



## MANURE MANAGEMENT PLAN

**DEVELOPMENT:** Full Planning for the Erection of a Poultry Unit on Farm to accommodate 32,000 Free Range Chickens (Egg Production) together with associated Feed Bins and other associated works

**LOCATION:** Ty Hen Farm  
Beulah  
Newcastle Emlyn  
Ceredigion  
SA38 9QE

**CLIENT:** Mr Teifi Jenkins

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## 1. INTRODUCTION

The Manure Management Plan presented has been prepared to accompany the planning application of the farming business Mr Teifi Jenkins for the erection of a 32,000 bird Poultry Unit.

The Water Code states that, to reduce leaching losses from manures, you should not apply more than 250 kg per ha of total nitrogen in organic manures in any 12 months. However these are guideline levels only and if a FACTS trained advisor can show that the crop requirements are higher the rates can be increased. The farm is not within a Nitrate Vulnerable Zone.

The farm land of Mr Jenkins extends to 291 acres in total. Some areas are not suitable for the application of manure. Approximately 284 acres of spreadable ground is available to apply manure and slurry to, the majority of which is owner occupied, this is subject to land to be excluded to meet the requirements of the relevant regulations.

## 2. PROPOSED DEVELOPMENT AND FARM STOCKING

The proposed development is for an erection of a 32,000 bird free range poultry unit extension at Ty Hen, Beulah. Mr Jenkins is running 245 mixed cattle and 50 breeding ewes.

## 3. LAND AVAILABLE & HARVEST

We have analysed the Environment Agency flood plans for the land available for spreading of manure, and at appendix one of this report are found detailed maps annotating spreading areas.

Annually the farm business makes two cuts of silage. Taking cuts of silage off the farm land results in a high requirement for organic manures to restore the nutrients to the ground. Mr Jenkins annually make 80 acres of first cut silage 80 acres of second cut silage and 60 acres of round bales.

## 4. STORAGE OF MANURE

All solid manure produced within the poultry unit will be removed every four days and directly spread upon the extensive land available at Ty Hen. It is the intention of the Applicants not to store any manure on farm. In the worst case scenario, where continual bad weather results in no application of manure to the land, the Applicant will use the existing manure store on farm.



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## 5. MANURE APPLICATION

A Manure Management Plan has been produced at Appendix 1. In addition to identifying no-spread areas, high risk areas and those areas of the farm that are suitable for applications of manures for most of the year, the plan should also assess the amount of land available to take the manures produced. The map should be colour coded: -

Red = No-spread areas, e.g. yards; within 10 metres of a watercourse or 50 metres of a borehole, spring or well used for drinking or parlour washings. Or Areas not normally used for operational reasons but may be brought into use in the future.

Orange = Very High Risk. Steeply sloping fields of gradients 1 in 7 to 1 in 5; fields at risk of flooding; sandy or shallow soil over fissured rock; fields where drains have been installed during the past 12 months; poorly drained or waterlogged land; severely compacted soils, etc.

Yellow = Moderate Risk. Slopes between 1 in 14 to 1 in 8; land sloping towards watercourses; imperfectly drained land.

Hatched Dark Green = Lower Risk with Caution. This land may have manure applied to it but care must be taken prior to application of manure, that no flood warnings have been raised or that excessive rainfall is forecast within 48 hours of the proposed application.

Green = Lower Risk. Remainder of land upon which manures are applied and which has not been subsoiled or mole ploughed within the past 12 months.



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Field Number	Field Size (Ha)	Spreadable Area (Ha)	Non Spreadable Area (Ha)
SN2847 8047	1.59	1.59	
SN2847 6848	1.89	1.89	
SN2847 5740	1.04	1.04	
SN2847 4036	3.33	3.33	
SN2847 7527	2.96	2.96	
SN2847 5634	0.52		0.52
SN2847 5721	4.69	4.69	
SN2847 4323	1.10	1.10	
SN2847 3122	2.56	2.56	
SN2847 4210	2.23	2.23	
SN2847 1836	1.84	1.84	
SN2847 2129	0.22		0.22
SN2847 2025	0.18	0.18	
SN2847 0327	2.78	2.76	0.02
SN2847 0139	3.02	3.00	0.02
SN2747 7217	5.10	5.06	0.04
SN2747 9717	2.29	2.27	0.02
SN2847 0307	1.68	1.65	0.03
SN2847 1714	3.68	3.65	0.03
SN2746 7197	3.51	3.51	
SN2746 5497	4.70	4.70	
SN2746 6881	2.36	2.33	0.03
SN2747 8602	1.89	1.89	
SN2746 8887	2.99	2.99	
SN2746 9175	1.54	1.54	
SN2846 0974	1.78	1.78	0.02
SN2846 0293	2.80	2.78	
SN2846 1597	2.04	2.01	0.03
SN2846 1987	1.57	1.57	
SN2846 3196	1.99	1.96	0.03
SN2846 3076	3.33	3.33	
SN2846 3289	1.68		1.68
SN2846 4088	0.25	0.25	
SN2846 4483	0.17	0.17	
SN2846 6197	6.16	6.01	0.15
SN2847 7105	0.72	0.72	
SN2847 7711	1.16	1.16	
SN2846 7696	0.84	0.84	
SN2846 5580	3.02	3.02	
SN2846 6464	4.26	4.26	
SN2846 4359	5.91	5.91	
SN2846 7680	1.49	1.49	
SN2846 8072	0.99	0.99	



