



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

**Ffynnoncyff Farm, Pencefen Farm & Blaeneifed Farm,  
Cardigan,  
Ceredigion**

**Applicant:**

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

**Permit Number: EPR/AB3891CX**

**Date: 24/02/2021**

# 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	
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### 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	<b>07968 496178</b>
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 - Over 500 meters from: • European site, and/or • Ramsar, and/or • SSSI		- In a Source Protection Zone 2, and/or - 500 meters or less from: • European site, and/or • Ramsar, and/or • SSSI <b>You <i>must</i> submit a site specific risk assessment.</b>
SR2010No4 List A wastes (Lower risk)	Low risk deployment <input type="checkbox"/>	Medium risk (2) deployment <input type="checkbox"/>	
SR2010No4 List B wastes (Higher risk)	Medium risk (1) deployment <input checked="" type="checkbox"/>	High risk deployment <input type="checkbox"/>	
SR2010No5 (Any waste listed)	Medium risk (1) deployment <input type="checkbox"/>	High risk deployment <input type="checkbox"/>	
SR2010No6 (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	6238
2	02 05 02	Sludge from dairy waste treatment	Liquid sludge	Volac – Felinfach	5297
3	02 05 02	Sludge from dairy waste treatment	Liquid sludge	First Milk - Haverfordwest	3509
4	02 07 02	Spent wash from spirits distillation	Liquid	The Welsh Whisky Co. – Penderyn Distillery	3752
5					N.B. Maximums for single waste stream
6					
7					
8					
9					
10					
				<b>Total tonnage</b>	Max. 6238

#### 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				
			<b>Total hectares</b>	49.90

**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 19291 50605	02 05 02 or 02 07 02	Field Nurse Tank	120
3	SN 24425 45076	02 05 02 or 02 07 02	Field Nurse Tank	120
4	SN 19715 50450	02 05 02 or 02 07 02	Field Nurse Tank	120
5				
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"/>	<i>Go to section 5b</i>
Cheque	<input type="checkbox"/>	<i>Go to section 5c</i>
Postal order	<input type="checkbox"/>	<i>Go to section 5d</i>
Credit or debit card	<input type="checkbox"/>	<i>Go to section 5e</i>

### 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="EPDEPSTEPS0059"/>
Amount paid	<input type="text" value="£798"/>

### 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 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 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 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)	23/02/2021	





## 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, Pencefen Farm & Blaeneifed 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. Arthur Morgan  
Pencefen Farm  
Mwnt  
Cardigan  
Ceredigion  
SA43 1QB

Holding number 55/226/0136

Land line: 01239 615085

Grid reference: SN 19645 50376

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Mr. Geraint Jones  
Blaeneifed Farm  
Llangoedmor  
Cardigan  
Ceredigion  
SA43 2LZ

Holding No. 55/219/0032

Mobile: 07812 588907

Grid reference: SN 24047 45580










Field ref.	Spreadable Area (hectares)	Grid reference (centre of fields)	Waste type(s) to be spread (LoW)
<b><u>Ffynnoncyff Farm</u></b>			
Ffynnoncyff 4	2.70	SN 18792 50636	02 05 02 , 02 07 02
Ffynnoncyff 5	4.50	SN 18979 50561	02 05 02 , 02 07 02
Ffynnoncyff 6	4.50	SN 19157 50512	02 05 02 , 02 07 02
Ffynnoncyff 7 (A, B & C)	11.10	SN 18857 50339	02 05 02 , 02 07 02
<b><u>Pencefen</u></b>			
Pencefen 1	3.80	SN 20291 50428	02 05 02 , 02 07 02
Pencefen 2	3.30	SN 20078 50668	02 05 02 , 02 07 02
Pencefen 3	2.20	SN 19932 50796	02 05 02 , 02 07 02
Pencefen 6	1.40	SN 19769 50360	02 05 02 , 02 07 02
Pencefen 7	1.70	SN 19966 50412	02 05 02 , 02 07 02
Pencefen 8	2.00	SN 19943 50311	02 05 02 , 02 07 02
Pencefen 9	1.80	SN 20098 50322	02 05 02
<b><u>Blaeneifed Farm</u></b>			
Blaeneifed 14	5.50	SN 24538 45263	02 05 02 , 02 07 02
Blaeneifed 15	5.40	SN 24367 45386	02 05 02 , 02 07 02
<b>TOTAL</b>	<b>49.90</b>		



**TABLE 4 Previous land treatment**

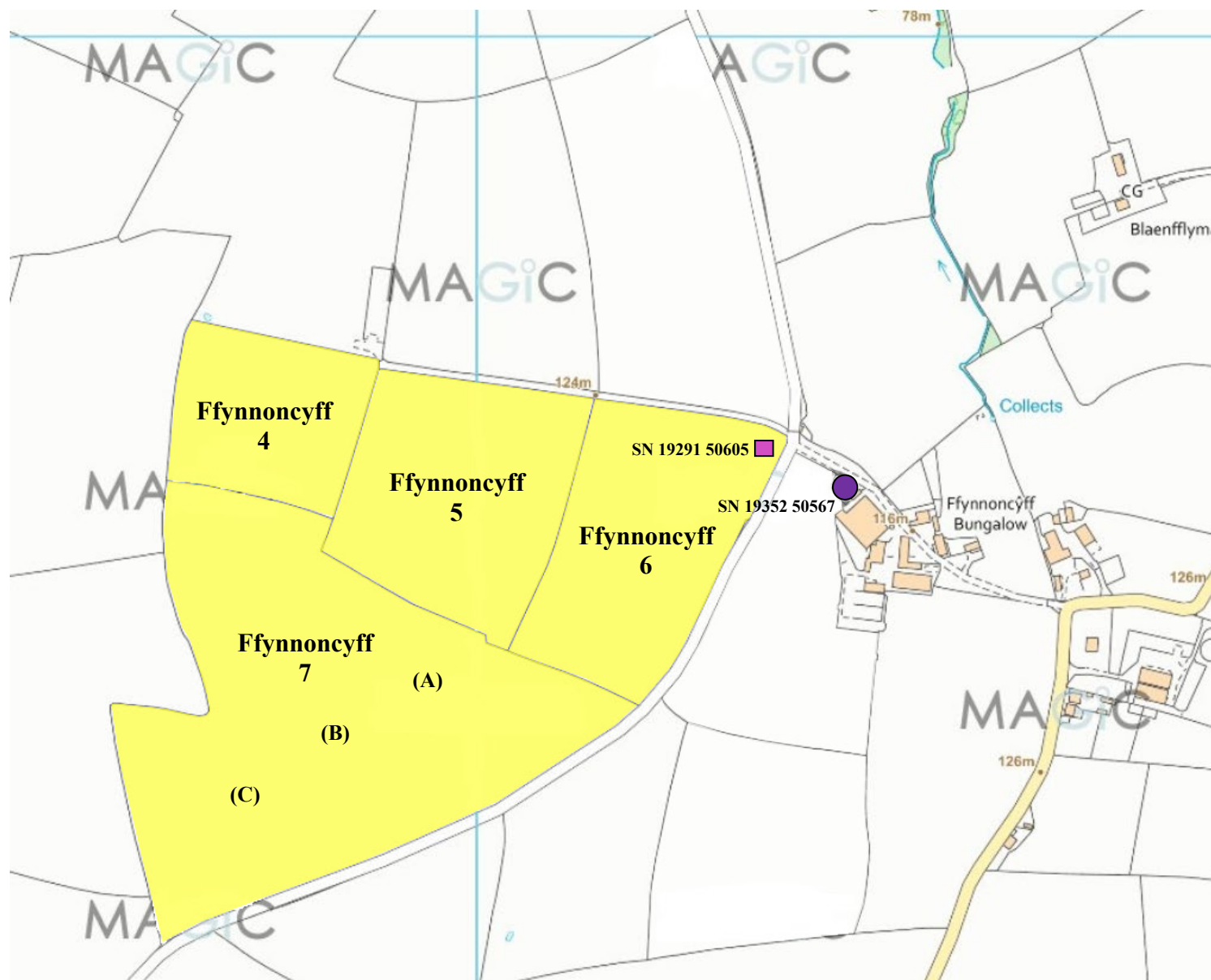
Field ref.	Waste description	Person/ company who spread the waste	Quantity spread per hectare (in tonnes)	Deployment / other reference (if known)
<b><u>Ffynnoncyff Farm</u></b>				
Ffynnoncyff 4	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	34	PAN-009195
Ffynnoncyff 5	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	36	PAN-009195
Ffynnoncyff 6	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	30	PAN-009195
Ffynnoncyff 7 (A, B & C)	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	39	PAN-009195
<b><u>Pencefen Farm</u></b>				
Pencefen 1	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	50	PAN-009060
Pencefen 2	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	33	PAN-009060
Pencefen 3	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	100	PAN-009060
Pencefen 6	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	29	PAN-009060
Pencefen 7	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	24	PAN-009060
Pencefen 8	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	25	PAN-009060
Pencefen 9	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	33	PAN-009060
<b><u>Blaeneifed Farm</u></b>				
Blaeneifed 14	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	127	PAN-009195
Blaeneifed 15	Volac, Felinfach - sludge from dairy waste treatment	Stepside Agricultural Contractors	131	PAN-009195

