment    | Liquid sludge | Volac – Felinfach                          | 4163                                    |
| 3                     | 02 05 02                     | Sludge from dairy waste treatment    | Liquid sludge | First Milk - Haverfordwest                 | 3054                                    |
| 4                     | 02 07 02                     | Spent wash from spirits distillation | Liquid        | The Welsh Whisky Co. – Penderyn Distillery | 1432                                    |
| 5                     |                              |                                      |               |                                            | N.B. Maximums for single waste stream   |
| 6                     |                              |                                      |               |                                            |                                         |
| 7                     |                              |                                      |               |                                            |                                         |
| 8                     |                              |                                      |               |                                            |                                         |
| 9                     |                              |                                      |               |                                            |                                         |
| 10                    |                              |                                      |               |                                            |                                         |
|                       |                              |                                      |               | <b>Total tonnage</b>                       | Max. 6100                               |

#### 4g About the land you want to treat

**4g1** Please give details of the main address of the land to be treated.

|                                    |                  |
|------------------------------------|------------------|
| Address                            | Ffynnoncyff Farm |
|                                    | Ferwig           |
|                                    | Cardigan         |
|                                    | Ceredigion       |
| Postcode                           | SA43 1QD         |
| National grid reference (12 digit) | SN19382 50533    |

**4g2** What type of land do you want to treat?

|                       |                                     |                                                 |             |
|-----------------------|-------------------------------------|-------------------------------------------------|-------------|
| Agricultural land     | <input checked="" type="checkbox"/> | Please give your County/ Parish/ Holding number | 55/226/0017 |
| Non-agricultural land | <input type="checkbox"/>            |                                                 |             |

#### 4h The parcels of land you want to treat

Please list all the individual areas (parcels) of land you want to include this deployment, in Table 3 below.

Please note: the total area to be treated must not be more than 50 hectares.

| Table 3 – parcels of land |                                                                        |                                             |                                                                           |                 |
|---------------------------|------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------|-----------------|
|                           | Field name/ number/ reference                                          | Grid reference - centre of field (12 digit) | Waste types to be spread/used (List of Waste code) Separate using commas. | Size (hectares) |
| 1                         | Please see continuation sheet: Table 3 – Details of land to be treated |                                             |                                                                           |                 |
| 2                         |                                                                        |                                             |                                                                           |                 |
| 3                         |                                                                        |                                             |                                                                           |                 |
| 4                         |                                                                        |                                             |                                                                           |                 |
| 5                         |                                                                        |                                             |                                                                           |                 |
| 6                         |                                                                        |                                             |                                                                           |                 |
| 7                         |                                                                        |                                             |                                                                           |                 |
| 8                         |                                                                        |                                             |                                                                           |                 |
| 9                         |                                                                        |                                             |                                                                           |                 |
| 10                        |                                                                        |                                             |                                                                           |                 |
|                           |                                                                        |                                             | Total hectares                                                            | 48.80           |

**4i** Is the permit holder the owner or occupier of the land you want to spread on/treat?

Yes ☐ Go to section 4k

No ☒ You must give us details of the land owner or occupier, below.

Organisation name (if relevant)

|                    |                  |  |
|--------------------|------------------|--|
| Title              | Mr               |  |
| First name         | Eilir            |  |
| Last name          | Williams         |  |
| Address            | Ffynnoncyff Farm |  |
|                    | Ferwig           |  |
|                    | Cardigan         |  |
|                    | Ceredigion       |  |
| Postcode           | SA43 1QD         |  |
| Telephone - mobile | 07966722534      |  |
| Telephone - office | 01239 613127     |  |
| Email address      |                  |  |

If there is more than one owner or occupant for the area covered by this deployment, you must give us details of each. Please continue on a separate sheet and tell us the reference you have given the sheet.

Document reference Farm Details

#### 4j Do you have the consent of the owner or occupier to carry out the activity?

Yes ☒ Go to section 4k

No ☐ You must tell us why you think you can carry out the activity without the consent of the occupier. Please give an explanation in the box, below. Continue on a separate sheet if needed.

| Explanation |
|-------------|
|             |

#### 4k Previous land treatment

Has any of the land listed in Table 3 been treated with other wastes, sewage sludge, slurries or manures etc. in the last 12 months?

No ☐ Go to section 4l

Yes ☒ You must give us details in Table 4 below *and* account for them in your benefit statement.

| Table 4 – previous land treatment |                               |                                               |                                      |                                         |                                        |
|-----------------------------------|-------------------------------|-----------------------------------------------|--------------------------------------|-----------------------------------------|----------------------------------------|
|                                   | Field name/ number/ reference | Describe the waste spread (in last 12 months) | Person/ company who spread the waste | Quantity spread per hectare (in tonnes) | Deployment/ other reference (if known) |
|                                   |                               |                                               |                                      |                                         |                                        |

|      |                                                                  |                             |                |    |            |
|------|------------------------------------------------------------------|-----------------------------|----------------|----|------------|
| e.g. | East field                                                       | Digested sewage sludge cake | Eastern Waters | 20 | PAN 000000 |
| 1    | Please see continuation sheet: Table 4 - Previous land treatment |                             |                |    |            |
| 2    |                                                                  |                             |                |    |            |
| 3    |                                                                  |                             |                |    |            |
| 4    |                                                                  |                             |                |    |            |
| 5    |                                                                  |                             |                |    |            |
| 6    |                                                                  |                             |                |    |            |
| 7    |                                                                  |                             |                |    |            |
| 8    |                                                                  |                             |                |    |            |
| 9    |                                                                  |                             |                |    |            |
| 10   |                                                                  |                             |                |    |            |

#### 4I Waste storage

Are you proposing to store waste in connection with this deployment?

No ☐ Go to section 5

Yes ☒ You must give us details in Table 5 below.

| Table 5 – waste storage details |                           |                                                      |                                  |                                             |
|---------------------------------|---------------------------|------------------------------------------------------|----------------------------------|---------------------------------------------|
|                                 | Grid reference (12 digit) | Waste type being stored (6 digit List of Waste code) | Storage method                   | Quantity stored at any one time (in tonnes) |
| 1                               | SN 19352 50567            | 02 05 02 or 02 07 02                                 | Above Ground Liquid Storage Tank | 400                                         |
| 2                               | SN 19158 50335            | 02 05 02 or 02 07 02                                 | Field Nurse Tank                 | 120                                         |
| 3                               | SN 19561 50291            | 02 05 02 or 02 07 02                                 | Field Nurse Tank                 | 120                                         |
| 4                               | SN 20658 48796            | 02 05 02                                             | Field Nurse Tank                 | 120                                         |
| 5                               | SN 20621 48800            | 02 05 02                                             | Field Nurse Tank                 | 120                                         |
| 6                               |                           |                                                      |                                  |                                             |
| 7                               |                           |                                                      |                                  |                                             |
| 8                               |                           |                                                      |                                  |                                             |
| 9                               |                           |                                                      |                                  |                                             |
| 10                              |                           |                                                      |                                  |                                             |

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## 5 Payment

### 5a Tick an option below to show how you will pay for the application.

|                                         |                                     |                  |
|-----------------------------------------|-------------------------------------|------------------|
| Electronic transfer (for example, BACS) | <input checked="" type="checkbox"/> | Go to section 5b |
| Cheque                                  | <input type="checkbox"/>            | Go to section 5c |
| Postal order                            | <input type="checkbox"/>            | Go to section 5d |
| Credit or debit card                    | <input type="checkbox"/>            | Go to section 5e |

### 5b Paying by electronic transfer

If you choose to pay by electronic transfer use the following information to make your payment.

Company name: Natural Resources Wales  
Company address: Income Dept., PO BOX 663, Cardiff, CF24 0TP  
Bank: RBS  
Address: National Westminster Bank Plc, 2 ½ Devonshire Square, London, EC2M 4BA  
Sort code: 60-70-80  
Account number: 10014438

### Reference number

You can use any reference number but we prefer the number to be 'EPDEP' followed by the first five letters of your organisation name followed by a four-digit number.

For example, for a company named Joe Bloggs Ltd, the reference number might be EPDEPJOEBL0001. (Remember you can use any four-digit number at the end.)

The reference number you will provide will appear on our bank statements so we can check your payment. We may need to contact your bank to make sure the reference number is quoted correctly.

You should also email your payment details and payment reference number to [banking.team@naturalresourceswales.gov.uk](mailto:banking.team@naturalresourceswales.gov.uk) / [banking.team@cyfoethnaturiolcymru.gov.uk](mailto:banking.team@cyfoethnaturiolcymru.gov.uk) or fax it to 0300 065 3001 and enter it in the space provided below.

|                |                                             |
|----------------|---------------------------------------------|
| BACS reference | <input type="text" value="EPDEPSTEPS0061"/> |
| Amount paid    | <input type="text" value="£1,018"/>         |

### Making payments from outside the UK

These details have changed. If you are making your payment from outside the United Kingdom (which must be received in sterling), our IBAN number is GB70 NWBK6070 8010 0144 38 and our SWIFT/BIC number is NWBKGB2L.

If you do not quote your payment reference number, there may be a delay in processing your payment and application.

### 5c Paying by cheque or postal order

You should make cheques or postal orders payable to Natural Resources Wales and they should be marked 'A/c Payee'. We will not accept post-dated cheques (cheques with a future date written on them).

|                             |                      |
|-----------------------------|----------------------|
| Cheque/ postal order number | <input type="text"/> |
| Amount paid                 | <input type="text"/> |

### 5d Paying by credit or debit card

If you are paying by credit or debit card, please fill in the separate form CC1.

You can download this from our Website or you can ask for one of our customer service providers to send one by post. We will destroy your card details once we have processed your payment. We can accept payments by Visa, MasterCard or Maestro UK card only.

## 6 Supporting documents

You must provide all relevant documents to support your application. The information we need depends on the type of deployment application you're making. If you don't provide us with all the information we need, we won't be able to assess your proposal and the application may be rejected.

Better quality deployments result in shorter processing times. If we don't need to come back to you for more information, we'll be able to give you a decision quicker.

### 6a What supporting evidence do you need to send?

Are you applying to spread/use waste under a SR2010 No4 standard rule set permit?

Yes ☒ Complete the checklist in Table 6 *and* Table 7 *Go to section 6b*

No ☐ Complete the checklist in Table 7 only. *Go to section 6c*

### 6b Checklist for deployments under SR2010 No4 only

Complete the checklist in Table 6, below. Tick to confirm you've completed the action.

| Table 6                                                                                                                               |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Do the grid references (for fields and storage areas) match the map locations?                                                        | <input checked="" type="checkbox"/> |
| Are the grid references in the correct format i.e. AB 12345 67890?                                                                    | <input checked="" type="checkbox"/> |
| Have details of previous land treatment been provided?                                                                                | <input checked="" type="checkbox"/> |
| Have you included a location map?                                                                                                     | <input checked="" type="checkbox"/> |
| Does the map include all the relevant features as set out in the guidance?                                                            | <input checked="" type="checkbox"/> |
| Have you included a waste analysis?                                                                                                   | <input checked="" type="checkbox"/> |
| Is the waste analysis for each waste less than 12 months old?                                                                         | <input checked="" type="checkbox"/> |
| Does the waste analysis include pH, Nitrogen (N), Phosphorus (P), Potassium (K), % dry matter and Potentially Toxic Elements (PTE's)? | <input checked="" type="checkbox"/> |
| Have you included a soil analysis?                                                                                                    | <input checked="" type="checkbox"/> |
| Is the soil analysis less for each field than 4 years old?                                                                            | <input checked="" type="checkbox"/> |
| Does the soil analysis provide the soil pH, Potassium (K), Phosphorus (P), Magnesium (Mg) and PTEs if they are high in the waste?     | <input checked="" type="checkbox"/> |
| Have the soil indices for P, K and Mg for each field been provided?                                                                   | <input checked="" type="checkbox"/> |
| Have you included a Certificate of Agricultural Benefit?                                                                              | <input checked="" type="checkbox"/> |
| Has the proposed cropping regime been stated?                                                                                         | <input checked="" type="checkbox"/> |
| Has the waste application rate been stated?                                                                                           | <input checked="" type="checkbox"/> |
| Has the timing of application been stated and is it appropriate for the cropping regime?                                              | <input checked="" type="checkbox"/> |
| Has the intended method of waste application been stated?                                                                             | <input checked="" type="checkbox"/> |
| Have the total nutrients supplied by the waste been stated and have they been provided in oxide format?                               | <input checked="" type="checkbox"/> |
| Has the nutrient requirement for the proposed crop been provided?                                                                     | <input checked="" type="checkbox"/> |
| Has the soil nitrogen supply (SNS) for each field been provided?                                                                      | <input checked="" type="checkbox"/> |

|                                                                                                                                                                                                                                 |                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| If the land has been treated with other wastes, sewage sludge, slurries manures etc. in the last 12 months, has relevant information been provided?                                                                             | <input checked="" type="checkbox"/> |
| If more than one waste stream is to be applied to the land; has the benefit for each individual waste stream been demonstrated?                                                                                                 | <input checked="" type="checkbox"/> |
| Have you included a site specific risk assessment? (where relevant)                                                                                                                                                             | <input checked="" type="checkbox"/> |
| Does the Site Specific Risk Assessment; consider all potential receptors, identify all risks from the activity, and include information on all measures you'll use to minimise or mitigate the impact and why they're suitable. | <input checked="" type="checkbox"/> |

### 6c Checklist for all types of deployment application.

Complete the checklist in Table 7, below. Tick to confirm you've completed the action.

| Table 7                                                |                                     |                                        |
|--------------------------------------------------------|-------------------------------------|----------------------------------------|
| Item                                                   | Complete                            | Your document reference/ description   |
| Location map (required for all deployments)            | <input checked="" type="checkbox"/> |                                        |
| Benefit statement (required for all deployments)       | <input checked="" type="checkbox"/> |                                        |
| Waste analysis (required for all deployments)          | <input checked="" type="checkbox"/> |                                        |
| Receiving soil analysis (required for all deployments) | <input checked="" type="checkbox"/> |                                        |
| Site-specific risk assessment (in accordance with 4e)  | <input checked="" type="checkbox"/> |                                        |
| Any other additional information                       | N/A                                 | Farm Details                           |
|                                                        | N/A                                 | Table 3: Details of land to be treated |
|                                                        | N/A                                 | Table 4: Previous land treatment       |
|                                                        | N/A                                 |                                        |

## 7 The data Protection Act 1998

We, the Natural Resources Body for Wales (hereafter "Natural Resources Wales"), will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- carry out research and development work on environmental issues;
- provide information from the public register to anyone who asks;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;
- assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows).

We may pass the information on to our agents or representatives to do these things for us.

## 8 Confidentiality and national security

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential.

You can ask for information to be made confidential by ticking the box below and enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application.

