

Manure Management Plan

For

Whittingham
Wern Fawr
Llangynhafal
Ruthin
Denbighshire
LL15 1RT

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1.0 Introduction

The manure management plan presented has been prepared to accompany a planning application for the erection of a 16,000 bird (egg laying) poultry unit. On the 27th of January 2021 the Water Resources (control of Agricultural Pollution) (Wales) Regulations 2021 were announced. The objective of this work is to outline the (Control of Agricultural Pollution) (Wales) Regulations 2021 requirements and how these will impact the business and what steps the business needs to take in terms of changes to the quantity and types of manures used, stocking rates or changes needed to comply with manure and slurry storage requirements.

2.0 Disclaimer

The accuracy of this report is dependent upon the information provided by the farming client. Responsibility for action taken lies with the client and it is the client's responsibility to keep up to date with any updates and / or changes to the regulations. The calculations and recommendations in this report are in accordance with the information and requirements provided in the Water Resources (control of Agricultural Pollution) (Wales) Regulations 2021 document as of the date on this report, Canllaw consultancy cannot be held liable for the report not being accurate in accordance to any future changes / updates to the regulations if these were to occur.

This report highlights some of the main areas of regulations and areas of section 4 are quoted from The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 Guidance for Farmers and Land Managers. However, this report does not include all the requirements of the regulations, and it is the client's responsibility to read and adhere to the full list of regulations that can be found at the following link: -

<https://www.gov.wales/water-resources-control-agricultural-pollution-wales-regulations-2021-guidancefarmers-and-land>

3.0 Farm Management Details

Wern Fawr farm is a productive, beef and sheep enterprise farmed and managed by Richard & Harri Whittingham and family situated near Llangynhafal, Ruthin. The grazable area extends to 186.92 hectares.

Stock consists of a herd of 180 store beef cattle typically reared for 12 months. The calves arrive at the farm when approximately 5 months old and go off the holding as fat cattle between 16 to 17 months old. The cattle are housed in loose housing on straw bedding throughout the winter months.

The other enterprise on the farm is a flock of 580 ewes and 15 tups with all the lambs finished and sold from 5 to 12 months old. Replacement rams are purchased during the Autumn sales and barren and old ewes sold as culls. Average stocking levels for the year are shown in table 1.

Table 1. Average livestock figures over a period of 12 months from the 1st January 2025 – 31st December 2025:

Type of livestock	Average number of stock	Days on farm
Beef Cattle		
From 3 months and less than 13 months	180	240
From 13 months and less than 25 months	180	120
Sheep		
Lambs from 6 months to 9 months	250	90
After lambing or tugging (weighing more than 60kg)	595 (580 ewes and 15 tups)	365

4.0 Farm manures

This section will evaluate the holding limit for the farm and will also evaluate the total nitrogen supplied by organic manures on the fields that receive most organic manures to assess if these application rates are within the 250 kg of N /ha limit from organic manures. This section will also evaluate current storage capacity and storage requirements.

Table 2. Current organic manure policy

1 cut silage ground	15/ha of farmyard manure applied in Spring or after harvest between July and August
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4.1 Holding limit

Across the holding you must not exceed a limit of 170kg of Nitrogen per hectare from all livestock manure, including direct excreta from animals on to the land and the spreading of manure applies to each 12-month period beginning with 1st of January for holdings or parts of holdings not previously situated within an NVZ.

Table 3. Shows the holding limit calculations for Wern Fawr

Current holding limit				
Total area of holding (ha)	Total Nitrogen capacity of holding from livestock manure (kg)	Total Nitrogen produced (kg)	Balance (kg)	Overall kg/ha
213.13	36232.1	14128	22104.1	66

The calculations above show that this farm currently is under the 170 kg of N /ha limit.

Future holding limit including proposed 16,000 free range hens				
Total area of holding (ha)	Total Nitrogen capacity of holding from livestock manure (kg)	Total Nitrogen produced (kg)	Balance (kg)	Overall kg/ha
213.13	36232.1	22928	13304.1	108

The calculations above show that with the proposed 16,000 free range egg unit the farm will be within the 170kg of N/ha limit.