## 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 </td

Farmer: E. Williams  
 Map Grid Ref: SN 19121 50625  
 Farm ID: Ffynnoncyff Farm  
 Farm Post Code: SA43 1QD

## Ffynnoncyff Farm – Location Map

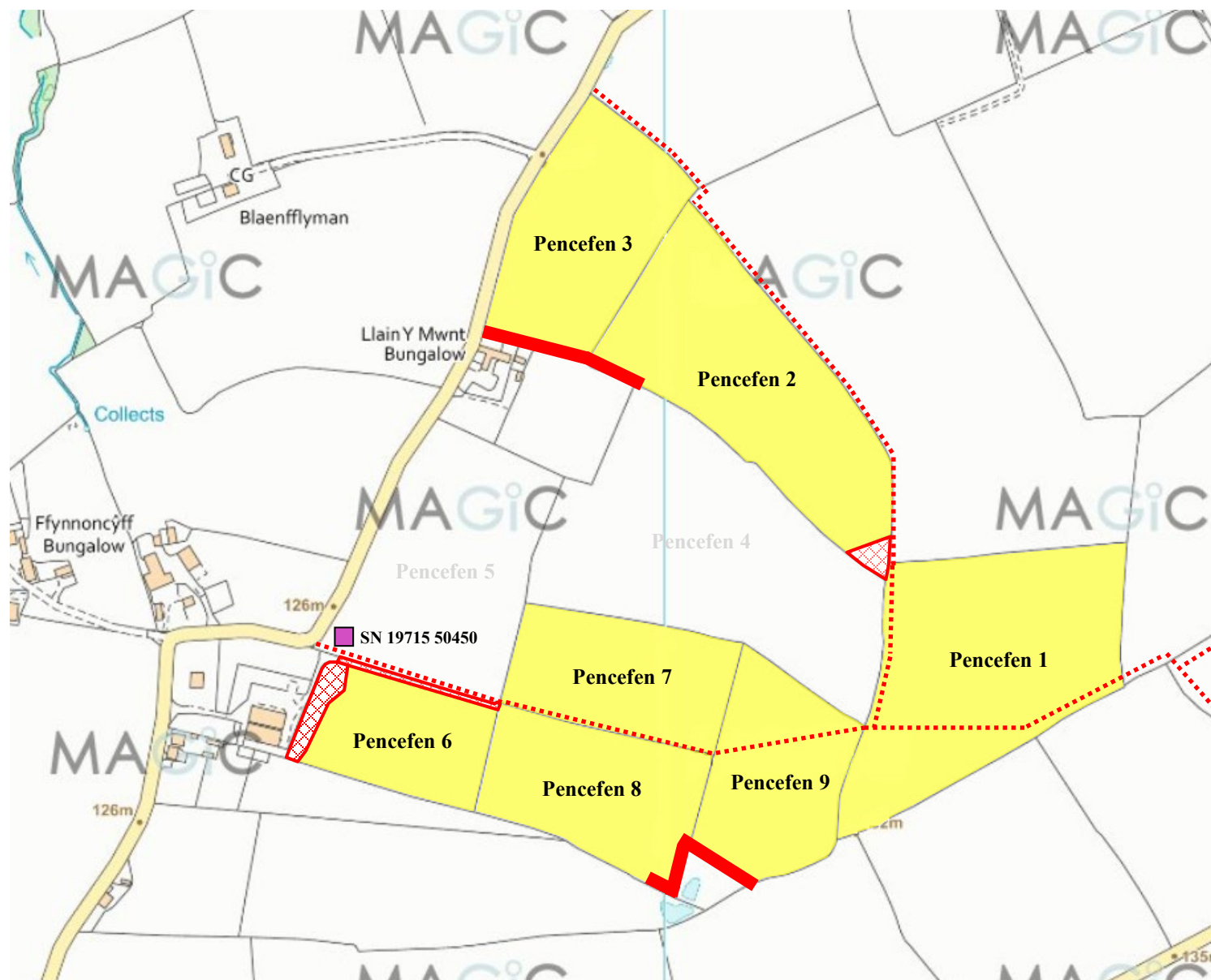


## Map Key










	Non-Spreadable Section of Field
	No spread area (10 Metres Buffer to Watercourses)
	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: Arthur Morgan  
 Map Grid Ref: SN 20032 50518  
 Farm ID: Pencefen Farm  
 Farm Post Code: SA43 1QB