Please treat the information in my application as confidential. ☐

You can tell the Secretary of State that you believe including information on a public register would not be in the interests of national security. You must enclose a letter with your application telling us that you have told the Welsh Ministers and you must still include the information in your application. We will not include the information in the public register unless the Welsh Ministers decides that it should be included.

Only tick the box below if you are certain that you wish to claim confidentiality or national security for your application. This may delay your application.

I attach a letter stating that I have written to the Welsh Ministers explaining why my information should not be included on the public register for national security reasons ☐

## 9 Declaration

**You must read this section before making the declaration and sending your form to us.**

A relevant person should make the declaration. You must be a relevant person or have the authority of a relevant person to sign this application on their behalf.

Relevant people means each applicant, and in the case of a company, a director, manager, company secretary or any similar officer or employee listed on current appointments in Companies House. In the case of a Limited Liability Partnership (LLP), it includes any partner. If the permit holder is an organisation of individuals, each individual (or individual trustee) must complete the declaration.

To simplify and speed up the application process we recommend that the declaration is filled in by an officer of a company or one of the partners in a Limited Liability Partnership (LLP).

If you wish a manager, employee or consultant etc. to sign the declaration on behalf of a relevant person, we will need written confirmation from a relevant person; that is, an officer of the company, a partner in the LLP or the individual, confirming that the person has the authority to fill in the declaration.

If you are joint permit holders you should each fill in your own declaration. We have provided a separate sheet for this.

Where the operator is the subject of any insolvency procedure, the declaration must be filled in by the official receiver/appointed insolvency practitioner.

### 9a Are you signing the form on *behalf* of a relevant person?

If you are *not* a relevant person, but want to sign the application on their behalf, you must include confirmation that you can do this.

I have included written confirmation from a relevant person to confirm I can sign on their behalf. ☒

### 9b Does your deployment application relate to a standard facility permit?

If your deployment application is being made in relation to a standard facility permit (SRP), you also need to confirm that you are able to meet all relevant criteria of the standard rule set/sets under which you are applying.

I confirm that my activity/activities will fully meet the rules of the permit deployment I have applied for. ☒

### 9c Sign to confirm you understand the declaration.

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

**I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.**

**I understand that if I knowingly or recklessly make a false or misleading statement:**

- I may be prosecuted; and**
- if convicted, I may have to pay a fine and/or go to prison.**

By signing below, you are confirming that you understand and agree with the declaration above.

|                            |                 |  |
|----------------------------|-----------------|--|
| Title                      | Mr              |  |
| First name                 | David           |  |
| Last name                  | Powell          |  |
| On behalf of (if relevant) | Mr Daniel James |  |
| Today's date (DD/MM/YYYY)  | 14/04/2021      |  |



## Continuing Competence Certificate

**This certificate confirms that**

**David Powell**

**Has met the relevant requirements of the Continuing Competence scheme for the following award(s) which will remain current for two years from 13/01/2020**

AD Anaerobic Digestion  
LS Land Spreading

**Expiry Date:  
13/01/2022**

Verification date: 03/01/2020

Authorised:

WAMITAB Chief Executive Officer

Learner ID: 21046

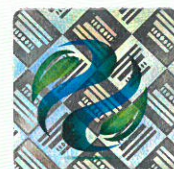
Certificate No.: 5157880

Date of Issue: 13/01/2020

CIWM Chief Executive Officer



The Chartered Institution  
of Wastes Management



00133014

**Farm details for Ffynnoncyff Farm & Troedyrhiw Farm Deployment**

Mr. Eilir Williams  
Ffynnoncyff Farm  
Ferwig  
Cardigan  
Ceredigion  
SA43 1QD

Holding no. 55/226/0017

Mobile: 07966722534 Landline: 01239 613127

Grid reference: SN 19382 50533

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Mr. John Williams  
Troedyrhiw Farm  
Ferwig  
Cardigan  
Ceredigion  
SA43 1RX

Holding No. 55/226/0006

Mobile: 07970189966

Grid reference: SN 20240 49543

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**TABLE 3: Details of land to be treated**

| Field ref.                     | Spreadable area (hectares) | Grid reference (centre of fields) | Waste type(s) to be spread (LoW) |
|--------------------------------|----------------------------|-----------------------------------|----------------------------------|
| <b><u>Ffynnoncyff Farm</u></b> |                            |                                   |                                  |
| 22                             | 4.40                       | SN 19469 50326                    | 02 05 02 , 02 07 02              |
| 23                             | 3.20                       | SN 19298 50419                    | 02 05 02 , 02 07 02              |
| 24                             | 3.70                       | SN 19281 50219                    | 02 05 02 , 02 07 02              |
| 25                             | 2.60                       | SN 19104 50219                    | 02 05 02 , 02 07 02              |
| 26                             | 3.50                       | SN 19394 50703                    | 02 05 02 , 02 07 02              |
| 28                             | 4.60                       | SN 19346 50947                    | 02 05 02 , 02 07 02              |
| 29                             | 1.10                       | SN 19589 50249                    | 02 05 02 , 02 07 02              |
| 30                             | 3.10                       | SN 19799 50232                    | 02 05 02 , 02 07 02              |
| <b><u>Troedyrhiw Farm</u></b>  |                            |                                   |                                  |
| Troedyrhiw 6                   | 10.00                      | SN 20560 48670                    | 02 05 02                         |
| Troedyrhiw 7                   | 5.00                       | SN 20770 48930                    | 02 05 02                         |
| Troedyrhiw 8                   | 2.60                       | SN 20430 48960                    | 02 05 02                         |
| Troedyrhiw 9                   | 2.00                       | SN 20560 49080                    | 02 05 02                         |
| Troedyrhiw 10                  | 3.00                       | SN 20700 49090                    | 02 05 02                         |
| <b>TOTAL</b>                   | <b>48.80</b>               |                                   |                                  |

**TABLE 4 Previous land treatment**

| Field ref.                     | Waste description                 | Person/ company who spread the waste | Quantity spread per hectare (in tonnes) | Deployment / other reference (if known) |
|--------------------------------|-----------------------------------|--------------------------------------|-----------------------------------------|-----------------------------------------|
| <b><u>Ffynnoncyff Farm</u></b> |                                   |                                      |                                         |                                         |
| 22                             | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 124                                     | PAN-009060                              |
| 23                             | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 38                                      | PAN-009195                              |
| 24                             | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 32                                      | PAN-009195                              |
| 25                             | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 69                                      | PAN-009060                              |
| 26                             | Cattle FYM                        | Farmer                               | 15                                      | N/A                                     |
| 28                             | Cattle FYM                        | Farmer                               | 15                                      | N/A                                     |
| 29                             | Cattle FYM                        | Farmer                               | 15                                      | N/A                                     |
| 30                             | Cattle FYM                        | Farmer                               | 15                                      | N/A                                     |
| <b><u>Troedyrhiw Farm</u></b>  |                                   |                                      |                                         |                                         |
| Troedyrhiw 6                   | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 93                                      | PAN-009802                              |
| Troedyrhiw 7                   | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 87                                      | PAN-009802                              |
| Troedyrhiw 8                   | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 35                                      | PAN-009802                              |
| Troedyrhiw 9                   | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 25                                      | PAN-009802                              |
| Troedyrhiw 10                  | Sludge from dairy waste treatment | Stepside Agricultural Contractors    | 33                                      | PAN-009802                              |

## Map Key

|                                                                                   |                                                   |
|-----------------------------------------------------------------------------------|---------------------------------------------------|
|  | Non-Spreadable Section of Field                   |
|  | No spread area (10 Metres Buffer to Watercourses) |
|  | Suitable for Spreading                            |
|  | Store                                             |
|  | Water Course (10 Metres Buffer)                   |
|  | Foot Path (5 Metres Buffer on Either Side)        |
|  | Spring, Well or Bore Hole (50 Metres Buffer)      |
|  | Other Features                                    |
|  | Nurse Tank                                        |

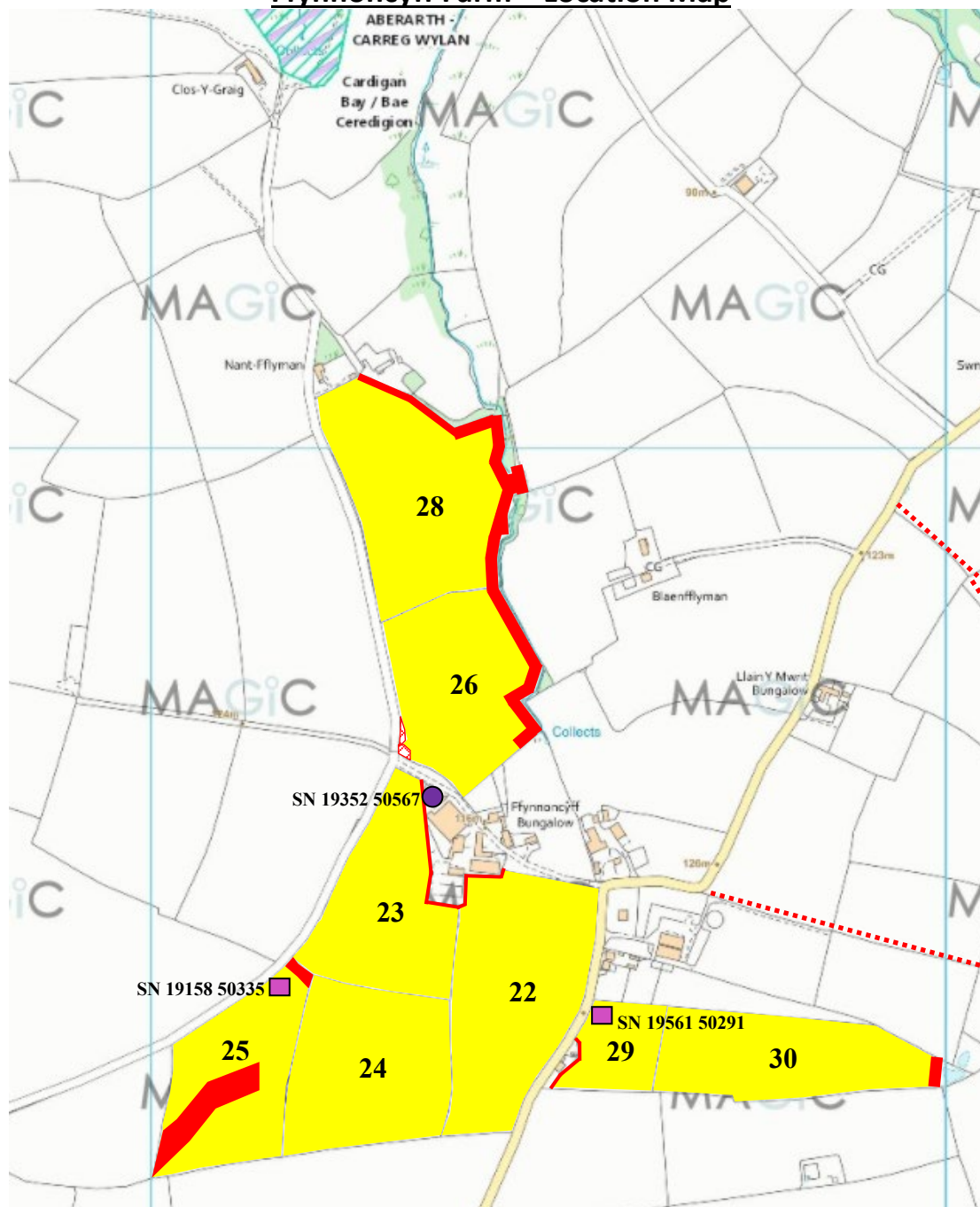
Farmer: E. Williams

Map Grid Ref: SN 19387 50765

Farm ID: Ffynnoncyff Farm

Farm Post Code: SA43 1QD

## Ffynnoncyff Farm – Location Map

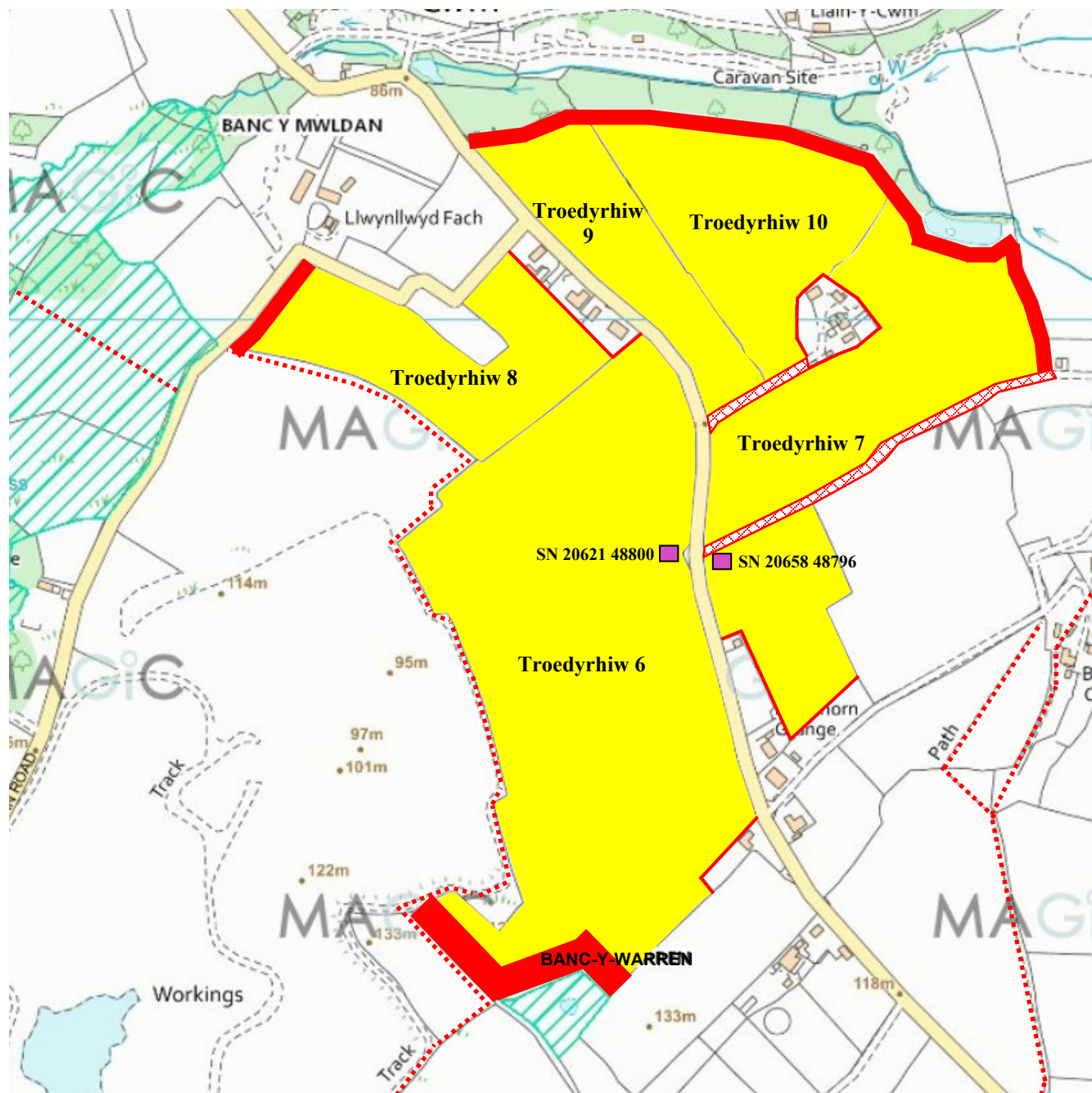


## Map Key

|                                                                                   |                                                                                           |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
|  | Non-Spreadable Section of Field                                                           |
|  | No spread area (10 Metres Buffer to Watercourses, 20 Metres Buffer to Banc-Y-Warren SSSI) |
|  | Suitable for Spreading                                                                    |
|  | Store                                                                                     |
|  | Water Course (10 Metres Buffer)                                                           |
|  | Foot Path (5 Metres Buffer on Either Side)                                                |
|  | Spring, Well or Bore Hole (50 Metres Buffer)                                              |
|  | Other Features                                                                            |
|  | Nurse Tank                                                                                |