4.2 Organic manure limit – 250 kg N / ha

A limit of 250kg of total Nitrogen per individual hectare is applied to the spreading of organic manure for any 12-month rolling period.

Table 4. Total nitrogen supplied from organic manures on one of the fields that would typically receive most organic manures within a season

Field use	Current organic manure applications	Total N loading from organic manures (kg/h)
2 cut silage fields	15 t / ha of FYM	90

Total		90
	Proposed organic manure applications	Total N loading from organic manures (kg/h)
2 cut silage fields	15 t / ha of FYM	90
	4.942 t/ ha of poultry manure	93.898
Total		183.898

The table above shows the application rates for the fields receiving most organic manure are well below the 250 kg N /ha limit.

4.3 When and where to spread organic manures and non-organic fertilizers

The following bullet points have been included as guidance about areas that manures and fertilizers should not be spread. During the visit to Wern Fawr these areas were identified and recorded on a risk map for the farm.

- Organic manures must not be spread within 50 meters of a borehole, spring or well or within 10 meters of surface water (6m if precision spreading)
- Poultry manure, slurry and liquid digested sewage sludge applied onto the surface of bare soil or stubble (but not sown) must be incorporated into the soil as soon as practical, and within 24 hours at the latest, unless precision spreading equipment is used.
- Any other organic manure applied to bare soil or stubble (other than organic manure spread as a mulch on sandy soil) must be incorporated into the soil as soon as practicable, and within 24 hours at the latest, if the land is within 50 meters of surface water and slopes in such a way that there may be run-off to that water.
- If you spread organic manure on your holding, you must produce and maintain a map of the holding. "Risk maps" must be produced and can be designed to enable you to comply with other measures as well as these Regulations. A copy must be available on request.
- Manufactured nitrogen fertilizer must not be spread within 2 meters of surface water.

5.0 Closed periods & storage of organic manures

This section is intended to highlight some of the main points in terms of closed periods and storage of slurry and farmyard manure.

5.1 Closed periods for spreading manufactured nitrogen fertilizer

Do not apply fertilizer that contains Nitrogen during closed periods: -

Grassland *	From 15 th September to 15 th January
Tillage land	From 1 st September to 15 th January

*Exemptions apply, notably 80kg/ha of N to grassland up to 31st of October split into two applications

5.2 Closed periods for organic manures (requirement from 1st August 2024)

These periods apply to manures with readily available nitrogen (over 30% available N) such as cattle slurry and poultry manure. **FYM is not included in the closed period.** The closed periods are shown in table 5.

Table 5. Closed periods for organic manures (over 30% available N) (Requirement from 1st August 2024)

Soil Type	Grassland	Tillage Land
Sandy or shallow soil	1 September to 31 December	1 August to 31 December
All other soils	15 October to 15 January	1 October to 31 January

5.3 Storage of farmyard manure

The farmyard manure at Wern Fawr is spread directly onto fields and stored in a covered manure store. For your information any liquid fraction after separation is defined as slurry and must be stored as required by the (Control of Agricultural Pollution) (Wales) Regulations 2021.

The following points highlight some of the regulations regarding the storage of organic manures:

- Must be stored in a covered building, in a vessel, or in a temporary field site if it can be stacked in a free-standing heap without slumping
- If stored on an impermeable surface any liquid arising from the store will be classed as slurry and will need to be collected
- Solid organic manure may be stored in temporary field heaps if it can be stacked in a free-standing heap without slumping, does not drain liquid from within the heap and meets the following requirements

Temporary field heaps must not be located:

- in a field liable to flooding or becoming waterlogged.
- within 50m of a spring, well or borehole.
- within 10m of surface water or a land drain (other than a sealed impermeable pipe); or
- The surface area should be as small as reasonably practicable to minimize leaching and run-off caused by rainfall.
- The temporary field heap must not be located in any single position for more than 12 consecutive months or in the same place as an earlier one constructed within the last two years. Topsoil must not be removed from the ground upon which a temporary field heap is to be constructed.