## Pencefen Farm – Location Map



## 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

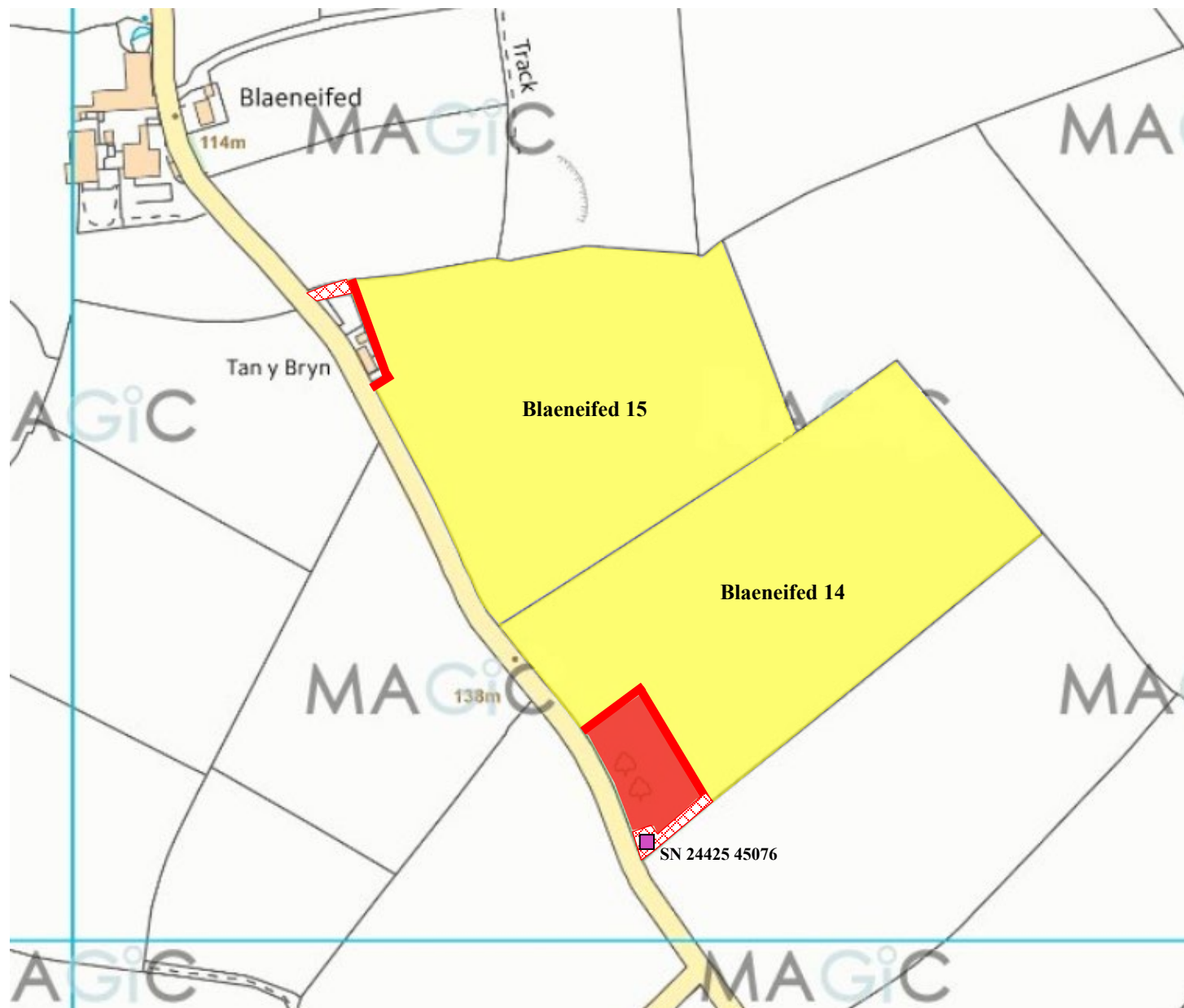
Farmer: Geraint Jones

Map Grid Ref: SN 24453 45322

Farm ID: Blaeneifed Farm

Farm Post Code: SA43 2LZ

## Blaeneifed Farm – Location Map



# Statement of Agricultural Benefit – Ffynnoncyff Farm, Pencefen Farm & Blaeneifed 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

Pencefen Farm, Mwnt, Cardigan, Ceredigion, SA43 1QB - Holding No. 55/226/0136

Blaeneifed Farm, Llangoedmor, Cardigan, Ceredigion, SA43 2LZ – Holding No. 55/219/0032

## 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:

- Ffynnoncyff fields 4, 5, 6 & 7 (A, B & C), Pencefen field 2 & Blaeneifed fields 14 & 15 will be spread in spring 2021 ahead of field cultivations and the spring barley being planted or in spring into the standing crop. These fields will then be spread again in autumn 2021 prior to grass establishment with the waste incorporated into the soil. The max application rates for these fields listed in table 1 will be split between spring 2021 application and autumn 2021 application. The application rates for the autumn 2021 spreading will be a maximum of 50t/ha for the Volac liquid sludge, 25t/ha for the First Milk liquid sludge or 30t/ha for the TWWC Penderyn Distillery spent wash.
- Pencefen fields 1, 3, 6, 7, 8, 9 will be spread subject to ground conditions being suitable and when there's a significant crop nutrient requirement (i.e. spring 2021, after a silage cut spring / summer 2021). 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.
- 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 spring barley 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 will 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 50kg SO<sub>3</sub>/ha for the spring barley crops and 40kg SO<sub>3</sub>/ha before each cut of grass silage. The amount of available sulphur supplied by the wastes at the proposed max application rates is 2-8 kg 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 Volac liquid sludge from dairy waste treatment as in 'Table 4 - Previous Land Treatment' under deployments PAN-009195 & PAN-009060 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 kg/ha		Phosphate (P <sub>2</sub> O <sub>5</sub> ) kg/ha		Potash (K <sub>2</sub> O) kg/ha		Magnesium (MgO) kg/ha		Sulphur (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 @ 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 @ 53t/ha	64	13	64	39	17	13	7	1	17	3
First Milk liquid sludge @ 119t/ha	143	29	145	87	38	30	16	2	38	8
Estimated Availability	20%		60%		80%		10%		20%	
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

Field Ref.	Soil Type	Spreadable Area (ha)	Previous Crop	Next Crop	Following Crop	Nitrogen		Phosphate			Potash			Magnesium	
						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)
Ffynnoncyff Farm															
Ffynnoncyff 4	Medium soils	2.70	Westerwold ryegrass (1 cut)	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	4	0	51 + 39	2-	71 + 140	72 + 138	2	0
Ffynnoncyff 5	Medium soils	4.50	Westerwold ryegrass (1 cut)	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	4	0	51 + 39	2-	71 + 140	72 + 138	2	0
Ffynnoncyff 6	Medium soils	4.50	Westerwold ryegrass (1 cut)	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	3	0 + 20	51 + 39	2-	71 + 140	72 + 138	2	0
Ffynnoncyff 7 (A, B & C)	Medium soils	11.10	Westerwold ryegrass (1 cut)	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	3	0 + 20	51 + 39	1	101 + 170	72 + 138	2	0
Pencefen Farm															
Pencefen 1	Medium soils	3.80	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	3	20	65	1	270	228	3	0
Pencefen 2	Medium soils	3.30	Stubble turnips	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	2	49 + 40	51 + 39	2-	71 + 140	72 + 138	2	0
Pencefen 3	Medium soils	2.20	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	1	95	65	2-	230	228	2	0
Pencefen 6	Medium soils	1.40	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	2	65	65	1	270	228	3	0
Pencefen 7	Medium soils	1.70	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	2	65	65	1	270	228	3	0
Pencefen 8	Medium soils	2.00	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	2	65	65	2-	230	228	2	0
Pencefen 9	Medium soils	1.80	Grass 2 cuts silage & grazing	Grass 2 cuts silage & grazing		Moderate	205	3	20	65	1	270	228	2	0
Blaenelfed Farm															
Blaenelfed 14	Medium soils	5.50	Fodder beet	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	1	79 + 70	51 + 39	2-	71 + 140	72 + 138	2	0
Blaenelfed 15	Medium soils	5.40	Grass 3 cuts silage	Spring barley	Westerwold ryegrass	1, Moderate	140 + 30	0	109 + 100	51 + 39	1	101 + 170	72 + 138	2	0
TOTAL		49.90													