Farmer: J. Williams  
 Map Grid Ref: SN 20647 48845  
 Farm ID: Troedyrhiw Farm  
 Farm Post Code: SA43 1RX

## Troedyrhiw Farm – Location Map



# Statement of Agricultural Benefit – Ffynnoncyff Farm & Troedyrhiw Farm



**Applicant:** Stepside Agri Contractors

**Permit:** SR2010 No4: mobile plant for land-spreading

**Permit Number:** EPR/AB3891CX

## Person with Technical Expertise:

Mr David Powell

FACTS: FE/2981

WAMITAB CCC No: 5157880

Phone number: 07968 496178

Email: dave.purlon@gmail.com

## Farm Addresses:

Ffynnoncyff Farm, Ferwig, Cardigan, Ceredigion, SA43 1QD - Holding No. 55/226/0017

Troedyrhiw Farm, Ferwig, Cardigan, Ceredigion, SA43 1RX - Holding No. 55/226/0006

## Wastes to be applied:

| Waste Code | Waste Description                                                                | Physical Form | Waste Producer                                       |
|------------|----------------------------------------------------------------------------------|---------------|------------------------------------------------------|
| 02 05 02   | Waste from the dairy products industry – sludges from on-site effluent treatment | Liquid        | Dairy Partners, Newcastle Emlyn                      |
| 02 05 02   | Waste from the dairy products industry – sludges from on-site effluent treatment | Liquid        | Volac, Felinfach                                     |
| 02 05 02   | Waste from the dairy products industry – sludges from on-site effluent treatment | Liquid        | First Milk, Haverfordwest                            |
| 02 07 02   | Waste from spirits distillation – spent wash                                     | Liquid        | The Welsh Whisky Co., Penderyn Distillery - Penderyn |

## Application:

- The Ffynnoncyff Farm fields will be spread subject to ground conditions being suitable and when there's a significant crop nutrient requirement (i.e. spring, after a silage cut spring / summer, in advance of periods of grazing). Spreading of these grass fields will be split into multiple applications and the total of all applications will not exceed the max application rate per field as listed in table 1.
- The Troedyrhiw Farm fields will be spread in spring 2022 ahead of field cultivations and the forage maize being planted. The waste will be incorporated into the soil.
- Spreading of the waste will be carried out in accordance with the Code of Good Agricultural Practice ("Protecting our Water, Soil and Air. Defra, 2009) and in accordance with the requirements of the deployment and environmental permitting regulations.
- NRW will be informed at least 48 hours prior to any spreading commencing and no spreading will occur within 48 hours of forecasted rainfall.
- The waste will be either directly spread onto the fields (with shallow injection equipment for the grass fields or a dribble bar for the forage maize fields) assuming ground conditions are suitable at the time of waste receipt or for Ffynnoncyff stored in a secure above ground liquid storage tank for future application when conditions are suitable and there is requirement for application. Should the ground or weather conditions mean it's unsuitable for spreading then contingency field storage in nurse tanks may also be required. These potential locations are also detailed on the attached field maps and within the LPD1 form.
- The maximum application rate for each field may be split into multiple applications and will not exceed 50t/ha in any one application to a field.
- Waste will not be stored or spread in combination (i.e. one waste stream per field).**

## Benefits from waste application:

- The analysis and nutrient content of the wastes are shown in the waste analysis attachments.
- The wastes are a source of nitrogen, phosphate, potassium, magnesium, sulphur, sodium, calcium and organic matter. The wastes can be beneficially used to replace a proportion of bagged mineral fertiliser.
- At the proposed application rates for each of the wastes in this deployment the amount of total magnesium supplied by the wastes is 4-19kg MgO/ha.
- The risk of sulphur deficiency has been estimated as 'High' based on the soil texture and expected winter rainfall (RB209). The crop requirements are 25-80kg SO<sub>3</sub>/ha. The amount of available sulphur supplied by the wastes at the proposed max application rates is 2-7kg SO<sub>3</sub>/ha.
- The addition of sodium will improve the palatability of grass and is important in the diet for livestock health. The crop requirements for the grass fields are up to 140kg/ha Na<sub>2</sub>O.
- The recommended maximum application rates are shown in Table 1 and have been made on a field by field basis using The Nutrient Management Guide (RB209).

## Materials applied in previous 12 months:

The fields within this deployment application have received the rates (t/ha) of materials as in 'Table 4 - Previous Land Treatment' within the previous 12 months.

It's considered that the nutrients applied from these applications will have been utilised by the previous crops before the material within this deployment is applied for the next crops.

## Nutrients supplied by this application:

| Rates of application (t/ha)                  | Nitrogen<br>kg/ha |           | Phosphate<br>(P <sub>2</sub> O <sub>5</sub> ) kg/ha |           | Potash<br>(K <sub>2</sub> O) kg/ha |           | Magnesium<br>(MgO) kg/ha |           | Sulphur<br>(SO <sub>3</sub> ) kg/ha |           |
|----------------------------------------------|-------------------|-----------|-----------------------------------------------------|-----------|------------------------------------|-----------|--------------------------|-----------|-------------------------------------|-----------|
|                                              | Total             | Available | Total                                               | Available | Total                              | Available | Total                    | Available | Total                               | Available |
| Dairy Partners liquid sludge @ 125t/ha       | 38                | 8         | 23                                                  | 14        | 33                                 | 27        | 4                        | 0         | 10                                  | 2         |
| Volac liquid sludge @ 51t/ha                 | 31                | 6         | 32                                                  | 19        | 73                                 | 59        | 6                        | 1         | 8                                   | 2         |
| Volac liquid sludge @ 89t/ha                 | 53                | 11        | 56                                                  | 34        | 128                                | 102       | 11                       | 1         | 14                                  | 3         |
| Volac liquid sludge @ 103t/ha                | 62                | 12        | 65                                                  | 39        | 148                                | 119       | 13                       | 1         | 16                                  | 3         |
| Volac liquid sludge @ 107t/ha                | 64                | 13        | 67                                                  | 40        | 154                                | 123       | 13                       | 1         | 17                                  | 3         |
| First Milk liquid sludge @ 26t/ha            | 31                | 6         | 32                                                  | 19        | 8                                  | 7         | 4                        | 0         | 8                                   | 2         |
| First Milk liquid sludge @ 46t/ha            | 55                | 11        | 56                                                  | 34        | 15                                 | 12        | 6                        | 1         | 15                                  | 3         |
| First Milk liquid sludge @ 53t/ha            | 64                | 13        | 64                                                  | 39        | 17                                 | 13        | 7                        | 1         | 17                                  | 3         |
| First Milk liquid sludge @ 116t/ha           | 139               | 28        | 141                                                 | 85        | 37                                 | 30        | 16                       | 2         | 37                                  | 7         |
| Estimated Availability                       | 20%               |           | 60%                                                 |           | 80%                                |           | 10%                      |           | 20%                                 |           |
| TWWC Penderyn Distillery spent wash @ 39t/ha | 31                | 3         | 32                                                  | 16        | 32                                 | 29        | 9                        | 1         | 8                                   | 2         |
| TWWC Penderyn Distillery spent wash @ 78t/ha | 62                | 6         | 65                                                  | 32        | 64                                 | 58        | 19                       | 2         | 17                                  | 3         |
| Estimated Availability                       | 10%               |           | 50%                                                 |           | 90%                                |           | 20%                      |           | 20%                                 |           |

Table 1: Field, Soil & Cropping Details, Fertiliser Recommendations and Application Rates

|                  |              |                      |                               |                               | Nitrogen |                    | Phosphate |                                                |                            | Potash  |                                   |                            | Magnesium |                      |
|------------------|--------------|----------------------|-------------------------------|-------------------------------|----------|--------------------|-----------|------------------------------------------------|----------------------------|---------|-----------------------------------|----------------------------|-----------|----------------------|
| Field Ref.       | Soil Type    | Spreadable Area (ha) | Previous Crop                 | Next Crop                     | SNS      | N Required (kg/ha) | P Index   | P <sub>2</sub> O <sub>5</sub> Required (kg/ha) | Crop Use (Offtake) (kg/ha) | K Index | K <sub>2</sub> O Required (kg/ha) | Crop Use (Offtake) (kg/ha) | Mg Index  | MgO Required (kg/ha) |
| Flynnoncyff Farm |              |                      |                               |                               |          |                    |           |                                                |                            |         |                                   |                            |           |                      |
| 22               | Medium soils | 4.40                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 4         | 0                                              | 65                         | 3       | 70                                | 228                        | 2         | 0                    |
| 23               | Medium soils | 3.20                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 4         | 0                                              | 65                         | 3       | 70                                | 228                        | 3         | 0                    |
| 24               | Medium soils | 3.70                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 3         | 20                                             | 65                         | 3       | 70                                | 228                        | 2         | 0                    |
| 25               | Medium soils | 2.60                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 3         | 20                                             | 65                         | 2+      | 180                               | 228                        | 2         | 0                    |
| 26               | Medium soils | 3.50                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 4         | 0                                              | 65                         | 2+      | 180                               | 228                        | 2         | 0                    |
| 28               | Medium soils | 4.60                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 4         | 0                                              | 65                         | 2-      | 230                               | 228                        | 2         | 0                    |
| 29               | Medium soils | 1.10                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 3         | 20                                             | 65                         | 2-      | 230                               | 228                        | 2         | 0                    |
| 30               | Medium soils | 3.10                 | Grass 2 cuts silage & grazing | Grass 2 cuts silage & grazing | Moderate | 205                | 3         | 20                                             | 65                         | 1       | 270                               | 228                        | 2         | 0                    |
| Troedyrhiw Farm  |              |                      |                               |                               |          |                    |           |                                                |                            |         |                                   |                            |           |                      |
| Troedyrhiw 6     | Medium soils | 10.00                | Forage maize                  | Forage maize                  | 1        | 100                | 1         | 85                                             | 56                         | 1       | 205                               | 176                        | 2         | 0                    |
| Troedyrhiw 7     | Medium soils | 5.00                 | Forage maize                  | Forage maize                  | 1        | 100                | 1         | 85                                             | 56                         | 1       | 205                               | 176                        | 2         | 0                    |
| Troedyrhiw 8     | Medium soils | 2.60                 | Forage maize                  | Forage maize                  | 1        | 100                | 2         | 55                                             | 56                         | 1       | 205                               | 176                        | 2         | 0                    |
| Troedyrhiw 9     | Medium soils | 2.00                 | Forage maize                  | Forage maize                  | 1        | 100                | 2         | 55                                             | 56                         | 0       | 235                               | 176                        | 3         | 0                    |
| Troedyrhiw 10    | Medium soils | 3.00                 | Forage maize                  | Forage maize                  | 1        | 100                | 2         | 55                                             | 56                         | 0       | 235                               | 176                        | 3         | 0                    |
| TOTAL            |              | 48.80                |                               |                               |          |                    |           |                                                |                            |         |                                   |                            |           |                      |

Nutrient requirements based on:  
Forage maize 40t/ha silage (30% DM)  
Grass 2 cuts silage (23t FW/ha at 1st cut, 15t FW/ha at 2nd cut), silage 25% DM, totalling 1.7kg/t P2O5 and 6.0kg/t K2O removed in offtake + grazing. Expected DM yields of grass 9-12t/ha, good grass growth class