The solid manure produced by the proposed poultry unit will be removed every seven days and directly spread upon the extensive land available at Wern Fawr. In the worst case scenario, where continual bad weather results in no application of manure to the land, the business will use the existing manure store on farm.

5.4 Importing and exporting manures (for your information)

If in the future, if you bring livestock manure on to the holding you must record:

- a) the type and amount of livestock manure.
- b) the date it is brought onto the holding.
- c) the nitrogen content; and, if known.
- d) the name and address of the supplier within one week

If in the future, if you send livestock manure off your holding you must record:

- a) the type and amount of livestock manure.
- b) the date it is sent off the holding.
- c) the nitrogen content.
- d) the name and address of the recipient; and
- e) details of any contingency plan if the export is refused

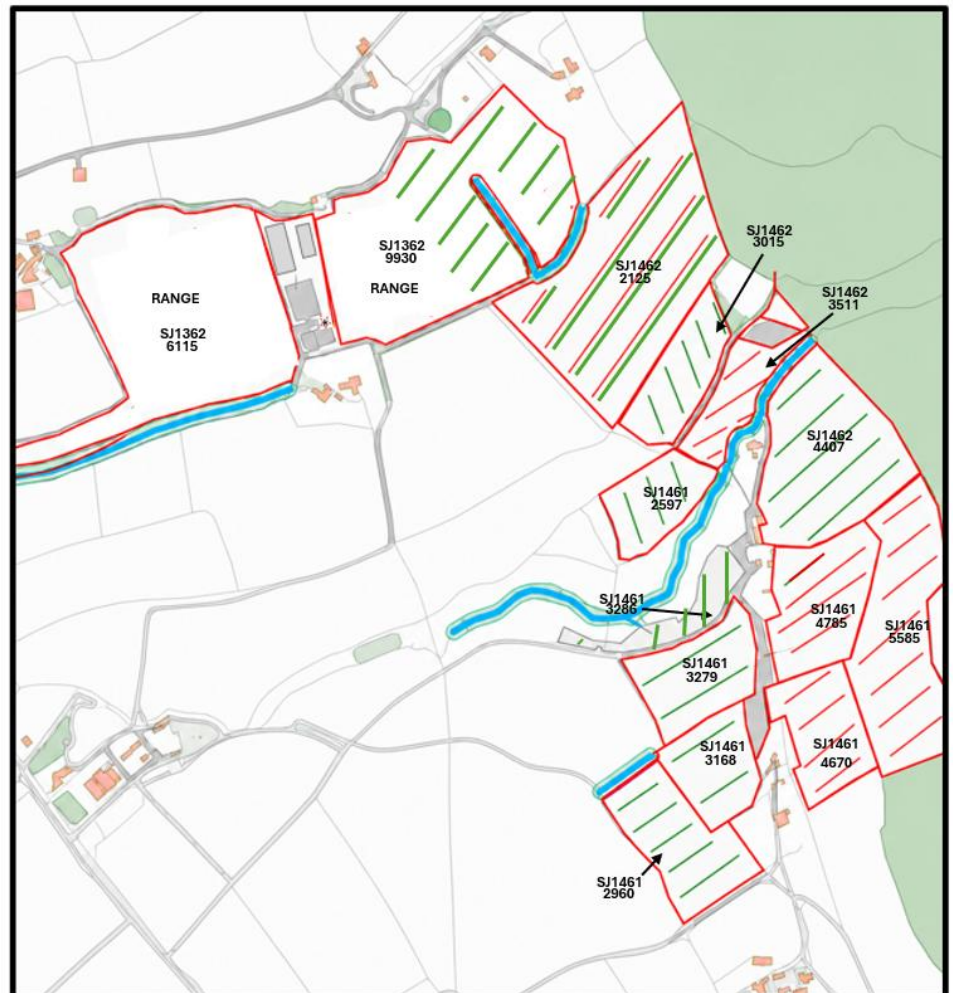
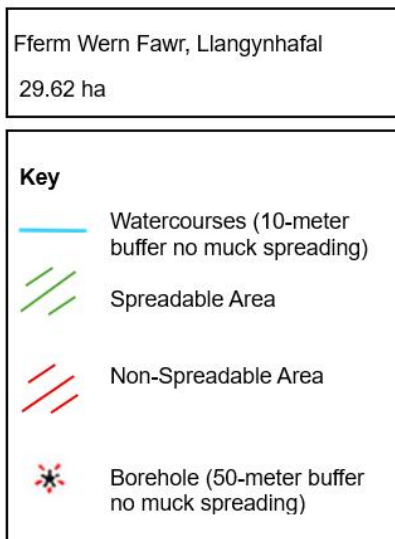
If the nitrogen content of the livestock manure brought on to the holding is not known you must ascertain it as soon as is reasonably practicable and record within one week in your farm records.

