
MANURE MANAGEMENT PLAN

Erection of a 55,000 Bird Broiler
Unit
At
Llwyngwilym
Rhayader
Powys
LD6 5NS

Prepared for H & E Powell

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1. INTRODUCTION

The Manure Management Plan presented has been prepared to accompany the planning application of the farming business H & E Powell

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.

Approximately 510 acres of spreadable ground is available to apply manure and slurry that is within Messrs Powell's ownership.

2. PROPOSED DEVELOPMENT AND FARM STOCKING

The proposed development is for a 55,000 broiler bird unit at Llwyngwilym Farm, Rhayader. The farm already accommodates 24,000 free range broilers in mobile units.

Llwyngwilym also runs a large flock of ewes and a large herd of suckler cows and finishing cattle.

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.

4. STORAGE OF MANURE

All solid manure produced within the poultry unit will be removed at the end of the crop cycle and either directly spread upon the land at Llwyngwilym if the nutrients are required., stored in the existing manure store upon farm or transported to a local Anaerobic Digestion Plant.

5. MANURE APPLICATION

A Manure Management Plan has been produced at Appendix one. 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.

The applicant has assessed his proposals against the above guidance of the Welsh Government.

Field Number	Field Size (Ha)	Spreadable Area (Ha)	Non Spreadable Area (Ha)
SN9669 9917	1.81	1.81	
SN9768 5371	2.50	2.50	
SN9769 0945	1.31	0.33	0.98
SN9769 1254	0.44	0.00	0.44
SN9769 2185	0.46	0.46	
SN9769 2362	2.63	2.58	0.05
SN9769 2577	1.67	1.61	0.06
SN9769 2842	4.21	0.00	4.21
SN9769 4336	1.41	1.01	0.40
SN9769 4356	5.74	5.66	0.08
SN9769 4379	4.05	3.88	0.17
SN9769 4921	1.55	1.45	0.10
SN9769 5396	6.87	6.83	0.04
SN9769 5542	2.48	2.41	0.07
SN9769 6705	0.02	0.00	0.02
SN9769 6723	4.03	3.98	0.05
SN9769 7253	5.14	4.96	0.18
SN9769 7873	4.34	4.32	0.02
SN9769 7934	2.96	2.96	
SN9769 8011	2.82	2.80	0.02
SN9769 8589	4.95	4.83	0.12
SN9769 9053	4.79	4.77	0.02
SN9769 9418	1.44	1.30	0.14
SN9769 9834	0.73	0.69	0.04
SN9769 9966	0.60	0.30	0.30
SN9770 7151	3.87	3.87	
SN9770 8003	6.40	6.38	0.02
SN9770 8039	5.46	5.09	0.37
SN9770 8616	5.22	5.09	0.13
SN9770 9541	2.80	2.72	0.08
SN9771 0897	0.55	0.55	
SN9771 1698	1.43	1.43	
SN9771 2289	0.31	0.00	0.31
SN9771 3093	1.09	1.04	0.05
SN9771 3994	0.82	0.82	
SN9771 4695	1.04	1.04	
SN9772 1913	1.83	1.63	0.20
SN9772 2502	0.76	0.76	
SN9772 2817	1.41	1.08	0.33
SN9772 3519	1.58	1.33	0.25
SN9772 3606	0.72	0.72	
SN9772 4416	2.70	2.70	

SN9868 2592	1.69	1.69	
SN9869 0142	0.34	0.34	
SN9869 0277	1.69	1.69	
SN9869 0358	0.55	0.00	0.55
SN9869 0504	5.21	4.99	0.22
SN9869 0929	0.28	0.00	0.28
SN9869 1047	1.67	1.64	0.03
SN9869 1368	2.83	2.83	
SN9869 1736	1.95	1.95	
SN9869 1787	5.47	5.47	
SN9869 1821	4.52	4.51	0.01
SN9869 2077	0.31	0.00	0.31
SN9869 2808	2.69	2.69	
SN9869 3173	0.35	0.00	0.35
SN9869 3299	3.96	3.84	0.12
SN9869 3601	1.56	1.56	
SN9869 4683	3.95	3.88	0.07
SN9869 4960	6.16	6.14	0.02
SN9869 5946	0.74	0.00	0.74
SN9869 6091	0.72	0.72	
SN9869 6176	2.19	1.99	0.20
SN9869 6199	0.68	0.00	0.68
SN9869 6768	1.12	1.04	0.08
SN9869 6787	1.95	0.00	1.95
SN9869 6858	1.00	0.99	0.01
SN9869 7345	2.70	2.43	0.25
SN9869 7372	0.27	0.27	
SN9869 7661	0.25	0.00	0.25
SN9869 7791	2.06	2.06	
SN9869 7953	1.44	1.43	0.05
SN9869 7975	0.23	0.00	0.23
SN9869 8170	0.29	0.29	
SN9869 8363	0.67	0.67	
SN9869 9271	3.48	3.48	
SN9869 9753	3.62	3.62	
SN9870 0163	5.34	4.28	1.06
SN9870 0229	2.02	2.00	0.02
SN9870 0843	0.14	0.00	0.14
SN9870 1070	0.25	0.00	0.25
SN9870 1108	4.37	3.67	0.70
SN9870 1143	0.14	0.00	0.14
SN9870 1431	2.38	2.36	0.02
SN9870 2441	8.27	7.55	0.72
SN9870 3117	3.28	3.22	0.06
SN9870 4416	0.37	0.00	0.37
SN9870 4631	0.44	0.00	0.44
SN9870 4908	0.66	0.66	
SN9870 5500	0.91	0.00	0.91
SN9870 5514	1.43	1.43	
SN9870 6504	1.03	0.00	1.03
SN9969 0341	1.29	1.16	0.13
SN9969 1061	1.14	1.14	