|                  | Dairy Partners, Newcastle Emlyn - liquid sludge |                                                       |                                          |                             |                         |              | Volac, Felinfach - liquid sludge |                                                       |                                          |                             |                         |              | First Milk, Haverfordwest - liquid sludge |                                                       |                                          |                             |                         |              |
|------------------|-------------------------------------------------|-------------------------------------------------------|------------------------------------------|-----------------------------|-------------------------|--------------|----------------------------------|-------------------------------------------------------|------------------------------------------|-----------------------------|-------------------------|--------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------|-----------------------------|-------------------------|--------------|
| Field Ref.       | N Applied - Waste (kg/ha)                       | P <sub>2</sub> O <sub>5</sub> Applied - Waste (kg/ha) | K <sub>2</sub> O Applied - Waste (kg/ha) | MgO Applied - Waste (kg/ha) | Application Rate (t/ha) | Total Tonnes | N Applied - Waste (kg/ha)        | P <sub>2</sub> O <sub>5</sub> Applied - Waste (kg/ha) | K <sub>2</sub> O Applied - Waste (kg/ha) | MgO Applied - Waste (kg/ha) | Application Rate (t/ha) | Total Tonnes | N Applied - Waste (kg/ha)                 | P <sub>2</sub> O <sub>5</sub> Applied - Waste (kg/ha) | K <sub>2</sub> O Applied - Waste (kg/ha) | MgO Applied - Waste (kg/ha) | Application Rate (t/ha) | Total Tonnes |
| Ffynnoncyff Farm |                                                 |                                                       |                                          |                             |                         |              |                                  |                                                       |                                          |                             |                         |              |                                           |                                                       |                                          |                             |                         |              |
| 22               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 550          | **6                              | *32                                                   | *73                                      | *6                          | 51                      | 224          | **6                                       | *32                                                   | *8                                       | *4                          | 26                      | 114          |
| 23               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 400          | **6                              | *32                                                   | *73                                      | *6                          | 51                      | 163          | **6                                       | *32                                                   | *8                                       | *4                          | 26                      | 83           |
| 24               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 463          | **12                             | *65                                                   | *148                                     | *13                         | 103                     | 381          | **13                                      | *64                                                   | *17                                      | *7                          | 53                      | 196          |
| 25               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 325          | **12                             | *65                                                   | *148                                     | *13                         | 103                     | 268          | **13                                      | *64                                                   | *17                                      | *7                          | 53                      | 138          |
| 26               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 438          | **6                              | *32                                                   | *73                                      | *6                          | 51                      | 178          | **6                                       | *32                                                   | *8                                       | *4                          | 26                      | 91           |
| 28               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 575          | **6                              | *32                                                   | *73                                      | *6                          | 51                      | 235          | **6                                       | *32                                                   | *8                                       | *4                          | 26                      | 120          |
| 29               | **8                                             | *23                                                   | *33                                      | *4                          | 125                     | 137          | **12                             | *65                                                   | *148                                     | *13                         | 103                     | 113          | **13                                      | *64                                                   | *17                                      | *7                          | 53                      | 58           |
| 30               | **8                                             | *23                                                   | **27                                     | *4                          | 125                     | 387          | **12                             | *65                                                   | **119                                    | *13                         | 103                     | 319          | **13                                      | *64                                                   | **13                                     | *7                          | 53                      | 164          |
| Troedyrhiw Farm  |                                                 |                                                       |                                          |                             |                         |              |                                  |                                                       |                                          |                             |                         |              |                                           |                                                       |                                          |                             |                         |              |
| Troedyrhiw 6     | **8                                             | **14                                                  | **27                                     | *4                          | 125                     | 1250         | **13                             | **40                                                  | **123                                    | *13                         | 107                     | 1070         | **28                                      | **85                                                  | **30                                     | *16                         | 116                     | 1160         |
| Troedyrhiw 7     | **8                                             | **14                                                  | **27                                     | *4                          | 125                     | 625          | **13                             | **40                                                  | **123                                    | *13                         | 107                     | 535          | **28                                      | **85                                                  | **30                                     | *16                         | 116                     | 580          |
| Troedyrhiw 8     | **8                                             | *23                                                   | **27                                     | *4                          | 125                     | 325          | **11                             | *56                                                   | **102                                    | *11                         | 89                      | 231          | **11                                      | *56                                                   | **12                                     | *6                          | 46                      | 120          |
| Troedyrhiw 9     | **8                                             | *23                                                   | **27                                     | *4                          | 125                     | 250          | **11                             | *56                                                   | **102                                    | *11                         | 89                      | 178          | **11                                      | *56                                                   | **12                                     | *6                          | 46                      | 92           |
| Troedyrhiw 10    | **8                                             | *23                                                   | **27                                     | *4                          | 125                     | 375          | **11                             | *56                                                   | **102                                    | *11                         | 89                      | 267          | **11                                      | *56                                                   | **12                                     | *6                          | 46                      | 138          |
| TOTAL            |                                                 |                                                       |                                          |                             |                         | 6100         |                                  |                                                       |                                          |                             |                         | 4163         |                                           |                                                       |                                          |                             |                         | 3054         |

| The Welsh Whisky Co. - Penderyn Distillery - spent wash |                           |                                                       |                                          |                             |                         |              |
|---------------------------------------------------------|---------------------------|-------------------------------------------------------|------------------------------------------|-----------------------------|-------------------------|--------------|
| Field Ref.                                              | N Applied - Waste (kg/ha) | P <sub>2</sub> O <sub>5</sub> Applied - Waste (kg/ha) | K <sub>2</sub> O Applied - Waste (kg/ha) | MgO Applied - Waste (kg/ha) | Application Rate (t/ha) | Total Tonnes |
| Flynnoncyff Farm                                        |                           |                                                       |                                          |                             |                         |              |
| 22                                                      | **3                       | *32                                                   | *32                                      | *9                          | 39                      | 172          |
| 23                                                      | **3                       | *32                                                   | *32                                      | *9                          | 39                      | 125          |
| 24                                                      | **6                       | *65                                                   | *64                                      | *19                         | 78                      | 289          |
| 25                                                      | **6                       | *65                                                   | *64                                      | *19                         | 78                      | 203          |
| 26                                                      | **3                       | *32                                                   | *32                                      | *9                          | 39                      | 136          |
| 28                                                      | **3                       | *32                                                   | *32                                      | *9                          | 39                      | 179          |
| 29                                                      | **6                       | *65                                                   | *64                                      | *19                         | 78                      | 86           |
| 30                                                      | **6                       | *65                                                   | **58                                     | *19                         | 78                      | 242          |
| Troedyrhiw Farm                                         |                           |                                                       |                                          |                             |                         |              |
| Troedyrhiw 6                                            |                           |                                                       |                                          |                             |                         | 0            |
| Troedyrhiw 7                                            |                           |                                                       |                                          |                             |                         | 0            |
| Troedyrhiw 8                                            |                           |                                                       |                                          |                             |                         | 0            |
| Troedyrhiw 9                                            |                           |                                                       |                                          |                             |                         | 0            |
| Troedyrhiw 10                                           |                           |                                                       |                                          |                             |                         | 0            |
| TOTAL                                                   |                           |                                                       |                                          |                             |                         | 1432         |

Waste will NOT be spread or stored in combination (i.e. one waste stream per field)

\* Total nutrient content of waste used on P, K or Mg index 2 or above  
\*\* Available nutrient content of waste used on P, K or Mg index 0 or 1  
The assumed availability of total nutrients in the Dairy Partners, Volac & First Milk liquid sludge are N 20%, P<sub>2</sub>O<sub>5</sub> 60%, K<sub>2</sub>O 80%, MgO 10%, SO<sub>3</sub> 20%  
The assumed availability of total nutrients in the Penderyn distillery spent wash are N 10%, P<sub>2</sub>O<sub>5</sub> 50%, K<sub>2</sub>O 90%, MgO 20%, SO<sub>3</sub> 20%

## Potential negative impacts from this application and mitigation measures planned:

### Waste Composition & Receiving Soils

- Potentially Toxic Elements: The supplied concentrations at the proposed application rates are lower than the maximum permissible levels detailed in the Sludge (Use in Agriculture) Regulations for biosolids applied to agriculture, which is believed to be a suitable comparison for wastes applied to agricultural land.
- Physical contaminants: The wastes are produced by managed processes. These liquid wastes do not contain physical contaminants.
- Waste pH: The wastes are acidic in nature. The acidic nature is most probably associated with the presence of food based organic acids. Acidic food-based wastes are routinely applied to agricultural land without adverse effects on crop health, or significant decreases in soil pH. Use of the Dairy Partners, Volac, First Milk & TWWC Penderyn Distillery wastes will be carefully monitored through low rates of individual application across the growing season and close monitoring of crop health, for any adverse signs resulting from acidity around roots.
- Receiving soils are below the limits set for grassland & arable soils under the Sludge (Use in Agriculture) Regulations.
- Soils have been sampled to 7.5cm depth for permanent grass fields & to 15cm depth for arable & temporary grass fields with a 'half cheese' corer soil sampler walking a 'W' pattern across each field collecting approx. 25 sub samples per field.

### Operations

The fields in this deployment have been designated as 'high risk' following site checks on the proximity to surrounding protected areas (e.g. SSSIs) and groundwater source protection zones. On the basis of 'high risk' the proposed operation will be subject to a site-specific risk assessment for deploying mobile plant under a SR2010 No.4. The potential risks associated with the application of waste on this deployment have been identified as;

- Potential run-off after application: The wastes will be applied following the Codes of Good Agricultural Practice. The maximum application rate for each field where over 50t/ha be split into multiple applications and will not exceed 50t/ha in any one application to a field.
- Odour may potentially be emitted from the spreading of waste – to mitigate odour generation all handling of waste will be done in accordance to current regulations and relevant mitigation strategies will be adopted e.g. waste will be sub-surface injected or incorporated. If any odour complaints are received, further odour mitigation methods will be implemented.
- Spillages: all spillages will be reported immediately to NRW.
- No waste will be spread within 10m of any ditch, pond or surface water, within 50m of any spring, well, borehole, or reservoir that supplies water for human consumption or farm dairies.
- Waste will be spread on delivery (or securely stored as stated above). Operators will aim to empty spreading equipment before the end of each working day to avoid overnight storage of waste in machinery.
- Regular servicing of all machinery is conducted and spreading equipment is annually calibrated. To prevent waste being held in faulty machinery replacement spreading equipment will be available.
- Spreading machinery will travel over the field in a direction which will most easily allow the machinery to turn within the boundaries of the field. Any spreading equipment will be turned off and/or lifted out of the soil prior to turning at the end of each run.
- Machinery turns will be routed to avoid rutting and wheel slip. The turns will not be executed on any buffer strips.
- There will be sufficient trained staff available to ensure that the operation continues throughout operational hours (i.e. there will be sufficient cover for illness, holiday etc.).
- Rights of way have been marked on the spread risk maps.
- Weather conditions will be monitored prior to spreading with wind speed and direction assessed.
- Consideration for the public and local residential receptors will be taken before and during application.

**Signed:** David Powell

**Date:** 14/04/2021

# Site Specific Risk Assessment

## Risk assessment for proposed land-spreading activity – Ffynnoncyff Farm & Troedyrhiw Farm

Risk assessment carried out by: D J Powell Date: April 2021

| Data                                                              |                                                                    |                                                            |                                                                            | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                                                                       | Action                                                                                                                                                                                                                                                                                                                  |                                                                |
|-------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect? | <i>Source</i><br>The agent or process with potential to cause harm | <i>Harm</i><br>The harmful consequences if things go wrong | <i>Pathway</i><br>How the receptor might come into contact with the source | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                                                                           | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                        | <i>Residual risk</i><br>Magnitude of the risk after management |
| Surface water – ditches, watercourses and ponds                   | Nutrients, organic matter and solids                               | Surface water pollution                                    | Direct application to surface water, underdrainage and run off             | Low                                                           | High                                                              | Medium                                                        | No spread areas, buffer zones in place and sub surface injection or soil incorporation.                                                                                                               | Comply with COGAP, Sludge Regs and EPR. Spreading to be only undertaken when conditions are suitable. No spreading areas enforced as per plans attached to application.                                                                                                                                                 | Low                                                            |
| Groundwater /Soils                                                | Nutrients and PTES                                                 | Groundwater pollution and excessive nutrient build up      | Over-application to land                                                   | Low                                                           | High                                                              | Low                                                           | The materials have low PTEs to be applied at proposed rates as detailed in application. The materials are low in available nitrogen. Phosphate applied is equal to or less than crop recommendations. | Appropriate rate and timing of application. Comply with COGAP, EPR and Sludge Regs. Materials to be soil incorporated within 24 hours following spreading for arable fields. Grass fields sub surface injected. No spreading within 50m of a spring, borehole or well. Carry out soil analysis of all fields regularly. | Low                                                            |
| Humans and animals                                                | Spreading activities – physical                                    | Harm to humans or animals                                  | Trespass, accidental contact                                               | Low                                                           | Medium                                                            | Low                                                           | Agricultural areas with limited public access.                                                                                                                                                        | Application during appropriate conditions & awareness of access issues.                                                                                                                                                                                                                                                 | Low                                                            |
| Soils                                                             | Physical damage to soil structure                                  | Damage to soil structure and poor subsequent crop yields   | Delivery and spreading activity                                            | Low                                                           | Medium                                                            | Low                                                           | Delivery and spreading to be undertaken under appropriate ground conditions using low ground pressure equipment.                                                                                      | Comply with COGAP and Cross Compliance Criteria. Apply only in suitable conditions.                                                                                                                                                                                                                                     | Low                                                            |

## Risk Assessment continued

| Data                                                              |                                                                    |                                                                                                                          |                                                                            | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                  | Action                                                                                                                                                                       |                                                                |
|-------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect? | <i>Source</i><br>The agent or process with potential to cause harm | <i>Harm</i><br>The harmful consequences if things go wrong                                                               | <i>Pathway</i><br>How the receptor might come into contact with the source | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                      | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                             | <i>Residual risk</i><br>Magnitude of the risk after management |
| Soils                                                             | PTE addition                                                       | Build-up of PTEs.                                                                                                        | Spreading activity                                                         | Low                                                           | Medium                                                            | Low                                                           | Low levels of PTEs in wastes.                                                                                                                    | Comply with COGAP, Cross Compliance and Sludge Regs. Apply at specified rates. Soils sampled regularly.                                                                      | Low                                                            |
| Soils                                                             | Nutrient build up                                                  | Reduced yield quality and quantity of subsequent crops, nutrient leaching, runoff to sensitive receptors & surface water | Spreading activity, over application                                       | Low                                                           | Medium                                                            | Low                                                           | Wastes applied at specified rates. The materials are low in available nitrogen. Phosphate applied is equal to or less than crop recommendations. | Apply according to RB209 recommendations and COGAP. Application rates in agricultural benefit statement not to be exceeded. Carry out soil analysis of all fields regularly. | Low                                                            |
| Air                                                               | Odour during stockpiling and spreading activities                  | Odour issues and complaints                                                                                              | Airborne compounds                                                         | Medium                                                        | Medium                                                            | Medium                                                        | Nearby residents often sensitive to odour.                                                                                                       | Sub surface injection on grass fields and soil incorporation following application for arable fields prior to drilling. Prevailing wind direction will be monitored.         | Low                                                            |
| Air                                                               | Dust during spreading                                              | Dust complaints                                                                                                          | Dust during windy conditions                                               | Low                                                           | Low                                                               | Low                                                           | Materials have low potential for dust.                                                                                                           | Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable.                                                | Low                                                            |
| Air/People                                                        | Noise                                                              | Noise complaints                                                                                                         | Noise from delivery, and spreading                                         | Low                                                           | Low to Medium                                                     | Low                                                           | Agricultural machinery in agricultural areas.                                                                                                    | Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible                                              | Low                                                            |
| Hedgerows and trees                                               | Physical damage from spreading equipment                           | Ecological + landscape                                                                                                   | Physical damage from spreading equipment                                   | Low                                                           | Low                                                               | Low                                                           | Experienced operators employed & instructed to take care around trees                                                                            | Leave a 2.0m minimum buffer zone adjacent to trees, shrubs and hedges.                                                                                                       | Low                                                            |

| Data                                                                             |                                                                              |                                                                                                    |                                                                            | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                                                                                     | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect?                | <i>Source</i><br>The agent or process with potential to cause harm           | <i>Harm</i><br>The harmful consequences if things go wrong                                         | <i>Pathway</i><br>How the receptor might come into contact with the source | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                                                                                         | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <i>Residual risk</i><br>Magnitude of the risk after management |
| BANC Y WARREN SSSI<br>Geological<br><br>Within 500m of various Troedyrhiw fields | Deterioration of site through contamination, nutrient enrichment, smothering | Harm to protected site through contamination, nutrient enrichment                                  | Spreading activity, flooding, nutrient run off or leaching                 | Low                                                           | Medium                                                            | Medium                                                        | 20m buffer zone to SSSI in field Troedyrhiw 6. No spreading areas to watercourses. Sub surface injection of material for grass fields or soil incorporation for arable fields and spreading at appropriate timings. | 20m no spread buffer zone to SSSI in field Troedyrhiw 6. Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but field Troedyrhiw 6 in particular to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material sub surface injected for grass fields. Material soil incorporated following spreading for arable fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. | Low                                                            |
| Local human population and local environment                                     | Flooding of site                                                             | If waste is washed off site, it may contaminate buildings / gardens / natural habitats downstream. | Flood waters                                                               | Low                                                           | Medium                                                            | Medium                                                        | Spreading undertaken only on fields at appropriate timings.                                                                                                                                                         | No spreading in periods where heavy rain is forecast or if land is waterlogged. Spreading operator to employ 10m no spreading areas as per attached plans to watercourses.                                                                                                                                                                                                                                                                                                                                                                                                               | Low                                                            |

