

# MANURE MANAGEMENT PLAN

DEVELOPMENT: Full Planning for the Erection of a Poultry Unit on Farm (extension) to

accommodate 32,000 Free Range Chickens (Egg Production) together with

associated Feed Bins, Internal Farm Access and Associated Works

**LOCATION:** 

Wern Llanyre

**Llandrindod Wells** 

Powys LD1 6EE

CLIENT: AJT POWELL

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July 2020



## 1. INTRODUCTION

The Manure Management Plan presented has been prepared to accompany the planning application of the farming business AJT POWELL 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.

Approximately 340 of spreadable ground is available to apply manure and slurry to. 220 acres of land is owner occupied and a further 200 acres of land is rented on annual grazing licences, and this has been held for the past ten years.

The applicants

## 2. PROPOSED DEVELOPMENT AND FARM STOCKING

The proposed development is for an erection of a 32,000 bird free range poultry unit at Wern. Mr Powell and his family also run a flock of commercial breeding ewes and herd of Suckler Cows.

25 Suckler Cows plus calves 600 Sheep 32,000 Birds plus a further 32,000 Birds

#### 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 one cut of silage. Taking a cut of silage off the farm land results in a high requirement for organic manures to restore the nutrients to the ground. 90 acres of harvest are annually made.

## 4. STORAGE OF MANURE

All solid manure produced within the poultry unit will be removed every four days and either directly spread upon the extensive land available at Wern or stored in the manure store upon farm that has recently secured planning consent and has six months storage capacity for manure from 64,000 birds.