Nutrient requirements based on:  
Spring barley 6t/ha with straw removed  
Westerwold ryegrass - autumn sown, winter grazing and 1 cut silage in spring 2022 (23t FW/ha silage cut), silage 25% DM, totalling 1.7kg/t P2O5 and 6.0kg/t K2O removed in offtake.  
Recommendations for autumn 2021 establishment. Expected DM yields of grass 5-7t/ha, good grass growth class  
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																		
Ffynnoncyff 4	**8	*23	*33	*4	125	337	**13	*67	*154	*13	107	289	**13	*64	*17	*7	53	143
Ffynnoncyff 5	**8	*23	*33	*4	125	563	**13	*67	*154	*13	107	482	**13	*64	*17	*7	53	239
Ffynnoncyff 6	**8	*23	*33		125	563	**13	*67	*154	*13	107	482	**13	*64	*17	*7	53	239
Ffynnoncyff 7 (A, B & C)	**8	*23	**27	*4	125	1388	**13	*67	**123	*13	107	1188	**13	*64	**13	*7	53	588
Pencefen Farm																		
Pencefen 1	**8	*23	**27	*4	125	475	**12	*65	**119	*13	103	391	**13	*64	**13	*7	53	201
Pencefen 2	**8	*23	*33	*4	125	412	**13	*67	*154	*13	107	353	**13	*64	*17	*7	53	175
Pencefen 3	**8	**14	*33	*4	125	275	**13	**40	*154	*13	107	235	**29	**87	*38	*16	119	262
Pencefen 6	**8	*23	**27	*4	125	175	**12	*65	**119	*13	103	144	**13	*64	**13	*7	53	74
Pencefen 7	**8	*23	**27	*4	125	212	**12	*65	**119	*13	103	175	**13	*64	**13	*7	53	90
Pencefen 8	**8	*23	*33	*4	125	250	**12	*65	*148	*13	103	206	**13	*64	*17	*7	53	106
Pencefen 9	**8	*23	**27	*4	125	225	**12	*65	**119	*13	103	185	**13	*64	**13	*7	53	95
Blaenelfed Farm																		
Blaenelfed 14	**8	**14	*33	*4	125	688	**13	**40	*154	*13	107	589	**29	**87	*38	*16	119	654
Blaenelfed 15	**8	**14	**27	*4	125	675	**13	**40	**123	*13	107	578	**29	**87	**30	*16	119	643
TOTAL						6238						5297						3509

Field Ref.	The Welsh Whisky Co. - Penderyn Distillery - spent wash					
	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
<b>Ffynnoncyff Farm</b>						
Ffynnoncyff 4	**6	*65	*64	*19	78	211
Ffynnoncyff 5	**6	*65	*64	*19	78	351
Ffynnoncyff 6	**6	*65	*64	*19	78	351
Ffynnoncyff 7 (A, B & C)	**6	*65	**58	*19	78	866
<b>Pencefen Farm</b>						
Pencefen 1	**6	*65	**58	*19	78	296
Pencefen 2	**6	*65	*64	*19	78	257
Pencefen 3	**6	**32	*64	*19	78	172
Pencefen 6	**6	*65	**58	*19	78	109
Pencefen 7	**6	*65	**58	*19	78	133
Pencefen 8	**6	*65	*64	*19	78	156
Pencefen 9					0	0
<b>Blaenelfed Farm</b>						
Blaenelfed 14	**6	**32	*64	*19	78	429
Blaenelfed 15	**6	**32	**58	*19	78	421
<b>TOTAL</b>						<b>3752</b>

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>2</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>2</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 'medium risk' following site checks on the proximity to surrounding protected areas (e.g. SSSIs) and groundwater source protection zones. On the basis of 'medium risk' the proposed operation will be subject to the generic 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 will 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:** 23/02/2021



# **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



STEPSIDE AGRI  
STEPSIDE FARM  
GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

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
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*



STEPSIDE AGRI  
STEPSIDE FARM  
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
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



STEPSIDE AGRI  
STEPSIDE FARM  
GWBERT ROAD  
CARDIGAN  
SA43 1PH

V850

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](mailto:enquiries@nrm.uk.com) [www.nrm.uk.com](http://www.nrm.uk.com)

# **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)
<b>Nitrogen (N)</b>	0.06	%	0.6	64	0.1	13
<b>Ammonium-N</b>	519	mg/kg	0.5	56		
<b>Phosphorus (P)</b>	275	mg/kg	0.3	29		
<b>Phosphate (P<sub>2</sub>O<sub>5</sub>)</b>			0.6	67	0.4	40
<b>Potassium (K)</b>	1199	mg/kg	1.2	128		
<b>Potash (K<sub>2</sub>O)</b>			1.4	154	1.2	123
<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	7		
<b>Sulphur (SO<sub>3</sub>)</b>			0.2	17	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	0.36	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



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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

Released by Myles Nicholson

Date 04/06/20



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STEPSIDE AGRI

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*

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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

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# **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)                    119.0  
Application rate (t/acre)                48.2  
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	143	0.2	29
Ammonium-N	109	mg/kg	0.1	13		
Phosphorus (P)	531	mg/kg	0.5	63		
Phosphate (P <sub>2</sub> O <sub>5</sub> )			1.2	145	0.7	87
Potassium (K)	265	mg/kg	0.3	32		
Potash (K <sub>2</sub> O)			0.3	38	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	38	0.1	8

### **POTENTIALLY TOXIC ELEMENTS**

	result	units	Rate		Limit
			(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	8.43	mg/kg	8.43	1.00	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

Released by *Linaben Patel*

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	

Released by *Linaben Patel*

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
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

Released by *Linaben Patel*

Date *02/09/20*

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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) 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

Released by Gina Graham

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

Released by Gina Graham

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

Released by *Gina Graham*

Date *11/05/20*

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Contact : STEPSIDE AGRI  
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Tel. : 01239 613 741