| Data                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                            |                                                                                     |                                                                                | Judgement                      |                                             |                                   |                                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------|---------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <i>Receptor</i>                                                                                                                                                                                                                                                                                                                                                                             | <i>Source</i>                                                                              | <i>Harm</i>                                                                         | <i>Pathway</i>                                                                 | <i>Probability of exposure</i> | <i>Consequence</i>                          | <i>Magnitude of risk</i>          | <i>Justification for magnitude</i>                                                                                                                                                                                                                 | <i>Risk management</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Residual risk</i>                   |
| What is at risk?<br>What do I wish to protect?                                                                                                                                                                                                                                                                                                                                              | The agent or process with potential to cause harm                                          | The harmful consequences if things go wrong                                         | How the receptor might come into contact with the source                       | How likely is this contact?    | Severity of the consequences if this occurs | The overall magnitude of the risk | Basis of my judgement                                                                                                                                                                                                                              | How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Magnitude of the risk after management |
| <p>BANC Y MWLDAN SSSI</p> <p>Within 500m of various Troedyrhiw fields</p> <p>This site consists of a number of lowland unimproved pastures lying along the south-eastern slope of the valley of the Afon Mwdan, where sandy glaciofluvial drift, support a remarkable assemblage of plants not known elsewhere in SW Wales. The site also has an insect fauna of national significance.</p> | Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering | Harm to protected site through contamination, nutrient enrichment, disturbance etc. | Spreading activity, airborne compounds, flooding, nutrient run off or leaching | Low                            | Medium                                      | Medium                            | 10m buffer zone in field Troedyrhiw 8 ensuring over 20 metres buffer to SSSI. No spreading areas to watercourses. Sub surface injection of material for grass fields or soil incorporation for arable fields and spreading at appropriate timings. | 10m no spread buffer zone in field Troedyrhiw 8. Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but field Troedyrhiw 8 in particular in relation to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material sub surface injected for grass fields. Material soil incorporated following spreading for arable fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. | Low                                    |

| Data                                                              |                                                                                            |                                                                                     |                                                                                | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                                                                                                      | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                |
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| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect? | <i>Source</i><br>The agent or process with potential to cause harm                         | <i>Harm</i><br>The harmful consequences if things go wrong                          | <i>Pathway</i><br>How the receptor might come into contact with the source     | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                                                                                                          | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                                                                                                                                                                           | <i>Residual risk</i><br>Magnitude of the risk after management |
| Aberarth-Carreg Wylan SSSI                                        | Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering | Harm to protected site through contamination, nutrient enrichment, disturbance etc. | Spreading activity, airborne compounds, flooding, nutrient run off or leaching | Low                                                           | Medium                                                            | Medium                                                        | No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings.<br><br>Proximity of fields to SSSI.<br><br>Ffynnoncyff field 28 is 370m from SSSI at the nearest point. | Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but Fynnoncyff field 28 in particular in relation to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. | Low                                                            |

| Data                                                              |                                                                                            |                                                                                                                                                                |                                                                                | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                                                                                                    | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
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| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect? | <i>Source</i><br>The agent or process with potential to cause harm                         | <i>Harm</i><br>The harmful consequences if things go wrong                                                                                                     | <i>Pathway</i><br>How the receptor might come into contact with the source     | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                                                                                                        | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                                                                                                                                                                         | <i>Residual risk</i><br>Magnitude of the risk after management |
| Cardigan Bay SAC<br><br>(- in particular the bottlenose dolphin)  | Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering | Harm to protected site through contamination, nutrient enrichment, disturbance etc.<br><br>Impact on the habitats of the bottlenose dolphin and other habitats | Spreading activity, airborne compounds, flooding, nutrient run off or leaching | Low                                                           | Medium                                                            | Medium                                                        | No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings.<br><br>Proximity of fields to SAC.<br><br>Ffynnoncyff field 28 is 370m from SAC at the nearest point. | Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but Fynnoncyff field 28 in particular in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. | Low                                                            |

| Data                                                                                                 |                                                                                            |                                                                                                                                                              |                                                                                | Judgement                                                     |                                                                   |                                                               |                                                                                                                                                                                                                                                                           | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                |
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| <i>Receptor</i><br>What is at risk?<br>What do I wish to protect?                                    | <i>Source</i><br>The agent or process with potential to cause harm                         | <i>Harm</i><br>The harmful consequences if things go wrong                                                                                                   | <i>Pathway</i><br>How the receptor might come into contact with the source     | <i>Probability of exposure</i><br>How likely is this contact? | <i>Consequence</i><br>Severity of the consequences if this occurs | <i>Magnitude of risk</i><br>The overall magnitude of the risk | <i>Justification for magnitude</i><br>Basis of my judgement                                                                                                                                                                                                               | <i>Risk management</i><br>How I can best manage the risk to reduce the magnitude                                                                                                                                                                                                                                                                                                                                                                                         | <i>Residual risk</i><br>Magnitude of the risk after management |
| West Wales Marine SAC<br><br>(- in particular the European Protected Species - the harbour porpoise) | Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering | Harm to protected site through contamination, nutrient enrichment, disturbance etc.<br><br>Impact on the habitats of the harbour porpoise and other habitats | Spreading activity, airborne compounds, flooding, nutrient run off or leaching | Low                                                           | Medium                                                            | Medium                                                        | No spreading areas to watercourses. Sub surface injection of material for grass fields or soil incorporation for arable fields and spreading at appropriate timings.<br><br>Proximity of fields to SAC.<br><br>Ffynnoncyff field 28 is 370m from SAC at the nearest point | Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but Fynnoncyff field 28 in particular in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading. | Low                                                            |

# **DAIRY PARTNERS, NEWCASTLE EMLYN**

## **Analysis of Liquid Waste**

Report No: 19446

Date: 21/08/2020

Application rate (t/ha)                    125.0  
Application rate (t/acre)                50.6  
pH                                                5.21  
Dry solids (%)                                0.78

Organic Matter( %)                        0.46

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.03   | %     | 0.3    | 38       | 0.1       | 8        |
| Ammonium-N                                 | 69     | mg/kg | 0.1    | 9        |           |          |
| Phosphorus (P)                             | 79.5   | mg/kg | 0.1    | 10       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.2    | 23       | 0.1       | 14       |
| Potassium (K)                              | 221    | mg/kg | 0.2    | 28       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.3    | 33       | 0.2       | 27       |
| Magnesium (Mg)                             | 20.5   | mg/kg | 0.0    | 3        |           |          |
| Magnesium (MgO)                            |        |       | 0.0    | 4        | 0.0       | 0        |
| Sulphur (S)                                | 32.2   | mg/kg | 0.0    | 4        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.1    | 10       | 0.0       | 2        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 2.01   | mg/kg | 2.01      | 0.25    | 15.00      |
| Copper   | 0.20   | mg/kg | 0.20      | 0.03    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.03    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.06    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.20   | mg/kg | 0.20      | 0.03    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.01    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



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GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

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DAIRY PARTNERS LTD

EFFLUENT

## EFFLUENT

Sample Reference :

DAIRY PARTNERS LTD

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19446 |
| Sample Number | 98842 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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         | 0.780 | %     |
| E Coli [Fresh]          | 10    | cfu/g |
| Conductivity 1:6        | 820   | uS/cm |
| Total Kjeldahl Nitrogen | 0.03  | % w/w |
| Nitrate Nitrogen        | <10   | mg/kg |
| Ammonium Nitrogen       | 69.0  | mg/kg |
| Total Phosphorus (P)    | 79.5  | mg/kg |
| Total Potassium (K)     | 221   | mg/kg |
| Total Magnesium (Mg)    | 20.5  | mg/kg |
| Total Copper (Cu)       | <0.2  | mg/kg |

Released by Linaben Patel

Date 02/09/20



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## EFFLUENT

Sample Reference :

DAIRY PARTNERS LTD

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19446 |
| Sample Number | 98842 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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 |
|---------------------|-------|-------|
| Total Zinc (Zn)     | 2.01  | mg/kg |
| Total Sulphur (S)   | 32.2  | mg/kg |
| Total Calcium (Ca)  | 113   | 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) | <0.2  | mg/kg |
| Total Sodium (Na)   | 834   | mg/kg |
| pH 1:6 [Fresh]      | 5.21  |       |

Released by Linaben Patel

Date 02/09/20

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
**Tel:** +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com



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Please quote above code for all enquiries

DAIRY PARTNERS LTD

EFFLUENT

## EFFLUENT

Sample Reference :

DAIRY PARTNERS LTD

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19446 |
| Sample Number | 98842 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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  |
|------------------------|----------|--------|
| Organic Matter LOI     | 0.46     | % w/w  |
| Coliforms [fresh]      | 15000    | cfu/g  |
| Oils,Fats and Grease   | 1960     | mg/kg  |
| Salmonella spp [fresh] | Negative | in 25g |
| EC [Neat]              | 4689     | uS/cm  |

Released by Linaben Patel

Date 02/09/20

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
**Tel:** +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com

# **VOLAC, FELINFACH**

## **Analysis of Liquid Waste**

Report No: 99545

Date: 28/05/2020

Application rate (t/ha)                      51.0  
 Application rate (t/acre)                  20.6  
 pH                                                  6.47  
 Dry solids (%)                                1.04

Organic Matter( %)                        0.36

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.06   | %     | 0.6    | 31       | 0.1       | 6        |
| Ammonium-N                                 | 519    | mg/kg | 0.5    | 26       |           |          |
| Phosphorus (P)                             | 275    | mg/kg | 0.3    | 14       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.6    | 32       | 0.4       | 19       |
| Potassium (K)                              | 1199   | mg/kg | 1.2    | 61       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 1.4    | 73       | 1.2       | 59       |
| Magnesium (Mg)                             | 73.4   | mg/kg | 0.1    | 4        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 6        | 0.0       | 1        |
| Sulphur (S)                                | 62     | mg/kg | 0.1    | 3        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.2    | 8        | 0.0       | 2        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 3.33   | mg/kg | 3.33      | 0.17    | 15.00      |
| Copper   | 0.20   | mg/kg | 0.20      | 0.01    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.01    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.03    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.20   | mg/kg | 0.20      | 0.01    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **VOLAC, FELINFACH**

## **Analysis of Liquid Waste**

Report No: 99545

Date: 28/05/2020

Application rate (t/ha)                      89.0  
 Application rate (t/acre)                  36.0  
 pH                                                  6.47  
 Dry solids (%)                                1.04

Organic Matter( %)                        0.36

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.06   | %     | 0.6    | 53       | 0.1       | 11       |
| Ammonium-N                                 | 519    | mg/kg | 0.5    | 46       |           |          |
| Phosphorus (P)                             | 275    | mg/kg | 0.3    | 24       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.6    | 56       | 0.4       | 34       |
| Potassium (K)                              | 1199   | mg/kg | 1.2    | 107      |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 1.4    | 128      | 1.2       | 102      |
| Magnesium (Mg)                             | 73.4   | mg/kg | 0.1    | 7        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 11       | 0.0       | 1        |
| Sulphur (S)                                | 62     | mg/kg | 0.1    | 6        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.2    | 14       | 0.0       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 3.33   | mg/kg | 3.33      | 0.30    | 15.00      |
| Copper   | 0.20   | mg/kg | 0.20      | 0.02    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.02    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.04    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.20   | mg/kg | 0.20      | 0.02    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **VOLAC, FELINFACH**

## **Analysis of Liquid Waste**

Report No: 99545

Date: 28/05/2020

Application rate (t/ha)                    **103.0**  
 Application rate (t/acre)                **41.7**  
 pH                                                **6.47**  
 Dry solids (%)                                **1.04**

Organic Matter( %)                        **0.36**

### **NUTRIENT CONTENT**

|                                               | result | units | Total  |          | Available |          |
|-----------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                               |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| <b>Nitrogen (N)</b>                           | 0.06   | %     | 0.6    | 62       | 0.1       | 12       |
| <b>Ammonium-N</b>                             | 519    | mg/kg | 0.5    | 53       |           |          |
| <b>Phosphorus (P)</b>                         | 275    | mg/kg | 0.3    | 28       |           |          |
| <b>Phosphate (P<sub>2</sub>O<sub>5</sub>)</b> |        |       | 0.6    | 65       | 0.4       | 39       |
| <b>Potassium (K)</b>                          | 1199   | mg/kg | 1.2    | 123      |           |          |
| <b>Potash (K<sub>2</sub>O)</b>                |        |       | 1.4    | 148      | 1.2       | 119      |
| <b>Magnesium (Mg)</b>                         | 73.4   | mg/kg | 0.1    | 8        |           |          |
| <b>Magnesium (MgO)</b>                        |        |       | 0.1    | 13       | 0.0       | 1        |
| <b>Sulphur (S)</b>                            | 62     | mg/kg | 0.1    | 6        |           |          |
| <b>Sulphur (SO<sub>3</sub>)</b>               |        |       | 0.2    | 16       | 0.0       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|                 | result | units | Rate      |         | Limit      |
|-----------------|--------|-------|-----------|---------|------------|
|                 |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| <b>Zinc</b>     | 3.33   | mg/kg | 3.33      | 0.34    | 15.00      |
| <b>Copper</b>   | 0.20   | mg/kg | 0.20      | 0.02    | 7.50       |
| <b>Nickel</b>   | 0.20   | mg/kg | 0.20      | 0.02    | 3.00       |
| <b>Lead</b>     | 0.50   | mg/kg | 0.50      | 0.05    | 15.00      |
| <b>Cadmium</b>  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| <b>Chromium</b> | 0.20   | mg/kg | 0.20      | 0.02    | 15.00      |
| <b>Mercury</b>  | 0.05   | mg/kg | 0.05      | 0.01    | 0.10       |
|                 |        |       |           |         |            |

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **VOLAC, FELINFACH**

## **Analysis of Liquid Waste**

Report No: 99545

Date: 28/05/2020

Application rate (t/ha)                    107.0  
 Application rate (t/acre)                43.3  
 pH                                                6.47  
 Dry solids (%)                                1.04