## 5. MANURE APPLICATION

A Manure Management Plan has been produced at Appendix one. In addition to identifying nospread 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.
- Very High Risk. Steeply sloping fields of gradients 1 in 7 to 1 in 5; fields at risk of Orange = flooding; sandy or shallow soil over fissured rock; fields were 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.
- Lower Risk. Remainder of land upon which manures are applied and which has not Green = 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)         Eligible Area (Ha)         Non Eligible Area           SO0263 0929         2.30         2.30           SO0263 1219         2.58         2.58           SO0263 1408         2.81         2.81           SO0263 3328         4.27         4.27           SO0263 3613         3.20         3.20           SO0263 5530         3.96         3.70         0.26           SO0263 5914         2.45         2.37         0.08           SO0263 7420         2.39         2.39 RANGE           SO0263 7728         1.70         1.70 RANGE           SO0263 8041         1.01         0.51         0.50 RANGE           SO0263 8513         1.59         1.59 RANGE           SO0263 8661         3.39         3.20         0.19           SO0263 9453         1.35         0.675         0.675 RANGE           SO0263 9733         0.21         0.21 RANGE
SO0263 1408       2.81       2.81         SO0263 3328       4.27       4.27         SO0263 3613       3.20       3.20         SO0263 5530       3.96       3.70       0.26         SO0263 5914       2.45       2.37       0.08         SO0263 7420       2.39       2.39 RANGE         SO0263 7728       1.70       1.70 RANGE         SO0263 8041       1.01       0.51       0.50 RANGE         SO0263 8334       2.11       2.11 RANGE         SO0263 8513       1.59       1.59 RANGE         SO0263 8661       3.39       3.20       0.19         SO0263 8821       0.25       0.25         SO0263 9453       1.35       0.675       0.675 RANGE
SO0263 3328       4.27         SO0263 3613       3.20         SO0263 5530       3.96         SO0263 5914       2.45         SO0263 7420       2.39         SO0263 7728       1.70         SO0263 8041       1.01         SO0263 8334       2.11         SO0263 8513       1.59         SO0263 8661       3.39         SO0263 8821       0.25         SO0263 9453       1.35         0.675 RANGE
SO0263 3613       3.20         SO0263 5530       3.96         SO0263 5914       2.45         SO0263 7420       2.39         SO0263 7728       1.70         SO0263 8041       1.01         SO0263 8334       2.11         SO0263 8513       1.59         SO0263 8661       3.39         SO0263 8821       0.25         SO0263 9453       1.35         0.675       0.675 RANGE
SO0263 5530       3.96       3.70       0.26         SO0263 5914       2.45       2.37       0.08         SO0263 7420       2.39       2.39 RANGE         SO0263 7728       1.70       1.70 RANGE         SO0263 8041       1.01       0.51       0.50 RANGE         SO0263 8334       2.11       2.11 RANGE         SO0263 8513       1.59       1.59 RANGE         SO0263 8661       3.39       3.20       0.19         SO0263 8821       0.25       0.25         SO0263 9453       1.35       0.675       0.675 RANGE
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SO0263 8334       2.11       2.11 RANGE         SO0263 8513       1.59       1.59 RANGE         SO0263 8661       3.39       3.20       0.19         SO0263 8821       0.25       0.25         SO0263 9453       1.35       0.675       0.675 RANGE
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SO0263 8661       3.39       3.20       0.19         SO0263 8821       0.25       0.25         SO0263 9453       1.35       0.675       0.675 RANGE
SO0263 8821         0.25         0.25           SO0263 9453         1.35         0.675         0.675 RANGE
SO0263 9453 1.35 0.675 0.675 RANGE
SO0263 9733 0.21 0.21 RANGE
SO0263 9741 0.87 0.87 0.87 RANGE
SO0363 0123 2.15 2.15 RANGE
SO0363 0337 1.30 1.30
SO0363 0745 1.04 0.83 0.21
SO0363 0859 1.98 1.98 RANGE
SO0363 1236 1.57 1.57 RANGE
SO0363 1252 1.20 1.20
SO0363 1826 1.74 1.74 RANGE
SO0363 2249 0.55 0.52 0.03
SO0363 2333 0.27 0.27
SO0363 2340 0.55 0.55 RANGE
SO0363 2561 1.74 1.74 ANGE
SO0363 2818 1.47 1.47 RANGE
SO0363 2847 0.65 0.65 RANGE
SO0363 3128 0.86 0.86 0.86 RANGE
SO0363 3454 0.72 0.72 RANGE
SO0363 3640 2.31 2.31 RANGE
SO0363 4031 0.41 0.39 0.02
SO0363 4064 0.91 0.91 RANGE
SO0363 4423 1.42 1.42 RANGE
SO0363 4452 1.63 1.63 RANGE
SO0363 5547 1.74 1.74 ANGE
SO0465 5817 3.23 3.23
SO0465 6831 2.01 2.01
SO0465 7119 0.18 0.18
SO0465 8025 2.33 2.33
SO0465 8101 2.17 0.97 1.20
SO0465 8715 1.39 1.33 0.06
SO0465 9426 1.32 1.32
SO0565 0822 1.63 1.63



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SO0565 5361 0.68	0.68	
SO0565 5434 1.08	1.08	
SO0565 5449 0.92	0.92	
SO0565 5940 0.27	0.27	
SO0565 6119 0.80	0.80	
SO0565 6143 0.75	0.75	
SO0565 6177 1.79	1.79	
SO0565 6332 1.38	1.38	
SO0565 6364 1.39	1.39	
SO0565 6555 0.75	0.75	
SO0565 7277 1.38	1.38	
SO0565 7464 1.19	1.19	
SO0560 0984 2.46	2.46	
SO0560 1877 2.50	2.40	0.10
SO0560 2127 2.12	2.11	0.01
SO0560 3181 0.17		0.17
SO0560 3639 3.12	3.12	
SO0560 4282 1.52	1.52	
SO0560 4348 0.15	0.15	
SO0560 4615 2.60	2.60	
SO0560 4627 1.67	1.67	
SO0560 5138 2.05	2.05	
SO0560 5677 1.12	1.12	
SO0560 5927 2.00	2.00	
SO0560 6545 1.83	1.83	
SO0560 1718 0.72	0.72	
SO1667 2806 4.62	4.59	0.03
SO1667 5022 8.87	8.84	0.03
SO0460 9865 1.69	1.69	
TOTAL 128.5	91.425	37.075

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

Wern 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 Wern are housed for six months of the year and are then out at pasture. The Sheep are housed for two months 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.