**V850**

Please quote the above code for all enquiries

Client : E WILLIAMS  
FFYNNONCYFF FARM  
FERWIG

Local Rep : D JAMES

Telephone :

Sample Matrix : Agricultural Soil

Laboratory Reference

Card Number 17288/18

Date Received 02-Oct-18

Date Reported 04-Oct-18

## SOIL ANALYSIS REPORT

Laboratory Sample Reference	Field Details		Soil pH	Index			mg/l (Available)		
	No.	Name or O.S. Reference with Cropping Details		P	K	Mg	P	K	Mg
75571/18	1								
75572/18	2								
75573/18	3	<b>FFYNNON 4</b> <i>No cropping details given</i>	<b>6.3</b>	<b>4</b>	<b>2-</b>	<b>2</b>	<b>59.2</b>	<b>180</b>	<b>85</b>
75574/18	4	<b>FFYNNON 5</b> <i>No cropping details given</i>	<b>6.2</b>	<b>4</b>	<b>2-</b>	<b>2</b>	<b>47.8</b>	<b>177</b>	<b>74</b>
75575/18	5	<b>FFYNNON 6</b> <i>No cropping details given</i>	<b>6.5</b>	<b>3</b>	<b>2-</b>	<b>2</b>	<b>30.8</b>	<b>134</b>	<b>68</b>
75576/18	6	<b>FFYNNON 7</b> <i>No cropping details given</i>	<b>6.5</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>26.6</b>	<b>117</b>	<b>65</b>

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 DEFRA Fertiliser Recommendations RB209 9th Edition.

Released by ..... **Darren Whitbread** ..... On behalf of NRM Ltd Date **04/10/18** .....

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# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

---

<b>Sampling Point No -</b>	149347	<b>Location -</b>	WD298 - FD 4 - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	10:50
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014812
<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	90	
357	ARSENIC (DRY WT)	MG/KG	16.9	
380	SELENIUM (DRY WT)	MG/KG	2.68	
384	MOLYBDENUM (DRY WT)	MG/KG	1.1	
4620	pH on soil/sludge	PH UNITS	5.9	
7772	Extract Phosphorous	MG/L	60	
7773	Extractable Potassiu	MG/L	220	
9271	CADMIUM TOTAL	MG/KG	0.3	
9272	CHROMIUM TOTAL	MG/KG	54.8	
9273	COPPER TOTAL	MG/KG	20.9	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	20.6	
9276	LEAD TOTAL	MG/KG	29.4	
9277	ZINC TOTAL	MG/KG	91	



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

---

<b>Sampling Point No -</b>	149348	<b>Location -</b>	WD298 - FD 5 - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	11:00
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014813
<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	66	
357	ARSENIC (DRY WT)	MG/KG	14.5	
380	SELENIUM (DRY WT)	MG/KG	2.5	
384	MOLYBDENUM (DRY WT)	MG/KG	0.7	
4620	pH on soil/sludge	PH UNITS	6.6	
7772	Extract Phosphorous	MG/L	40	
7773	Extractable Potassiu	MG/L	130	
9271	CADMIUM TOTAL	MG/KG	0.3	
9272	CHROMIUM TOTAL	MG/KG	49	
9273	COPPER TOTAL	MG/KG	18.5	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	20.6	
9276	LEAD TOTAL	MG/KG	23.4	
9277	ZINC TOTAL	MG/KG	86	



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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<b>Sampling Point No -</b>	149349	<b>Location -</b>	WD298 - FD 6 - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	11:10
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014814
<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	47	
357	ARSENIC (DRY WT)	MG/KG	13.1	
380	SELENIUM (DRY WT)	MG/KG	2.09	
384	MOLYBDENUM (DRY WT)	MG/KG	0.7	
4620	pH on soil/sludge	PH UNITS	6.6	
7772	Extract Phosphorous	MG/L	32	
7773	Extractable Potassiu	MG/L	190	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	45.6	
9273	COPPER TOTAL	MG/KG	17.1	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	20.6	
9276	LEAD TOTAL	MG/KG	22.4	
9277	ZINC TOTAL	MG/KG	81	



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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<b>Sampling Point No -</b>	149350	<b>Location -</b>	WD298 - FD 7A - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	11:20
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014815
<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	63	
357	ARSENIC (DRY WT)	MG/KG	15.1	
380	SELENIUM (DRY WT)	MG/KG	2.42	
384	MOLYBDENUM (DRY WT)	MG/KG	0.8	
4620	pH on soil/sludge	PH UNITS	6.4	
7772	Extract Phosphorous	MG/L	21	
7773	Extractable Potassiu	MG/L	190	
9271	CADMIUM TOTAL	MG/KG	0.3	
9272	CHROMIUM TOTAL	MG/KG	42.9	
9273	COPPER TOTAL	MG/KG	16.5	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	19.2	
9276	LEAD TOTAL	MG/KG	28	
9277	ZINC TOTAL	MG/KG	76	



# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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<b>Sampling Point No -</b>	149351	<b>Location -</b>	WD298 - FD 7B - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	11:30
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014816
<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	62	
357	ARSENIC (DRY WT)	MG/KG	13.9	
380	SELENIUM (DRY WT)	MG/KG	2.15	
384	MOLYBDENUM (DRY WT)	MG/KG	0.8	
4620	pH on soil/sludge	PH UNITS	6.5	
7772	Extract Phosphorous	MG/L	24	
7773	Extractable Potassiu	MG/L	200	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	39.8	
9273	COPPER TOTAL	MG/KG	15.7	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	19.1	
9276	LEAD TOTAL	MG/KG	25.7	
9277	ZINC TOTAL	MG/KG	76	





# Sample Analysis Report

MR WILLIAMS  
FFYNNONCYFF FARM  
FERWIG  
CARDIGAN

SA43 1QD

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<b>Sampling Point No -</b>	149352	<b>Location -</b>	WD298 - FD 7C - FFYNNONCYFF FARM
<b>Date Sampled -</b>	22/11/2016	<b>Time Taken -</b>	11:40
<b>Originator -</b>	ENVIRONMENTAL	<b>Purpose -</b>	7.5 / 15cm FIELD SOIL SAMPLE
<b>Laboratory -</b>	GLASLYN	<b>Lab Ref No -</b>	E 4014817
<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	64	
357	ARSENIC (DRY WT)	MG/KG	14.3	
380	SELENIUM (DRY WT)	MG/KG	2.42	
384	MOLYBDENUM (DRY WT)	MG/KG	0.8	
4620	pH on soil/sludge	PH UNITS	6.6	
7772	Extract Phosphorous	MG/L	22	
7773	Extractable Potassiu	MG/L	250	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	40.1	
9273	COPPER TOTAL	MG/KG	16.1	
9274	MERCURY TOTAL	MG/KG	LT 0.14	
9275	NICKEL TOTAL	MG/KG	19.7	
9276	LEAD TOTAL	MG/KG	26.7	
9277	ZINC TOTAL	MG/KG	79	