Organic Matter( %)                        0.36

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.06   | %     | 0.6    | 64       | 0.1       | 13       |
| Ammonium-N                                 | 519    | mg/kg | 0.5    | 56       |           |          |
| Phosphorus (P)                             | 275    | mg/kg | 0.3    | 29       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.6    | 67       | 0.4       | 40       |
| Potassium (K)                              | 1199   | mg/kg | 1.2    | 128      |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 1.4    | 154      | 1.2       | 123      |
| Magnesium (Mg)                             | 73.4   | mg/kg | 0.1    | 8        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 13       | 0.0       | 1        |
| Sulphur (S)                                | 62     | mg/kg | 0.1    | 7        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.2    | 17       | 0.0       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 3.33   | mg/kg | 3.33      | 0.36    | 15.00      |
| Copper   | 0.20   | mg/kg | 0.20      | 0.02    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.02    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.05    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.20   | mg/kg | 0.20      | 0.02    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.01    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



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EFFLUENT

## EFFLUENT

Sample Reference :

VOLAC-EFFLUENT

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 99545 |
| Sample Number | 96050 |

|               |             |
|---------------|-------------|
| Date Received | 28-MAY-2020 |
| Date Reported | 04-JUN-2020 |

The sample submitted was of adequate size 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         | 1.04  | %     |
| E Coli [Fresh]          | 370   | cfu/g |
| Conductivity 1:6        | 2030  | uS/cm |
| Total Kjeldahl Nitrogen | 0.06  | % w/w |
| Nitrate Nitrogen        | <10   | mg/kg |
| Ammonium Nitrogen       | 519   | mg/kg |
| Total Phosphorus (P)    | 275   | mg/kg |
| Total Potassium (K)     | 1199  | mg/kg |
| Total Magnesium (Mg)    | 73.4  | mg/kg |
| Total Copper (Cu)       | <0.2  | mg/kg |

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Date 04/06/20



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EFFLUENT

## EFFLUENT

Sample Reference :

VOLAC-EFFLUENT

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 99545 |
| Sample Number | 96050 |

|               |             |
|---------------|-------------|
| Date Received | 28-MAY-2020 |
| Date Reported | 04-JUN-2020 |

The sample submitted was of adequate size 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 |
|---------------------|-------|-------|
| Total Zinc (Zn)     | 3.33  | mg/kg |
| Total Sulphur (S)   | 62.0  | mg/kg |
| Total Calcium (Ca)  | 373   | 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) | <0.2  | mg/kg |
| Total Sodium (Na)   | 969   | mg/kg |
| pH 1:6 [Fresh]      | 6.47  |       |

Released by Myles Nicholson

Date 04/06/20

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
**Tel:** +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com



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EFFLUENT

## EFFLUENT

Sample Reference :

VOLAC-EFFLUENT

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 99545 |
| Sample Number | 96050 |

|               |             |
|---------------|-------------|
| Date Received | 28-MAY-2020 |
| Date Reported | 04-JUN-2020 |

The sample submitted was of adequate size 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  |
|------------------------|----------|--------|
| Organic Matter LOI     | 0.36     | % w/w  |
| Coliforms [fresh]      | 1500     | cfu/g  |
| Oils,Fats and Grease   | 1080     | mg/kg  |
| Salmonella spp [fresh] | Negative | in 25g |
| EC [Neat]              | 10470    | uS/cm  |

Released by Myles Nicholson

Date 04/06/20

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
**Tel:** +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com

# **FIRST MILK, HAVERFORDWEST**

## **Analysis of Liquid Waste**

Report No: 19447

Date: 21/08/2020

Application rate (t/ha)                    26.0  
Application rate (t/acre)                10.5  
pH                                                5.77  
Dry solids (%)                                3.15

Organic Matter( %)                        2.25

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.12   | %     | 1.2    | 31       | 0.2       | 6        |
| Ammonium-N                                 | 109    | mg/kg | 0.1    | 3        |           |          |
| Phosphorus (P)                             | 531    | mg/kg | 0.5    | 14       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 1.2    | 32       | 0.7       | 19       |
| Potassium (K)                              | 265    | mg/kg | 0.3    | 7        |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.3    | 8        | 0.3       | 7        |
| Magnesium (Mg)                             | 82.2   | mg/kg | 0.1    | 2        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 4        | 0.0       | 0        |
| Sulphur (S)                                | 129    | mg/kg | 0.1    | 3        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.3    | 8        | 0.1       | 2        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 8.43   | mg/kg | 8.43      | 0.22    | 15.00      |
| Copper   | 0.24   | mg/kg | 0.24      | 0.01    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.01    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.01    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.66   | mg/kg | 0.66      | 0.02    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **FIRST MILK, HAVERFORDWEST**

## **Analysis of Liquid Waste**

Report No: 19447

Date: 21/08/2020

Application rate (t/ha)                    46.0  
Application rate (t/acre)                18.6  
pH                                                5.77  
Dry solids (%)                                3.15

Organic Matter( %)                        2.25

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.12   | %     | 1.2    | 55       | 0.2       | 11       |
| Ammonium-N                                 | 109    | mg/kg | 0.1    | 5        |           |          |
| Phosphorus (P)                             | 531    | mg/kg | 0.5    | 24       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 1.2    | 56       | 0.7       | 34       |
| Potassium (K)                              | 265    | mg/kg | 0.3    | 12       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.3    | 15       | 0.3       | 12       |
| Magnesium (Mg)                             | 82.2   | mg/kg | 0.1    | 4        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 6        | 0.0       | 1        |
| Sulphur (S)                                | 129    | mg/kg | 0.1    | 6        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.3    | 15       | 0.1       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 8.43   | mg/kg | 8.43      | 0.39    | 15.00      |
| Copper   | 0.24   | mg/kg | 0.24      | 0.01    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.01    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.02    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.66   | mg/kg | 0.66      | 0.03    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **FIRST MILK, HAVERFORDWEST**

## **Analysis of Liquid Waste**

Report No: 19447

Date: 21/08/2020

Application rate (t/ha)                    53.0  
Application rate (t/acre)                21.4  
pH                                                5.77  
Dry solids (%)                                3.15

Organic Matter( %)                        2.25

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.12   | %     | 1.2    | 64       | 0.2       | 13       |
| Ammonium-N                                 | 109    | mg/kg | 0.1    | 6        |           |          |
| Phosphorus (P)                             | 531    | mg/kg | 0.5    | 28       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 1.2    | 64       | 0.7       | 39       |
| Potassium (K)                              | 265    | mg/kg | 0.3    | 14       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.3    | 17       | 0.3       | 13       |
| Magnesium (Mg)                             | 82.2   | mg/kg | 0.1    | 4        |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 7        | 0.0       | 1        |
| Sulphur (S)                                | 129    | mg/kg | 0.1    | 7        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.3    | 17       | 0.1       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 8.43   | mg/kg | 8.43      | 0.45    | 15.00      |
| Copper   | 0.24   | mg/kg | 0.24      | 0.01    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.01    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.03    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.66   | mg/kg | 0.66      | 0.03    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

# **FIRST MILK, HAVERFORDWEST**

## **Analysis of Liquid Waste**

Report No: 19447

Date: 21/08/2020

Application rate (t/ha)                    116.0  
Application rate (t/acre)                46.9  
pH                                                5.77  
Dry solids (%)                                3.15

Organic Matter( %)                        2.25

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.12   | %     | 1.2    | 139      | 0.2       | 28       |
| Ammonium-N                                 | 109    | mg/kg | 0.1    | 13       |           |          |
| Phosphorus (P)                             | 531    | mg/kg | 0.5    | 62       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 1.2    | 141      | 0.7       | 85       |
| Potassium (K)                              | 265    | mg/kg | 0.3    | 31       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.3    | 37       | 0.3       | 30       |
| Magnesium (Mg)                             | 82.2   | mg/kg | 0.1    | 10       |           |          |
| Magnesium (MgO)                            |        |       | 0.1    | 16       | 0.0       | 2        |
| Sulphur (S)                                | 129    | mg/kg | 0.1    | 15       |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.3    | 37       | 0.1       | 7        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 8.43   | mg/kg | 8.43      | 0.98    | 15.00      |
| Copper   | 0.24   | mg/kg | 0.24      | 0.03    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.02    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.06    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.66   | mg/kg | 0.66      | 0.08    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.01    | 0.10       |
|          |        |       |           |         |            |

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



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FIRST MILK

EFFLUENT

## EFFLUENT

Sample Reference :

FIRST MILK

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19447 |
| Sample Number | 98843 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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         | 3.15  | %     |
| E Coli [Fresh]          | 100   | cfu/g |
| Conductivity 1:6        | 948   | uS/cm |
| Total Kjeldahl Nitrogen | 0.12  | % w/w |
| Nitrate Nitrogen        | <10   | mg/kg |
| Ammonium Nitrogen       | 109   | mg/kg |
| Total Phosphorus (P)    | 531   | mg/kg |
| Total Potassium (K)     | 265   | mg/kg |
| Total Magnesium (Mg)    | 82.2  | mg/kg |
| Total Copper (Cu)       | 0.24  | mg/kg |

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Date 02/09/20



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FIRST MILK

EFFLUENT

## EFFLUENT

Sample Reference :

FIRST MILK

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19447 |
| Sample Number | 98843 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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 |
|---------------------|-------|-------|
| Total Zinc (Zn)     | 8.43  | mg/kg |
| Total Sulphur (S)   | 129   | mg/kg |
| Total Calcium (Ca)  | 244   | 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) | 0.66  | mg/kg |
| Total Sodium (Na)   | 875   | mg/kg |
| pH 1:6 [Fresh]      | 5.77  |       |

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FIRST MILK

EFFLUENT

## EFFLUENT

Sample Reference :

FIRST MILK

Sample Matrix : EFFLUENT

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 19447 |
| Sample Number | 98843 |

|               |             |
|---------------|-------------|
| Date Received | 21-AUG-2020 |
| Date Reported | 02-SEP-2020 |

The sample submitted was of adequate size 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  |
|------------------------|----------|--------|
| Organic Matter LOI     | 2.25     | % w/w  |
| Coliforms [fresh]      | 15000    | cfu/g  |
| Oils,Fats and Grease   | 8240     | mg/kg  |
| Salmonella spp [fresh] | Negative | in 25g |
| EC [Neat]              | 5051     | uS/cm  |

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# **PENDERYN DISTILLERY**

## **Analysis of spent wash**

Sample Ref: Penderyn spent wash (liquid waste)

Report Number: 96462

Date: 28/04/2020

Application rate (t/ha) 39.0  
Application rate (t/acre) 15.8  
pH 4.50  
Dry solids (%) 2.2

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.08   | %     | 0.8    | 31       | 0.1       | 3        |
| Ammonium-N                                 | 25.00  | mg/kg | 0.0    | 1        |           |          |
| Phosphorus (P)                             | 363.00 | mg/kg | 0.4    | 14       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.8    | 32       | 0.4       | 16       |
| Potassium (K)                              | 686.00 | mg/kg | 0.7    | 27       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.8    | 32       | 0.7       | 29       |
| Magnesium (Mg)                             | 145.00 | mg/kg | 0.1    | 6        |           |          |
| Magnesium (MgO)                            |        |       | 0.2    | 9        | 0.0       | 1        |
| Sulphur (S)                                | 87.10  | mg/kg | 0.1    | 3        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.2    | 8        | 0.0       | 2        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 0.65   | mg/kg | 0.65      | 0.03    | 15.00      |
| Copper   | 3.22   | mg/kg | 3.22      | 0.13    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.01    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.02    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.62   | mg/kg | 0.62      | 0.02    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |

All results expressed on sample as received. The ammonium N, lead, cadmium, mercury and nickel concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown.

# **PENDERYN DISTILLERY**

## **Analysis of spent wash**

Sample Ref: Penderyn spent wash (liquid waste)

Report Number: 96462

Date: 28/04/2020

Application rate (t/ha) 78.0  
Application rate (t/acre) 31.6  
pH 4.50  
Dry solids (%) 2.2

### **NUTRIENT CONTENT**

|                                            | result | units | Total  |          | Available |          |
|--------------------------------------------|--------|-------|--------|----------|-----------|----------|
|                                            |        |       | (kg/t) | ( kg/ha) | (kg/t)    | ( kg/ha) |
| Nitrogen (N)                               | 0.08   | %     | 0.8    | 62       | 0.1       | 6        |
| Ammonium-N                                 | 25.00  | mg/kg | 0.0    | 2        |           |          |
| Phosphorus (P)                             | 363.00 | mg/kg | 0.4    | 28       |           |          |
| Phosphate (P <sub>2</sub> O <sub>5</sub> ) |        |       | 0.8    | 65       | 0.4       | 32       |
| Potassium (K)                              | 686.00 | mg/kg | 0.7    | 54       |           |          |
| Potash (K <sub>2</sub> O)                  |        |       | 0.8    | 64       | 0.7       | 58       |
| Magnesium (Mg)                             | 145.00 | mg/kg | 0.1    | 11       |           |          |
| Magnesium (MgO)                            |        |       | 0.2    | 19       | 0.0       | 2        |
| Sulphur (S)                                | 87.10  | mg/kg | 0.1    | 7        |           |          |
| Sulphur (SO <sub>3</sub> )                 |        |       | 0.2    | 17       | 0.0       | 3        |

### **POTENTIALLY TOXIC ELEMENTS**

|          | result | units | Rate      |         | Limit      |
|----------|--------|-------|-----------|---------|------------|
|          |        |       | (g/tonne) | (kg/ha) | (kg/ha/yr) |
| Zinc     | 0.65   | mg/kg | 0.65      | 0.05    | 15.00      |
| Copper   | 3.22   | mg/kg | 3.22      | 0.25    | 7.50       |
| Nickel   | 0.20   | mg/kg | 0.20      | 0.02    | 3.00       |
| Lead     | 0.50   | mg/kg | 0.50      | 0.04    | 15.00      |
| Cadmium  | 0.01   | mg/kg | 0.01      | 0.00    | 0.15       |
| Chromium | 0.62   | mg/kg | 0.62      | 0.05    | 15.00      |
| Mercury  | 0.05   | mg/kg | 0.05      | 0.00    | 0.10       |

All results expressed on sample as received. The ammonium N, lead, cadmium, mercury and nickel concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown.