5.5 Spreadable land area

A risk map has been produced to identify no-spread areas and those areas of the farm that are suitable for application of manures for most of the year.

The map is colour coded:

- | | |
|-------|--|
| Red | No spread areas e.g yards; within 10 meters of a watercourse or 50 meters from a borehole or well used for drinking water. |
| Green | Land upon which manures are applied and which has not been subsoiled or mole ploughed within the past 12 months. |



Y Mynydd, Wern Fawr
22.06 ha

Key

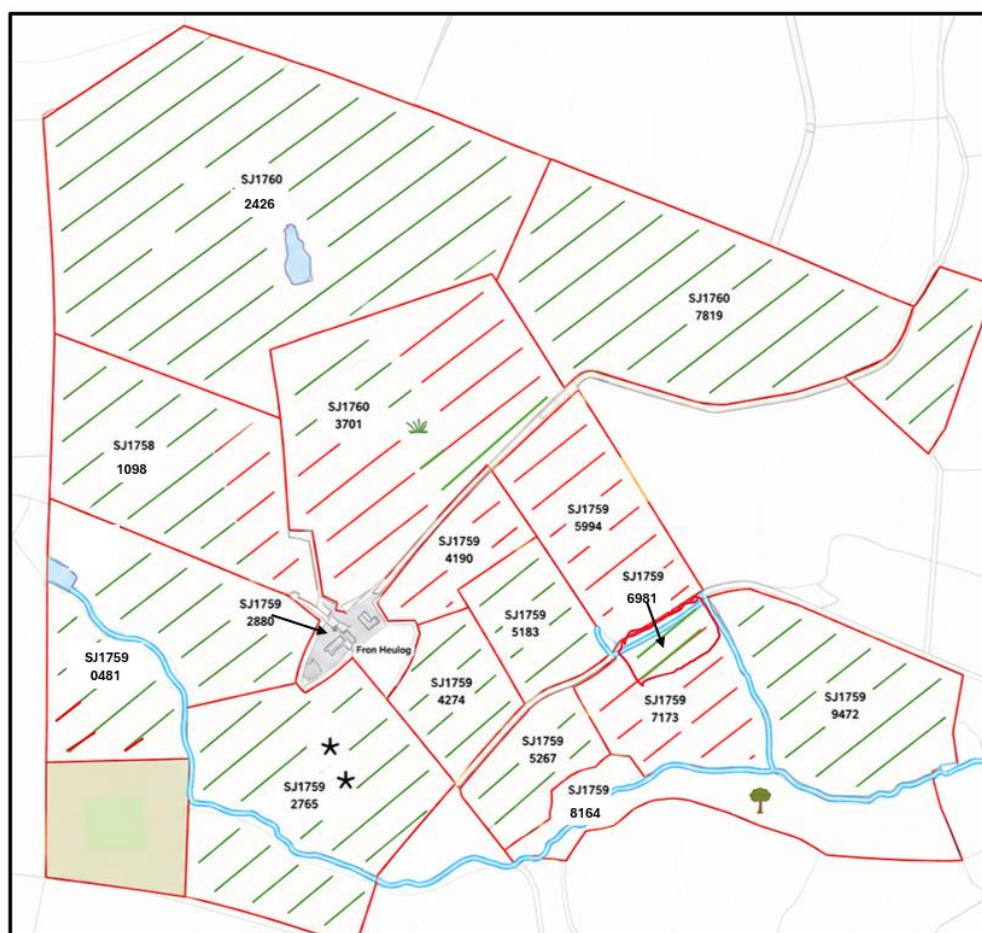
-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area