SN9969 1174	2.56	2.50	0.06
SN9969 1547	1.93	1.93	
SN9969 1687	1.87	1.87	
SN9969 2677	2.06	1.90	0.16
SN9969 2757	3.26	3.24	0.02
SN9969 4077	1.16	1.16	
SN9969 4363	3.95	3.92	0.03
SN9969 4547	2.63	2.62	0.02
TOTAL	228.41	206.51	21.93

As a result of the above, 510.30 acres of land is available for the application of manure.

The above land shows all of the land owned by H & E Powell upon which they spread manure. 21.93 hectares of ground has been removed as is not spread upon as in close proximity to watercourses or other permanent features or is unsafe to apply manure to as a result of topography.

Llwyngwilym is currently contracted in Glasitr Entry and Advanced agreements. Messrs Powell have recently renewed their Glastir Advanced Contract until 2021 and as part of their agreement, they have allocated field numbers SN9870 5500 and SN9870 6504 as Option Code 15 – grazed pasture with no inputs therefore we have amended the Manure Management Plan enclosed in Appendix 1 to prevent the input of manure on these fields, this has also been included in the table above. In regards to the Glastir Entry Contract, this is due to expire on 31st December 2018 and will not be renewed. The anticipated period for obtaining permission and constructing the proposed unit will likely surpass December 2018 therefore the options within the contract have not been included within the Manure Management Plan and the table above.

The minimum amount of land needed for spreading slurry and manure is calculated in table 1 below detailing the nitrogen available and nitrogen produced:

Table 1 – Total N Calculation

Llwyngwilym 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.

The Sheep at Llwyngwilym are not housed and are lambed out. The suckler cows and finishing cattle are housed for 6 months of the year. The Poultry shall be housed within the unit for the entire year.

Type of Livestock	Number of Stock	Total N produced by each unit of stock (kg/annum)	Total N produced per annum	Total N produced by type of livestock whilst housed
Suckler Cows	50	60	3000	1,500
Finishing Cattle	300	60	18,000	9,000
Poultry	55,000	0.55	30,250	30,250
TOTAL				40,750

Total Land Farmed (excluding range area)	228.41 hectares
Total Land available for Spreading	206.51 hectares
Total Nutrients Available	51,627.50 kg N
Total Nitrogen produced on Farm	40,750 kg N
Difference between Nitrogen	10,877.50 N

There is enough land for the application of manure therefore some of the nitrogen produced on farm shall be applied to the farm land at Llwyngwilym in line with the Codes of Good Agricultural and Environmental Condition, Cross Compliance Regulations. Manure will also be sold to local farmers and an Anaerobic Digestion plant.

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.

6.0 SPREADABLE AREA

The total land available for spreading manures is 206.51 hectares. Manure shall be spread directly onto this land or the existing manure store.

7. MANURE STORAGE

Existing Manure Store

Manure will be stored in the existing manure store upon farm.

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 after every crop cycle together with the hardcore area to the front of the poultry unit. Messrs Powell will require all areas to be clean outside the building as they will be producing food products within the unit.

The Poultry proposal at the Llwyngwilym will incorporate the installation of a dirty water tank adjacent to the poultry unit. Llwyngwilym Broiler 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 Llwyngwilym is full the applicant shall sell the manure to the local Anaerobic Digestion Plant. Messrs Powell has already spoken to the owners of the AD plant who would be willing to take the poultry manure from Llwyngwilym.

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

**IN THE EVENT OF ANY
POLLUTION INCIDENT
OR TO
PREVENT POTENTIAL POLLUTION
CALL
NATURAL RESOURCES WALES
03000 653 000**

APPENDIX 1 – Farm Plans