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PENDERY DISTILLERY

LIQUID WASTE

## LIQUID WASTE

Sample Reference :

PENDRYN-LIQUID WASTE

Sample Matrix : LIQUID WASTE

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 96462 |
| Sample Number | 95047 |

|               |             |
|---------------|-------------|
| Date Received | 28-APR-2020 |
| Date Reported | 11-MAY-2020 |

The sample submitted was of adequate size 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         | 2.20  | %     |
| Conductivity 1:6        | 1089  | uS/cm |
| Total Kjeldahl Nitrogen | 0.08  | % w/w |
| Nitrate Nitrogen        | <10   | mg/kg |
| Ammonium Nitrogen       | <25   | mg/kg |
| Total Phosphorus (P)    | 363   | mg/kg |
| Total Potassium (K)     | 686   | mg/kg |
| Total Magnesium (Mg)    | 145   | mg/kg |
| Total Copper (Cu)       | 3.22  | mg/kg |
| Total Zinc (Zn)         | 0.65  | mg/kg |

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Date 11/05/20



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PENDERY DISTILLERY

LIQUID WASTE

## LIQUID WASTE

Sample Reference :

PENDRYN-LIQUID WASTE

Sample Matrix : LIQUID WASTE

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 96462 |
| Sample Number | 95047 |

|               |             |
|---------------|-------------|
| Date Received | 28-APR-2020 |
| Date Reported | 11-MAY-2020 |

The sample submitted was of adequate size 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 |
|---------------------|-------|-------|
| Total Sulphur (S)   | 87.1  | mg/kg |
| Total Calcium (Ca)  | 48.1  | 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) | 0.62  | mg/kg |
| Total Sodium (Na)   | 1165  | mg/kg |
| pH 1:6 [Fresh]      | 4.50  |       |
| B.O.D. [fresh]      | 15120 | mg/l  |

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Date 11/05/20

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PENDERY DISTILLERY

LIQUID WASTE

## LIQUID WASTE

Sample Reference :

PENDRYN-LIQUID WASTE

Sample Matrix : LIQUID WASTE

### Laboratory References

|               |       |
|---------------|-------|
| Report Number | 96462 |
| Sample Number | 95047 |

|               |             |
|---------------|-------------|
| Date Received | 28-APR-2020 |
| Date Reported | 11-MAY-2020 |

The sample submitted was of adequate size 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 |
|----------------|-------|-------|
| C.O.D. [fresh] | 30530 | mg/l  |

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Tel. : 01239 613 741

**V850**

Please quote the above code for all enquiries

Client : E WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

Sample Matrix : Agricultural Soil

Laboratory Reference

Card Number 73608/21

Date Received 18-Mar-21

Date Reported 22-Mar-21

## SOIL ANALYSIS REPORT

| Laboratory<br>Sample<br>Reference | Field Details |                                                           | Soil<br>pH | Index    |           |          | mg/l (Available) |            |            |
|-----------------------------------|---------------|-----------------------------------------------------------|------------|----------|-----------|----------|------------------|------------|------------|
|                                   | No.           | Name or O.S. Reference<br>with Cropping Details           |            | P        | K         | Mg       | P                | K          | Mg         |
| 516773/21                         | 1             | <b>FICYFF 22/4631</b><br><i>No cropping details given</i> | <b>7.1</b> | <b>4</b> | <b>3</b>  | <b>2</b> | <b>57.4</b>      | <b>252</b> | <b>92</b>  |
| 516774/21                         | 2             | <b>FICYFF 23/2745</b><br><i>No cropping details given</i> | <b>6.8</b> | <b>4</b> | <b>3</b>  | <b>3</b> | <b>60.0</b>      | <b>327</b> | <b>104</b> |
| 516775/21                         | 3             | <b>FICYFF 24/2821</b><br><i>No cropping details given</i> | <b>6.2</b> | <b>3</b> | <b>3</b>  | <b>2</b> | <b>43.2</b>      | <b>269</b> | <b>92</b>  |
| 516776/21                         | 4             | <b>FICYFF 25/1020</b><br><i>No cropping details given</i> | <b>6.7</b> | <b>3</b> | <b>2+</b> | <b>2</b> | <b>29.6</b>      | <b>215</b> | <b>67</b>  |
| 516777/21                         | 5             | <b>FICYFF 26/3971</b><br><i>No cropping details given</i> | <b>6.7</b> | <b>4</b> | <b>2+</b> | <b>2</b> | <b>54.6</b>      | <b>216</b> | <b>76</b>  |
| 516778/21                         | 6             |                                                           |            |          |           |          |                  |            |            |

If general fertiliser and lime recommendations have been requested, these are given on the following sheets.

The analytical methods used are as described in DEFRA Reference Book 427

The index values are determined from the AHDB Fertiliser Recommendations RB209 9th Edition.

Released by Gina Graham On behalf of NRM Ltd Date 22/03/21

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Tel. : 01239 613 741

**V850**

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Client : E WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

Sample Matrix : Agricultural Soil

Laboratory Reference

Card Number 73608/21

Date Received 18-Mar-21  
Date Reported 22-Mar-21

## SOIL ANALYSIS REPORT

| Laboratory<br>Sample<br>Reference | Field Details |                                                           | Soil<br>pH | Index    |           |          | mg/l (Available) |            |           |
|-----------------------------------|---------------|-----------------------------------------------------------|------------|----------|-----------|----------|------------------|------------|-----------|
|                                   | No.           | Name or O.S. Reference<br>with Cropping Details           |            | P        | K         | Mg       | P                | K          | Mg        |
| 516779/21                         | 7             | <b>F/CYFF 28/3393</b><br><i>No cropping details given</i> | <b>6.4</b> | <b>4</b> | <b>2-</b> | <b>2</b> | <b>52.8</b>      | <b>175</b> | <b>95</b> |
| 516780/21                         | 8             | <b>FYNNONCYFF 29</b><br><i>No cropping details given</i>  | <b>6.4</b> | <b>3</b> | <b>2-</b> | <b>2</b> | <b>42.8</b>      | <b>142</b> | <b>79</b> |
| 516781/21                         | 9             | <b>FYNNONCYFF 30</b><br><i>No cropping details given</i>  | <b>6.6</b> | <b>3</b> | <b>1</b>  | <b>2</b> | <b>31.6</b>      | <b>117</b> | <b>69</b> |
| 516782/21                         | 10            |                                                           |            |          |           |          |                  |            |           |

If general fertiliser and lime recommendations have been requested, these are given on the following sheets.

The analytical methods used are as described in DEFRA Reference Book 427

The index values are determined from the AHDB Fertiliser Recommendations RB209 9th Edition.

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# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18569         | <b>Location -</b>        | WD298 - FD 22- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 14:30                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014834                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 44      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 10.1    |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.07    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.6     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 5.9     |       |
| 7772 | Extract Phosphorous  | MG/L     | 14      |       |
| 7773 | Extractable Potassiu | MG/L     | 110     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.1     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 43.2    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 12.5    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 20.3    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 19.4    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 72      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18570         | <b>Location -</b>        | WD298 - FD 23- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 14:40                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014835                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

---

## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 54      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 9       |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 1.82    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.6     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 6       |       |
| 7772 | Extract Phosphorous  | MG/L     | 37      |       |
| 7773 | Extractable Potassiu | MG/L     | 400     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.1     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 37.6    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 15.9    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 19.2    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 17.5    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 85      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18571         | <b>Location -</b>        | WD298 - FD 24- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 14:50                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014836                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 52      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 12.1    |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.28    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.8     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 6.5     |       |
| 7772 | Extract Phosphorous  | MG/L     | 23      |       |
| 7773 | Extractable Potassiu | MG/L     | 210     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.2     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 46.3    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 13.5    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 20.8    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 19.6    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 72      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18572         | <b>Location -</b>        | WD298 - FD 25- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 15:00                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014837                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 46      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 9.2     |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 1.73    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.6     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 5.6     |       |
| 7772 | Extract Phosphorous  | MG/L     | 13      |       |
| 7773 | Extractable Potassiu | MG/L     | 130     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.1     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 40      |       |
| 9273 | COPPER TOTAL         | MG/KG    | 9.6     |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 15.7    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 17.4    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 51      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18573         | <b>Location -</b>        | WD298 - FD 26- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 15:10                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014838                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 48      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 11      |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.41    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.8     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 5.6     |       |
| 7772 | Extract Phosphorous  | MG/L     | 27      |       |
| 7773 | Extractable Potassiu | MG/L     | 190     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.3     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 42.2    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 17.4    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 22.4    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 20.6    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 85      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18575         | <b>Location -</b>        | WD298 - FD 28- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 15:30                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014840                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 46      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 11.4    |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.16    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.6     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 6.3     |       |
| 7772 | Extract Phosphorous  | MG/L     | 8       |       |
| 7773 | Extractable Potassiu | MG/L     | 110     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.1     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 39.4    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 15.6    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 23.5    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 20.2    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 83      |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                 |
|----------------------------|---------------|--------------------------|---------------------------------|
| <b>Sampling Point No -</b> | 18576         | <b>Location -</b>        | WD298 - FD 29- FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 15:40                           |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE    |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014841                       |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                 |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                              |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 49      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 15.8    |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.49    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.9     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 6.6     |       |
| 7772 | Extract Phosphorous  | MG/L     | 30      |       |
| 7773 | Extractable Potassiu | MG/L     | 130     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.2     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 43.7    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 20.5    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 22.2    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 34.5    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 103     |       |



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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|                            |               |                          |                                  |
|----------------------------|---------------|--------------------------|----------------------------------|
| <b>Sampling Point No -</b> | 18577         | <b>Location -</b>        | WD298 - FD 30 - FFYNNONCYFF FARM |
| <b>Date Sampled -</b>      | 22/11/2016    | <b>Time Taken -</b>      | 15:50                            |
| <b>Originator -</b>        | ENVIRONMENTAL | <b>Purpose -</b>         | 7.5 / 15cm FIELD SOIL SAMPLE     |
| <b>Laboratory -</b>        | GLASLYN       | <b>Lab Ref No -</b>      | E 4014842                        |
| <b>Sampler -</b>           |               | <b>Samplers Comments</b> |                                  |
| <b>Type -</b>              |               | <b>No Results -</b>      | 14                               |

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## Sample Results

| Code | Determinand Name     | Units    | Result  | Limit |
|------|----------------------|----------|---------|-------|
| 48   | FLUORIDE (DRY WT)    | MG/KG    | 50      |       |
| 357  | ARSENIC (DRY WT)     | MG/KG    | 12.9    |       |
| 380  | SELENIUM (DRY WT)    | MG/KG    | 2.52    |       |
| 384  | MOLYBDENUM (DRY WT)  | MG/KG    | 0.7     |       |
| 4620 | pH on soil/sludge    | PH UNITS | 6.6     |       |
| 7772 | Extract Phosphorous  | MG/L     | 31      |       |
| 7773 | Extractable Potassiu | MG/L     | 150     |       |
| 9271 | CADMIUM TOTAL        | MG/KG    | 0.2     |       |
| 9272 | CHROMIUM TOTAL       | MG/KG    | 35.3    |       |
| 9273 | COPPER TOTAL         | MG/KG    | 16.8    |       |
| 9274 | MERCURY TOTAL        | MG/KG    | LT 0.14 |       |
| 9275 | NICKEL TOTAL         | MG/KG    | 18.6    |       |
| 9276 | LEAD TOTAL           | MG/KG    | 29.1    |       |
| 9277 | ZINC TOTAL           | MG/KG    | 86      |       |



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 6

STEPSIDE AGRI  
STEPSIDE FARM  
GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

Please quote above code for all enquiries

MR J WILLIAMS  
TROEDYRHIW FARM  
FREWIG  
CARDIGAN  
  
SOIL

### Laboratory References

Date Received 06-FEB-2019  
Date Reported 11-FEB-2019

Report Number 42415  
Sample Number 422225

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### pH <sup>(1)</sup>

#### Soil pH

| Determinand | Result | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|--------|---|---|---|---|---|---|
| Soil pH     | 5.8    |   |   |   |   |   |   |

#### Soil Nutrients <sup>(1)</sup>

#### Soil Index

| Determinand          | Result<br>mg/litre | Soil<br>Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|--------------------|---------------|---|---|---|---|---|---|---|
| Available Phosphorus | 12.8               | 1             |   |   |   |   |   |   |   |
| Available Potassium  | 62.8               | 1             |   |   |   |   |   |   |   |
| Available Magnesium  | 89.7               | 2             |   |   |   |   |   |   |   |

#### Potentially Toxic Elements <sup>(2)</sup>

#### % of maximum permissible concentration of PTE in arable/grassland soil

| Determinand    | Result mg/kg | Maximum mg/kg | 0% | 25% | 50% | 75% | 100% |
|----------------|--------------|---------------|----|-----|-----|-----|------|
| Total Copper   | 20.0         | Arable 100    |    |     |     |     |      |
|                |              | Grassland 170 |    |     |     |     |      |
| Total Zinc     | 73.1         | Arable 200    |    |     |     |     |      |
|                |              | Grassland 200 |    |     |     |     |      |
| Total Nickel   | 19.4         | Arable 60     |    |     |     |     |      |
|                |              | Grassland 100 |    |     |     |     |      |
| Total Cadmium  | 0.24         | Arable 3      |    |     |     |     |      |
|                |              | Grassland 3   |    |     |     |     |      |
| Total Lead     | 22.9         | Arable 300    |    |     |     |     |      |
|                |              | Grassland 300 |    |     |     |     |      |
| Total Chromium | 40.7         | Arable 400    |    |     |     |     |      |
|                |              | Grassland 600 |    |     |     |     |      |
| Total Mercury  | <0.2         | Arable 1      |    |     |     |     |      |
|                |              | Grassland 1.5 |    |     |     |     |      |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by J Doyle

Date 11/02/19

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
Tel: +44 (0) 1344 886338 Fax: +44 (0) 1344 890972 Email: [enquiries@nrm.uk.com](mailto:enquiries@nrm.uk.com) [www.nrm.uk.com](http://www.nrm.uk.com)



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 6

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | V850 |
|-----------------------------------------------------------------------|------|

Please quote above code for all enquiries

|               |             |
|---------------|-------------|
| Date Received | 06-FEB-2019 |
| Date Reported | 11-FEB-2019 |

|                                                                    |
|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422225 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand      | Result<br>mg/kg | Maximum<br>mg/kg |     | % of maximum permissible concentration<br>of PTE in arable/grassland soil |     |     |     |      |  |
|------------------|-----------------|------------------|-----|---------------------------------------------------------------------------|-----|-----|-----|------|--|
|                  |                 |                  |     | 0%                                                                        | 25% | 50% | 75% | 100% |  |
| Total Molybdenum | <1              | Arable           | 4   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 4   |                                                                           |     |     |     |      |  |
| Total Selenium   | 0.43            | Arable           | 3   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 5   |                                                                           |     |     |     |      |  |
| Total Arsenic    | 20.3            | Arable           | 50  |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 50  |                                                                           |     |     |     |      |  |
| Fluoride         | 42.8            | Arable           | 500 |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 500 |                                                                           |     |     |     |      |  |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by ..... *J Doyle* .....