Bron Heulog, Llanferres
73.12 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area
-  Temporary field heaps



Llandymog
1.98 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area



The Bryn, Hirwaen
2.66 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area



Gwerydd, Llanharmon yn Ial

11.33 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area

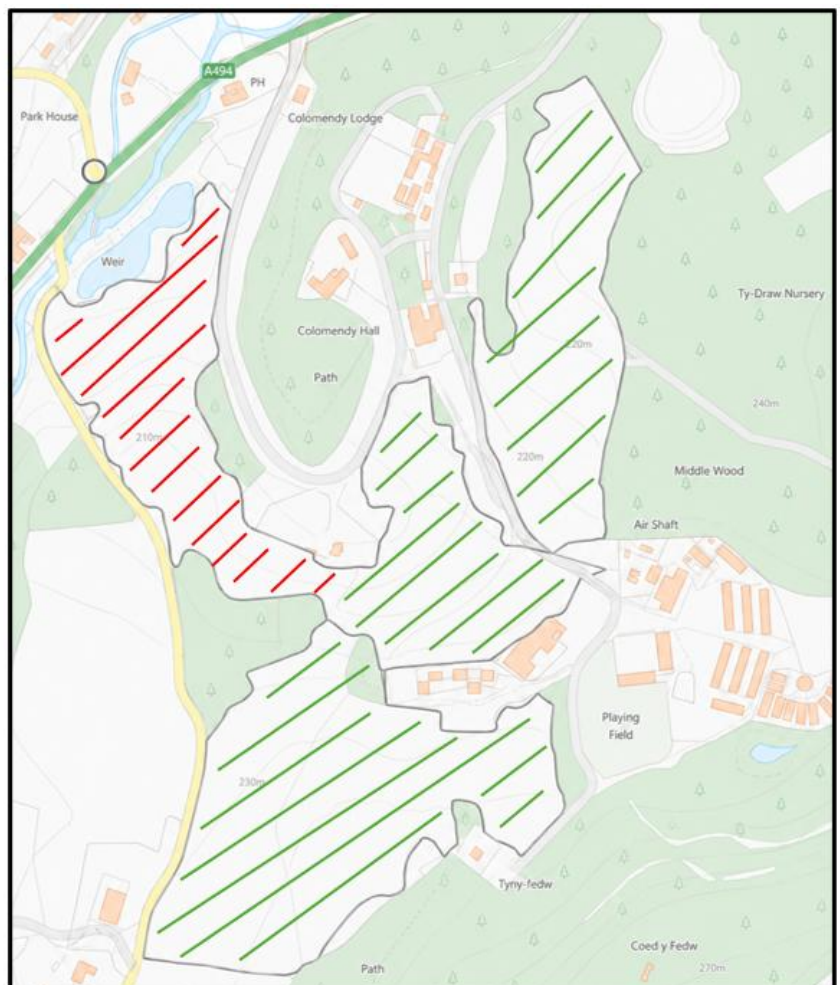


Colomendy, Loggerheads

14.49 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area



Cheaveley, Huntingdon

26.1 ha

Key

Watercourses (10-meter buffer no muck spreading)