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 1

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN SOIL
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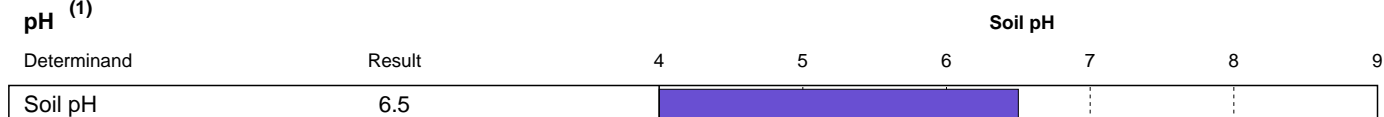
### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

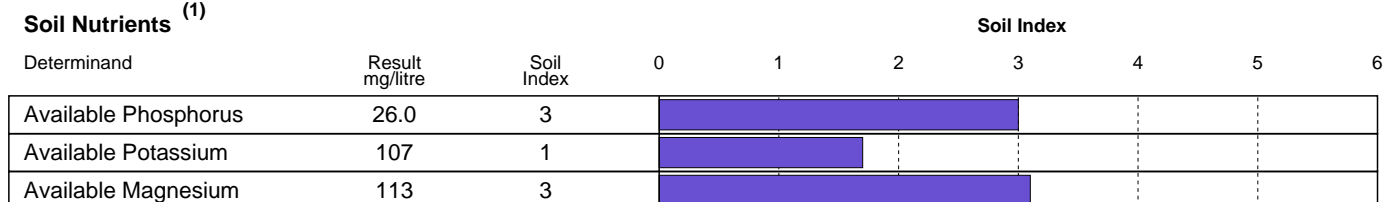
Report Number	25272
Sample Number	401602

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

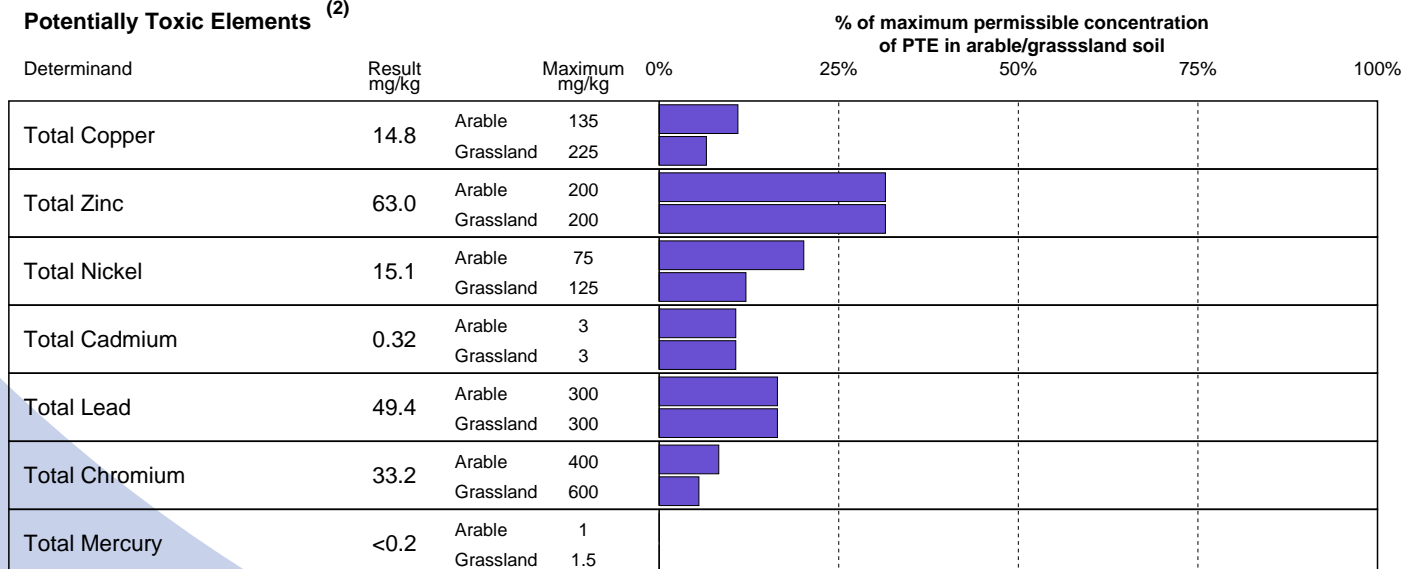
#### pH <sup>(1)</sup>



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



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



(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 **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 1

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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### Laboratory References

Report Number	25272
Sample Number	401602

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.38	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	20.1	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	62.2	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 2

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN SOIL
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### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

Report Number	25272
Sample Number	401603

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

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

Determinand	Result	4	5	6	7	8	9
Soil pH	6.2						

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

Determinand	Result mg/litre	Soil Index	0	1	2	3	4	5	6
Available Phosphorus	16.2	2							
Available Potassium	129	2-							
Available Magnesium	75.4	2							

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

Determinand	Result mg/kg	Maximum mg/kg	0%	25%	50%	75%	100%
Total Copper	12.3	Arable 135 Grassland 225					
Total Zinc	52.7	Arable 200 Grassland 200					
Total Nickel	16.6	Arable 75 Grassland 125					
Total Cadmium	0.13	Arable 3 Grassland 3					
Total Lead	34.5	Arable 300 Grassland 300					
Total Chromium	37.6	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 **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 2

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
--

### Laboratory References

Report Number	25272
Sample Number	401603

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.47	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	19.3	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	45.6	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 3

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	<b>V850</b>
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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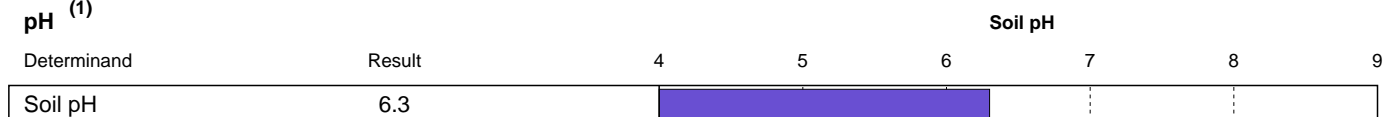
### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

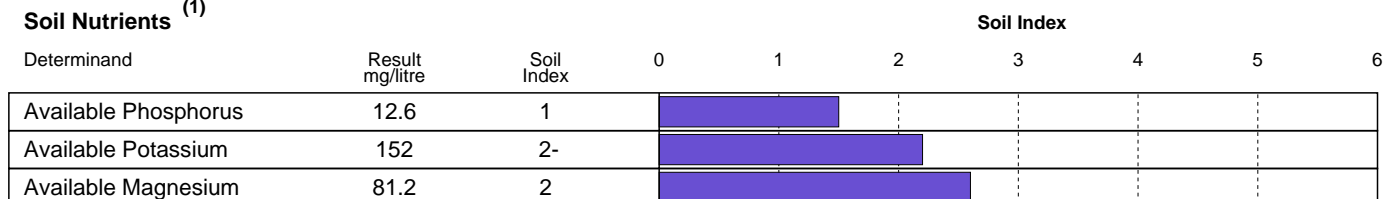
Report Number	25272
Sample Number	401604