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SN2846 8363	1.26	1.26	
SN2846 6547	2.99	2.99	
SN3538 1942	1.67	1.67	
SN3538 1231	2.12	2.12	
SN3538 0921	1.61	1.61	
SN3437 8998	1.88	1.88	
SN3437 7793	2.75	2.75	
SN3437 6397	1.85	1.85	
SN3437 6585	1.83	1.83	
TOTAL	117.81	114.97	2.84

As a result of the above, 284.09 acres of land is available for the application of manure.

Manure will be applied to the 114.97 hectares of land in rotation throughout the year in line with the effective management of the range area through the rotation of birds when grazing.

40 acres (16.18 hectares) of ground is required for the Range area for the birds therefore the total available land is 98.79 hectares).



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### **Table 1 – Total N Calculation**

Ty Hen is not located within a Nitrate Vulnerable Zone, however in utilising the Nitrate Vulnerable Zone Wales Farmers Workbook, 2014 Edition the farm figures for nitrogen produced per annum are shown below. These figures are used as the most up to date Nitrogen figures available in Wales. The minimum amount of land needed for spreading slurry and manure is calculated in table 1 and is based upon the housing period of the livestock.

Suckler Cows at Ty Hen are housed for six months of the year and are then out at pasture. The Sheep at Ty Hen are housed for one month of the year. The Poultry shall be housed within the unit for the entire year but shall be grazing the poultry unit each day in rotation.

<b>Type of Livestock</b>	<b>Number of Stock</b>	<b>Total N produced by each unit of stock (kg/annum)</b>	<b>Total N produced per annum</b>	<b>Total N produced by type of livestock whilst housed</b>
Suckler Cows	55	60	3,300	1,650
Sheep	50	12	600	50
Poultry	32,000	0.55	17,600 (per fourteen month cycle)	15,085.71 (per annum)
<b>TOTAL</b>				<b>16,785.71</b>

Total Land Farmed	117.81 hectares
Total Land available for Spreading	98.79 hectares
Total Nutrients Available	24,697.50 N
Total Nitrogen produced on Farm	16,785.71 kg N
Difference between Nitrogen	7,911.79 N

There is enough land at Ty Hen for the application of manure therefore the nitrogen shall be applied to the farm land at Ty Hen in line with the Codes of Good Agricultural and Environmental Condition, Cross Compliance Regulations. Poultry manure will also be sold to a local Anaerobic Digestion Plant and local farmers. Poultry manure is in demand as an organic fertiliser.

The table above page shows the total nitrogen produced over the housing period.

Good agricultural practice publications advise that a maximum of 250/kg a hectare of total nitrogen is applied to the ground through manures. Mr Jenkins plans to spread most of the manure and slurry at Ty Hen.



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## 6.0 SPREADABLE AREA

The total land available for spreading manures is 114.97 hectares less 16.18 hectares for the range area. Manure shall be spread directly onto this land. If weather conditions do not permit, manure shall be stored in the existing manure store on farm.

## 7. MANURE STORAGE

### Existing Manure Store

Manure in the worst case can be stored in the existing manure/slurry store.

Manure will be stored in accordance with SSAFO (Water Resources Act (Control of Pollution) (Silage Slurry and Agricultural Fuel Oil) (Wales) Regulations 2010).

## 8. "DIRTY" YARD AREAS

### "Dirty" Yards

The "dirty" yard areas on the farm will be kept to a minimum. This is due to the manure all being contained in the poultry unit and removed every four days together with the hardcore area to the front of the poultry unit.

Ty Hen Poultry Unit will have a dirty water tank installed on farm. The waste water tank will be built in compliance with the SSAFO standards.

## 9. CONTINGENCY PLAN

In the event that manure cannot be applied to the land and that the manure store at Ty Hen is full the applicant shall sell the manure to the local Anaerobic Digestion Plant. Mr Jenkins has already spoken to the owners of the AD plant who would be willing to take the poultry manure from Ty Hen. Please see Appendix 2 of a letter to confirm this following on from this report.

All contaminated wash water will be stored in the dirty water tank upon farm.



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APPENDIX 1 – Farm Plans

APPENDIX 2 – Letter from Owner of Anaerobic Digester Plant



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