Spreadable Area

Non-Spreadable Area



Chester Road, Eccleston

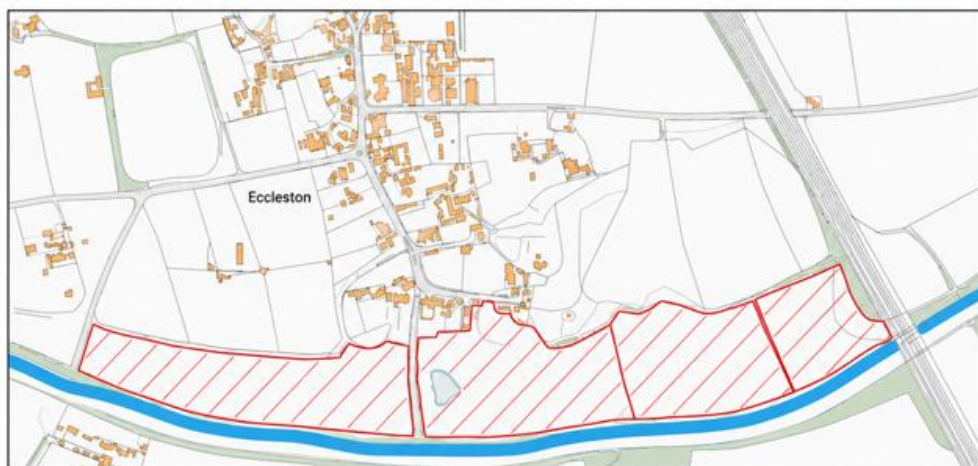
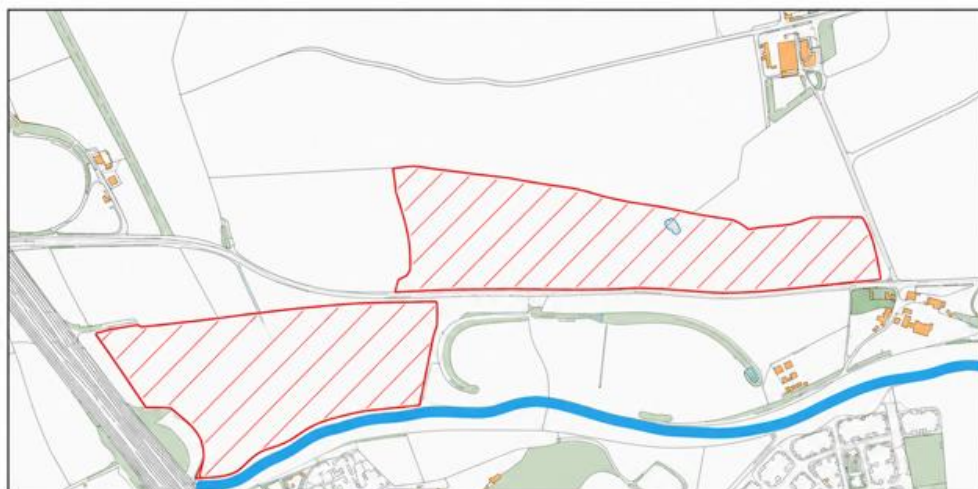
20.23 ha

Key

Watercourses (10-meter buffer no muck spreading)

Spreadable Area

Non-Spreadable Area



Pitts Cottage, Christleton
5.96 ha

Key

-  Watercourses (10-meter buffer no muck spreading)
-  Spreadable Area
-  Non-Spreadable Area



Table 6. Field sizes in hectares with spreadable areas

Field map reference and name of fields	Field size (Ha)	Spreadable area (Ha)	Non-Spreadable area (Ha)
SJ1362 9930 Wern	5.58	3.56	2.02
SJ1462 2125 Nant y Ne	4.99	4.99	
SJ1462 3015 Nant y Ne	1.31	1.31	
SJ1462 3511 Water Works	1.44	0.91	0.53
SJ1461 2597 Cae Boncyn	1.14	1.14	
SJ1462 4407 Bottom Ffridd	3.47	3.47	
SJ1461 4785 Ffridd Bach	1.29		1.29
SJ1461 5585 Top Ffridd	3.19		3.19
SJ1461 4670 Fron Goch Ffridd	1.47		1.47
SJ1461 3286 Field below house	0.65	0.65	
SJ1461 3279 Side of lane	1.37	1.37	
SJ1461 3168 Fron Goch	1.15	1.15	
SJ1461 2960 Fron Goch	1.7	1.7	
SJ1759 8164 Bluebells	3.41		3.41
SJ1759 9472 Bottom field Fron Heulog	4.61	4.08	0.53
SJ1759 7173 Garage	2.44		2.44
SJ1759 6981 Caravan	0.48	0.48	
SJ1759 5267 Cae Dan Lon	1.7	1.7	
SJ1759 4274 Cae Dan Ty	1.97	1.97	
SJ1759 5183 Fron Heulog Ffridds	1.83	1.83	
SJ1759 5994 Fron Heulog Ffridds	3.84	0	3.84
SJ1760 3701 The Gorse	7.5	3.75	3.75
SJ1759 2765 By the Wood	5.94	5.94	
SJ1759 0481 Sheep Dip	5.89	5.86	0.03
SJ1759 1098 Pointy Field	5.47	2.97	2.5
SJ1760 2426 Mountain	17.94	17.87	0.07
SJ1760 7819 Fron Hen	10.1	9.79	0.31
SJ1165 4068 Llandyrnog	1.98	1.98	
SJ1362 6115 Maes Blocyn	6.45	0	6.45
Colomendy, Loggerheads	14.49	11.91	2.58
Gwerydd, Llanarmon	11.33	9.47	1.86
Eccleston	26.1	0	26.1
Cheaveley	20.23	0	20.23
Christleton	5.96	0	5.96
The Bryn, Hirwaen	2.66	2.66	0
Y Mynydd, Wern Fawr	22.06	0	22.06
TOTAL	213.13	102.51	110.62