Date ..... *11/02/19* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 7

|                                                                       |             |
|-----------------------------------------------------------------------|-------------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | <b>V850</b> |
|-----------------------------------------------------------------------|-------------|

Please quote above code for all enquiries

|                                                                    |
|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

|               |             |
|---------------|-------------|
| Date Received | 06-FEB-2019 |
| Date Reported | 11-FEB-2019 |

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422226 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### pH <sup>(1)</sup>

| Determinand | Result | Soil pH |   |   |   |   |   |  |
|-------------|--------|---------|---|---|---|---|---|--|
|             |        | 4       | 5 | 6 | 7 | 8 | 9 |  |
| Soil pH     | 5.7    |         |   |   |   |   |   |  |

#### Soil Nutrients <sup>(1)</sup>

| Determinand          | Result mg/litre | Soil Index | Soil Index |   |   |   |   |   |
|----------------------|-----------------|------------|------------|---|---|---|---|---|
|                      |                 |            | 0          | 1 | 2 | 3 | 4 | 5 |
| Available Phosphorus | 14.0            | 1          |            |   |   |   |   |   |
| Available Potassium  | 79.3            | 1          |            |   |   |   |   |   |
| Available Magnesium  | 95.3            | 2          |            |   |   |   |   |   |

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand    | Result mg/kg | Maximum mg/kg | % of maximum permissible concentration of PTE in arable/grassland soil |     |     |     |      |  |
|----------------|--------------|---------------|------------------------------------------------------------------------|-----|-----|-----|------|--|
|                |              |               | 0%                                                                     | 25% | 50% | 75% | 100% |  |
| Total Copper   | 18.3         | Arable 100    |                                                                        |     |     |     |      |  |
|                |              | Grassland 170 |                                                                        |     |     |     |      |  |
| Total Zinc     | 70.7         | Arable 200    |                                                                        |     |     |     |      |  |
|                |              | Grassland 200 |                                                                        |     |     |     |      |  |
| Total Nickel   | 18.0         | Arable 60     |                                                                        |     |     |     |      |  |
|                |              | Grassland 100 |                                                                        |     |     |     |      |  |
| Total Cadmium  | 0.21         | Arable 3      |                                                                        |     |     |     |      |  |
|                |              | Grassland 3   |                                                                        |     |     |     |      |  |
| Total Lead     | 21.9         | Arable 300    |                                                                        |     |     |     |      |  |
|                |              | Grassland 300 |                                                                        |     |     |     |      |  |
| Total Chromium | 35.0         | Arable 400    |                                                                        |     |     |     |      |  |
|                |              | Grassland 600 |                                                                        |     |     |     |      |  |
| Total Mercury  | <0.2         | Arable 1      |                                                                        |     |     |     |      |  |
|                |              | Grassland 1.5 |                                                                        |     |     |     |      |  |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by J Doyle

Date 11/02/19

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
**Tel:** +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 7

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | V850 |
|-----------------------------------------------------------------------|------|

Please quote above code for all enquiries

|               |             |
|---------------|-------------|
| Date Received | 06-FEB-2019 |
| Date Reported | 11-FEB-2019 |

|                                                                    |
|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422226 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### Potentially Toxic Elements <sup>(2)</sup>

| Potentially Toxic Elements <sup>(2)</sup> |                 |           |                  | % of maximum permissible concentration<br>of PTE in arable/grassland soil |     |     |     |      |
|-------------------------------------------|-----------------|-----------|------------------|---------------------------------------------------------------------------|-----|-----|-----|------|
| Determinand                               | Result<br>mg/kg |           | Maximum<br>mg/kg | 0%                                                                        | 25% | 50% | 75% | 100% |
| Total Molybdenum                          | <1              | Arable    | 4                |                                                                           |     |     |     |      |
|                                           |                 | Grassland | 4                |                                                                           |     |     |     |      |
| Total Selenium                            | 0.38            | Arable    | 3                | <div></div>                                                               |     |     |     |      |
|                                           |                 | Grassland | 5                | <div></div>                                                               |     |     |     |      |
| Total Arsenic                             | 15.9            | Arable    | 50               | <div></div>                                                               |     |     |     |      |
|                                           |                 | Grassland | 50               | <div></div>                                                               |     |     |     |      |
| Fluoride                                  | 39.9            | Arable    | 500              | <div></div>                                                               |     |     |     |      |
|                                           |                 | Grassland | 500              | <div></div>                                                               |     |     |     |      |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by ..... *J Doyle* .....

Date ..... *11/02/19* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 8

STEPSIDE AGRI  
STEPSIDE FARM  
GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

Please quote above code for all enquiries

MR J WILLIAMS  
TROEDYRHIW FARM  
FREWIG  
CARDIGAN  
  
SOIL

### Laboratory References

Date Received 06-FEB-2019  
Date Reported 11-FEB-2019

Report Number 42415  
Sample Number 422227

### ANALYTICAL RESULTS *on 'dry matter' basis.*

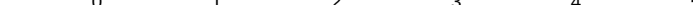
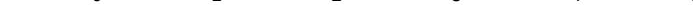
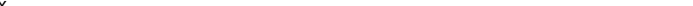
#### pH <sup>(1)</sup>

#### Soil pH

| Determinand | Result | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|--------|---|---|---|---|---|---|
| Soil pH     | 5.6    |   |   |   |   |   |   |

#### Soil Nutrients <sup>(1)</sup>

#### Soil Index

| Determinand          | Result<br>mg/litre | Soil<br>Index | 0                                                                                    | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|--------------------|---------------|--------------------------------------------------------------------------------------|---|---|---|---|---|---|
| Available Phosphorus | 17.4               | 2             |  |   |   |   |   |   |   |
| Available Potassium  | 65.3               | 1             |  |   |   |   |   |   |   |
| Available Magnesium  | 97.8               | 2             |  |   |   |   |   |   |   |

#### Potentially Toxic Elements <sup>(2)</sup>

#### % of maximum permissible concentration of PTE in arable/grassland soil

| Determinand    | Result mg/kg | Maximum mg/kg | 0% | 25% | 50% | 75% | 100% |
|----------------|--------------|---------------|----|-----|-----|-----|------|
| Total Copper   | 19.9         | Arable 100    |    |     |     |     |      |
|                |              | Grassland 170 |    |     |     |     |      |
| Total Zinc     | 79.2         | Arable 200    |    |     |     |     |      |
|                |              | Grassland 200 |    |     |     |     |      |
| Total Nickel   | 25.6         | Arable 60     |    |     |     |     |      |
|                |              | Grassland 100 |    |     |     |     |      |
| Total Cadmium  | 0.24         | Arable 3      |    |     |     |     |      |
|                |              | Grassland 3   |    |     |     |     |      |
| Total Lead     | 23.4         | Arable 300    |    |     |     |     |      |
|                |              | Grassland 300 |    |     |     |     |      |
| Total Chromium | 50.8         | Arable 400    |    |     |     |     |      |
|                |              | Grassland 600 |    |     |     |     |      |
| Total Mercury  | <0.2         | Arable 1      |    |     |     |     |      |
|                |              | Grassland 1.5 |    |     |     |     |      |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by J Doyle

Date 11/02/19

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 8

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | V850 |
|-----------------------------------------------------------------------|------|

Please quote above code for all enquiries

|               |             |
|---------------|-------------|
| Date Received | 06-FEB-2019 |
| Date Reported | 11-FEB-2019 |

|                                                                    |
|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422227 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand      | Result<br>mg/kg | Maximum<br>mg/kg |     | % of maximum permissible concentration<br>of PTE in arable/grassland soil |     |     |     |      |  |
|------------------|-----------------|------------------|-----|---------------------------------------------------------------------------|-----|-----|-----|------|--|
|                  |                 |                  |     | 0%                                                                        | 25% | 50% | 75% | 100% |  |
| Total Molybdenum | 1.1             | Arable           | 4   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 4   |                                                                           |     |     |     |      |  |
| Total Selenium   | 0.42            | Arable           | 3   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 5   |                                                                           |     |     |     |      |  |
| Total Arsenic    | 17.8            | Arable           | 50  |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 50  |                                                                           |     |     |     |      |  |
| Fluoride         | 41.5            | Arable           | 500 |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 500 |                                                                           |     |     |     |      |  |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by ..... *J Doyle* .....

Date ..... *11/02/19* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 9

STEPSIDE AGRI  
STEPSIDE FARM  
GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

Please quote above code for all enquiries

MR J WILLIAMS  
TROEDYRHIW FARM  
FREWIG  
CARDIGAN  
  
SOIL

### Laboratory References

Date Received 06-FEB-2019  
Date Reported 11-FEB-2019

Report Number 42415  
Sample Number 422228

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### pH <sup>(1)</sup>

#### Soil pH

| Determinand | Result | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|--------|---|---|---|---|---|---|
| Soil pH     | 5.7    |   |   |   |   |   |   |

#### Soil Nutrients <sup>(1)</sup>

#### Soil Index

| Determinand          | Result mg/litre | Soil Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|-----------------|------------|---|---|---|---|---|---|---|
| Available Phosphorus | 18.2            | 2          |   |   |   |   |   |   |   |
| Available Potassium  | 43.5            | 0          |   |   |   |   |   |   |   |
| Available Magnesium  | 124             | 3          |   |   |   |   |   |   |   |

#### Potentially Toxic Elements <sup>(2)</sup>

#### % of maximum permissible concentration of PTE in arable/grassland soil

| Determinand    | Result mg/kg | Maximum mg/kg | 0% | 25% | 50% | 75% | 100% |
|----------------|--------------|---------------|----|-----|-----|-----|------|
| Total Copper   | 20.7         | Arable 100    |    |     |     |     |      |
|                |              | Grassland 170 |    |     |     |     |      |
| Total Zinc     | 77.7         | Arable 200    |    |     |     |     |      |
|                |              | Grassland 200 |    |     |     |     |      |
| Total Nickel   | 20.0         | Arable 60     |    |     |     |     |      |
|                |              | Grassland 100 |    |     |     |     |      |
| Total Cadmium  | 0.25         | Arable 3      |    |     |     |     |      |
|                |              | Grassland 3   |    |     |     |     |      |
| Total Lead     | 21.9         | Arable 300    |    |     |     |     |      |
|                |              | Grassland 300 |    |     |     |     |      |
| Total Chromium | 38.3         | Arable 400    |    |     |     |     |      |
|                |              | Grassland 600 |    |     |     |     |      |
| Total Mercury  | <0.2         | Arable 1      |    |     |     |     |      |
|                |              | Grassland 1.5 |    |     |     |     |      |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by J Doyle

Date 11/02/19

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 9

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | V850 |
|-----------------------------------------------------------------------|------|

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|---------------|-------------|
| Date Received | 06-FEB-2019 |
| Date Reported | 11-FEB-2019 |

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|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422228 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand      | Result<br>mg/kg | Maximum<br>mg/kg |     | % of maximum permissible concentration<br>of PTE in arable/grassland soil |     |     |     |      |  |
|------------------|-----------------|------------------|-----|---------------------------------------------------------------------------|-----|-----|-----|------|--|
|                  |                 |                  |     | 0%                                                                        | 25% | 50% | 75% | 100% |  |
| Total Molybdenum | <1              | Arable           | 4   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 4   |                                                                           |     |     |     |      |  |
| Total Selenium   | 0.44            | Arable           | 3   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 5   |                                                                           |     |     |     |      |  |
| Total Arsenic    | 18.2            | Arable           | 50  |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 50  |                                                                           |     |     |     |      |  |
| Fluoride         | 52.0            | Arable           | 500 |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 500 |                                                                           |     |     |     |      |  |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

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Date ..... *11/02/19* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 10

|                                                                       |             |
|-----------------------------------------------------------------------|-------------|
| STEPSIDE AGRI<br>STEPSIDE FARM<br>GWBERT ROAD<br>CARDIGAN<br>SA43 1PH | <b>V850</b> |
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|                                                                    |
|--------------------------------------------------------------------|
| MR J WILLIAMS<br>TROEDYRHIW FARM<br>FREWIG<br>CARDIGAN<br><br>SOIL |
|--------------------------------------------------------------------|

### Laboratory References

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| Date Received | 06-FEB-2019 |
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|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422229 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### pH <sup>(1)</sup>

| Determinand | Result | 4 | 5 | 6 | 7 | 8 | 9 |
|-------------|--------|---|---|---|---|---|---|
| Soil pH     | 6.0    |   |   |   |   |   |   |

#### Soil Nutrients <sup>(1)</sup>

| Determinand          | Result mg/litre | Soil Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|----------------------|-----------------|------------|---|---|---|---|---|---|---|
| Available Phosphorus | 18.4            | 2          |   |   |   |   |   |   |   |
| Available Potassium  | 40.3            | 0          |   |   |   |   |   |   |   |
| Available Magnesium  | 104             | 3          |   |   |   |   |   |   |   |

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand    | Result mg/kg | Maximum mg/kg | 0% | 25% | 50% | 75% | 100% |
|----------------|--------------|---------------|----|-----|-----|-----|------|
| Total Copper   | 21.0         | Arable 100    |    |     |     |     |      |
|                |              | Grassland 170 |    |     |     |     |      |
| Total Zinc     | 75.0         | Arable 200    |    |     |     |     |      |
|                |              | Grassland 200 |    |     |     |     |      |
| Total Nickel   | 19.0         | Arable 60     |    |     |     |     |      |
|                |              | Grassland 100 |    |     |     |     |      |
| Total Cadmium  | 0.24         | Arable 3      |    |     |     |     |      |
|                |              | Grassland 3   |    |     |     |     |      |
| Total Lead     | 20.0         | Arable 300    |    |     |     |     |      |
|                |              | Grassland 300 |    |     |     |     |      |
| Total Chromium | 37.4         | Arable 400    |    |     |     |     |      |
|                |              | Grassland 600 |    |     |     |     |      |
| Total Mercury  | <0.2         | Arable 1      |    |     |     |     |      |
|                |              | Grassland 1.5 |    |     |     |     |      |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - TROEDYRHIW 10

|                                                                       |      |
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### Laboratory References

|               |        |
|---------------|--------|
| Report Number | 42415  |
| Sample Number | 422229 |

### ANALYTICAL RESULTS *on 'dry matter' basis.*

#### Potentially Toxic Elements <sup>(2)</sup>

| Determinand      | Result<br>mg/kg | Maximum<br>mg/kg |     | % of maximum permissible concentration<br>of PTE in arable/grassland soil |     |     |     |      |  |
|------------------|-----------------|------------------|-----|---------------------------------------------------------------------------|-----|-----|-----|------|--|
|                  |                 |                  |     | 0%                                                                        | 25% | 50% | 75% | 100% |  |
| Total Molybdenum | <1              | Arable           | 4   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 4   |                                                                           |     |     |     |      |  |
| Total Selenium   | 0.43            | Arable           | 3   |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 5   |                                                                           |     |     |     |      |  |
| Total Arsenic    | 19.1            | Arable           | 50  |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 50  |                                                                           |     |     |     |      |  |
| Fluoride         | 50.3            | Arable           | 500 |                                                                           |     |     |     |      |  |
|                  |                 | Grassland        | 500 |                                                                           |     |     |     |      |  |

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

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