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

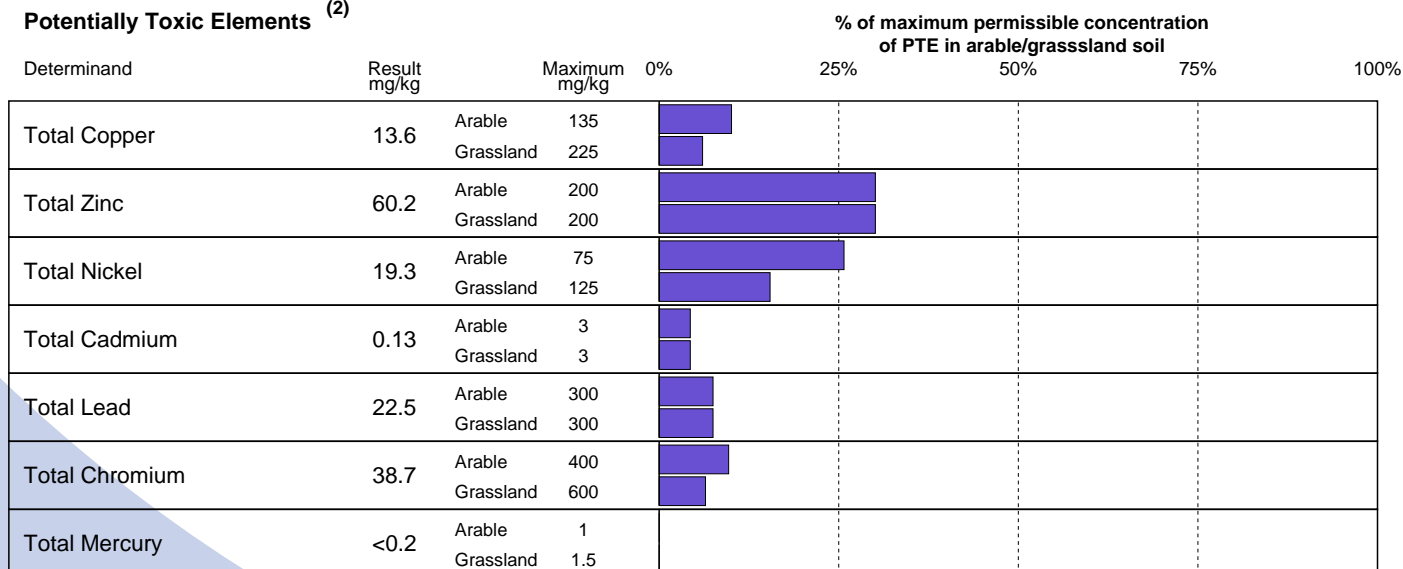
#### pH <sup>(1)</sup>



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



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



(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 **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 3

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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### Laboratory References

Report Number	25272
Sample Number	401604

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.48	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	18.2	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	52.6	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 6

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN SOIL
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### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

Report Number	25272
Sample Number	401607

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

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

Determinand	Result	4	5	6	7	8	9
Soil pH	5.8						

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

Determinand	Result mg/litre	Soil Index	0	1	2	3	4	5	6
Available Phosphorus	18.6	2							
Available Potassium	108	1							
Available Magnesium	114	3							

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

Determinand	Result mg/kg	Maximum mg/kg	0%	25%	50%	75%	100%
Total Copper	14.6	Arable 100 Grassland 170					
Total Zinc	69.1	Arable 200 Grassland 200					
Total Nickel	18.7	Arable 60 Grassland 100					
Total Cadmium	0.16	Arable 3 Grassland 3					
Total Lead	20.4	Arable 300 Grassland 300					
Total Chromium	37.7	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 **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 6

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
--

### Laboratory References

Report Number	25272
Sample Number	401607

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.41	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	17.0	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	47.1	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 7

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	<b>V850</b>
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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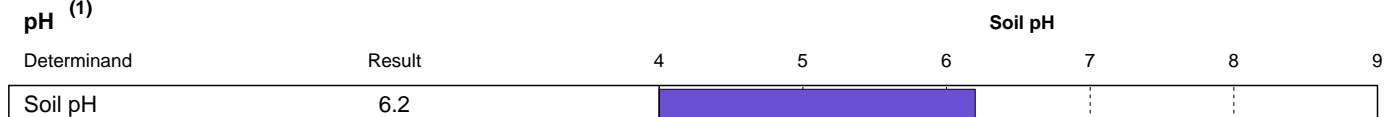
### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

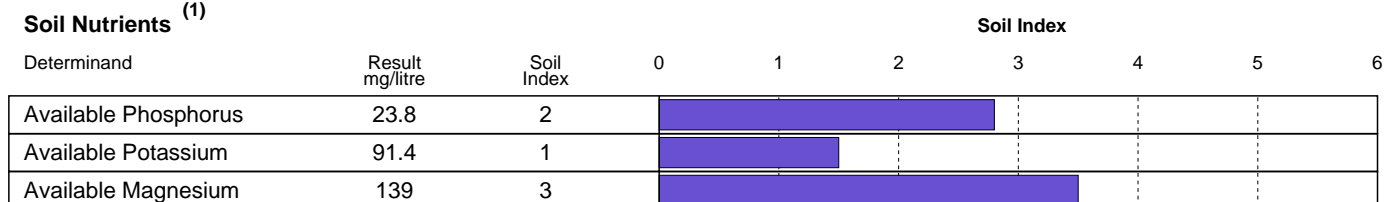
Report Number	25272
Sample Number	401608