Total land farmed	213.13 Hectares
Total land available for spreading	102.51 Hectares
Total nitrogen produced on farm (including 16,000 hens)	22,928 kg N
Total nitrogen available per hectare (spread on spreadable area only)	223.67 kg N per Hectare

Good agricultural practice publications advise that a maximum of 250/kg a hectare of total nitrogen is applied to the ground through manures. The farm has over the capacity of land available for spreading given the current livestock numbers and proposed livestock numbers.

6.0 Considerations & action plan

Requirement	Current status	Action required
Holding limit	The current holding limit at Wern Fawr is 66kg/ha which is within the 170 kg/ha limit Proposed holding limit at Wern Fawr is 108kg/ha which is within the 170 kg/ha limit	• Wern Fawr is compliant with the holding limit regulation at present therefore no action is required. • Any future changes to livestock numbers or land area would influence the farms N holding limit and would therefore need to be taken into consideration.
250 kg /ha limit	The silage fields that receive most organic manure have an N loading of 90 kg of N/ha With proposed poultry manure application at 4.942 tonnes per/H an extra N loading of 93.898 kg of N/ha will be spread	Ensure organic manure applications do not exceed the 250kg limit. No changes need to be made to the business regarding this limit, however it is the client's responsibility to ensure that no more than 250 kg/ha of N is applied in organic manures.
Buffer zones	Identified on the risk maps	Ensure that: - • Manufactured nitrogen fertilizer is not spread within 2 meters of surface water. • Organic manures are not spread within 50 meters of a borehole, spring or well or within 10 meters of surface water (6m if precision spreading)
FYM Storage	Farmyard manure is stored in a covered store	If the FYM is stored in temporary field heaps the location of the field heaps should be recorded on your risk maps.
Closed periods for fertilizer applications	Not applicable to Wern Fawr	For your information, do not apply fertilizer that contains Nitrogen during closed periods: - -On grassland, from 15 September to 15 January -On tillage land 1 September to 15 January *Exemptions apply, notably 80kg/ha of N to grassland up to 31st of October split into two

		applications
Closed periods for organic manures with readily available nitrogen (over 30% available N)	Not applicable at present to Wern Fawr farm but will be applicable if new poultry unit is built	For your information, do not apply organic manures with readily available nitrogen (over 30% available N) such as cattle slurry and poultry manure during the closed periods: - 15 th of October to 15 th of January
Import/Export of Manure	Not applicable at present to Wern Fawr farm	The import/export of manure onto/off the holding must be recorded.
Paperwork & records		Complete & maintain up to date records and all necessary paperwork such as the nitrogen plan, diary, risk maps etc. Update the farm workbook annually before the end of March. All records must be stored for a minimum and of 5 years and must be made available for inspection if requested
All regulations		This report highlights some of the main areas of the regulations. However, the report does not include all requirements of the regulations, and it is the client's responsibility to read and adhere to the full list of regulations that can be found at the following link: - Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021: farm workbook GOV.WALES