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

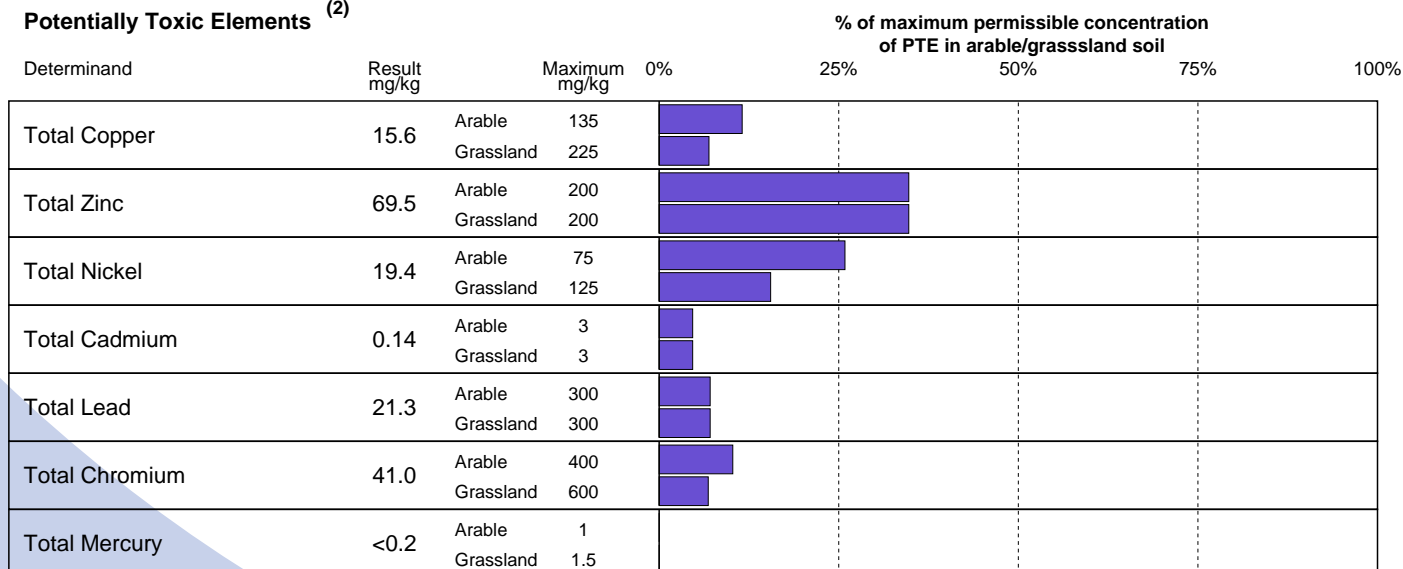
#### pH <sup>(1)</sup>



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



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



(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 **Darren Whitbread**

Date **05/09/18**

**NRM** Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS  
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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 7

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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### Laboratory References

Report Number	25272
Sample Number	401608

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.37	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	18.5	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	54.9	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 8

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN SOIL
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### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

Report Number	25272
Sample Number	401609

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

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

#### Soil pH

Determinand	Result	4	5	6	7	8	9
Soil pH	6.0						

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

#### Soil Index

Determinand	Result mg/litre	Soil Index	0	1	2	3	4	5	6
Available Phosphorus	23.6	2							
Available Potassium	127	2-							
Available Magnesium	85.1	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	14.8	Arable 100 Grassland 170					
Total Zinc	67.8	Arable 200 Grassland 200					
Total Nickel	21.3	Arable 60 Grassland 100					
Total Cadmium	0.13	Arable 3 Grassland 3					
Total Lead	23.2	Arable 300 Grassland 300					
Total Chromium	42.9	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 **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 8

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
--

### Laboratory References

Report Number	25272
Sample Number	401609

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.43	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	18.8	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	58.1	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 9

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	<b>V850</b>
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Please quote above code for all enquiries

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
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### Laboratory References

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

Report Number	25272
Sample Number	401610

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

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

Determinand	Result	Soil pH						
		4	5	6	7	8	9	
Soil pH	5.3							

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

Determinand	Result mg/litre	Soil Index	Soil Index						
			0	1	2	3	4	5	6
Available Phosphorus	40.4	3							
Available Potassium	118	1							
Available Magnesium	91.8	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	13.9	Arable 80							
		Grassland 138							
Total Zinc	59.0	Arable 200							
		Grassland 200							
Total Nickel	15.8	Arable 50							
		Grassland 80							
Total Cadmium	0.20	Arable 3							
		Grassland 3							
Total Lead	20.8	Arable 300							
		Grassland 300							
Total Chromium	38.4	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.

Released by **Darren Whitbread**

Date **05/09/18**

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## SOIL CHEMICAL ANALYSIS REPORT FOR FIELD - PENCEFEN 9

STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	V850
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Please quote above code for all enquiries

Date Received	29-AUG-2018
Date Reported	05-SEP-2018

MR MORGAN PENCEFEN FARM MWNT CARDIGAN  SOIL
--

### Laboratory References

Report Number	25272
Sample Number	401610

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

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

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 Molybdenum	<1	Arable	4					
		Grassland	4					
Total Selenium	0.52	Arable	3	<div></div>				
		Grassland	5	<div></div>				
Total Arsenic	19.5	Arable	50	<div></div>				
		Grassland	50	<div></div>				
Fluoride	70.5	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 ..... *Darren Whitbread* .....

Date ..... *05/09/18* .....



# ANALYTICAL REPORT

Report Number	71797-19	V850	STEPSIDE AGRI	Client	MR G JONES
Date Received	27-SEP-2019		STEPSIDE FARM		BLAENEIFED FARM
Date Reported	03-OCT-2019		GWBERT ROAD		LLANGOEDMOR
Project	SOIL		CARDIGAN		CARDIGAN
Reference	MR G JONES		SA43 1PH		
Order Number					

Laboratory Reference		SOIL454109	SOIL454110	SOIL454111	SOIL454112	SOIL454113	SOIL454114	SOIL454115	SOIL454116	SOIL454117	SOIL454118
Sample Reference		BLAENEIFED 11	BLAENEIFED 12	BLAENEIFED 13	BLAENEIFED 14	BLAENEIFED 15	BLAENEIFED 16	BLAENEIFED 17	BLAENEIFED 18	BLAENEIFED 19	BLAENEIFED 20
Determinand	Unit	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
pH water [1:2.5]						6.2	6.1				
Available Phosphorus (Index)	mg/l					9.6 (1)	7.4 (0)				
Available Potassium (Index)	mg/l					130 (2-)	71.3 (1)				
Available Magnesium (Index)	mg/l					76.4 (2)	69.3 (2)				
Total Copper	mg/kg					19.0	17.6				
Total Zinc	mg/kg					91.1	87.5				
Total Lead	mg/kg					35.0	35.1				
Total Arsenic	mg/kg					18.9	19.3				
Total Cadmium	mg/kg					0.12	0.12				
Total Nickel	mg/kg					27.1	25.3				
Total Chromium	mg/kg					57.1	56.2				
Total Mercury	mg/kg					<0.2	<0.2				
Total Selenium	mg/kg					0.43	0.46				
Total Molybdenum	mg/kg					<1	<1				
Fluoride	mg/kg					25.5	24.1				

Notes	
Analysis Notes	<p>The sample submitted was of adequate size to complete all analysis requested.</p> <p>The results as reported relate only to the item(s) submitted for testing.</p> <p>The results are presented on an as received basis unless otherwise stipulated.</p>
Document Control	<p><b>This test report shall not be reproduced, except in full, without the written approval of the laboratory.</b></p>





ANALYTICAL NOTES			
Report Number	71797-19	V850	Client MR G JONES
Date Received	27-SEP-2019	STEPSIDE AGRI	BLAENEIFED FARM
Date Reported	03-OCT-2019	STEPSIDE FARM	LLANGOEDMOR
Project	SOIL	GWBERT ROAD	CARDIGAN
Reference	MR G JONES	CARDIGAN	
Order Number		SA43 1PH	
Notes			
Reported by	<p><b><i>Linaben Patel</i></b> Natural Resource Management, a trading division of Cawood Scientific Ltd. Coopers Bridge, Braziers Lane, Bracknell, Berkshire, RG42 6NS Tel: 01344 886338 Fax: 01344 890972 email: enquiries@nrm.uk.com</p>		