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	25	83	2,075	1,037.50
Sheep	600	12	7,200	1,200
Poultry	64,000	0.55	35,200 (per fourteen month cycle)	30,171 (per annum)
TOTAL				32,408.50

Total Land Farmed 146.85 hectares
Total Land available for Spreading 91.425 hectares
Total Nutrients Available 22,856.25 kg N
Total Nitrogen produced on Farm 32,408.50 N
Difference between Nitrogen -9,552.25

There is not enough land at Wern for the application of manure therefore all of the nitrogen shall be applied to the farm land at Wern in line with the Codes of Good Agricultural and Environmental Condition, Cross Compliance Regulations and the excess manure will be sold to local farmers, or applied to the farm land that is rented by AJT Powell on an annual basis and has been for many years.

Phone

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 91.425 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 manure store on farm that has recently received planning consent and has the capacity for six months storage of poultry manure.

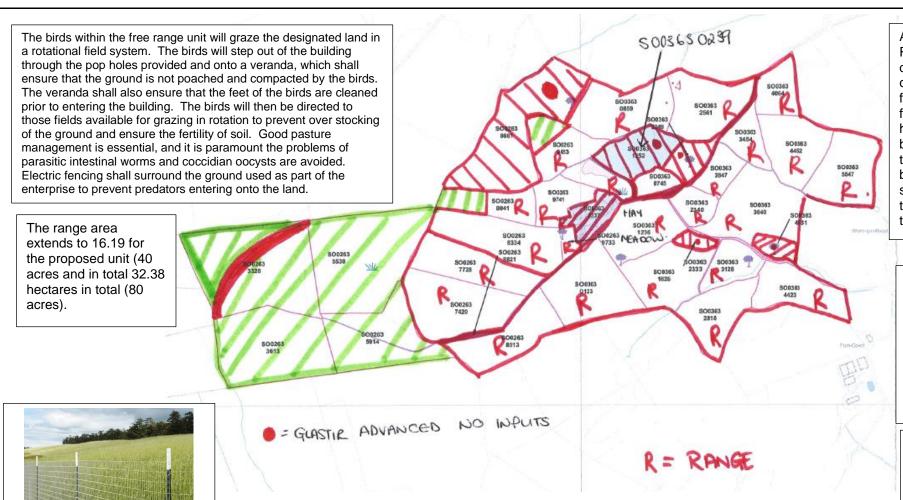
## 8. "DIRTY" YARD AREAS

## "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. 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 Wern will incorporate the installation of a dirty water tank adjacent to the poultry unit.





All hedgerows within the Range area will be double fenced with chicken stock proof fencing. The range area field boundaries are 90% hedgerows and the business wish to protect them. The hedgerow boundaries also act as shelter for the birds therefore it is important to protect them.

All watercourses will be fenced out using chicken fencing to prevent the birds damaging the watercourses and bank structures. Also, to prevent pollution of the watercourse.

Land drains will be placed where the ranging area slopes towards any sensitive water receptor to make sure that no sediment goes into the water and that it remains in the field.



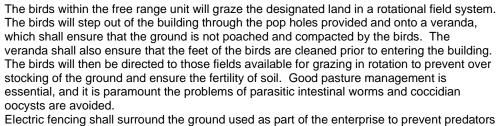
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JOB:	Proposed Free Range Poultry Extension
CLIENT:	AJT Powell
TITLE:	Manure Management Plan
LOCATION:	Wern, Llanyre, Llandrindod Wells, Powys
SCALE:	Identification Purposes Only
DATE:	Jul-20
DRAWING NO:	GEJ/POWE/MMP 1
DRAWN BY:	GEJ



Electric fencing shall surround the ground used as part of the enterprise to prevent predators entering onto the land.

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All hedgerows within the Range area will be double fenced with chicken stock proof fencing. The range area field boundaries are 90% hedgerows and the business wish to protect them. The hedgerow boundaries also act as shelter for the birds therefore it is important to protect them.

All watercourses will be fenced out using chicken fencing to prevent the birds damaging the watercourses and bank structures. Also, to prevent pollution of the watercourse.

Land drains will be placed where the ranging area slopes towards any sensitive water receptor to make sure that no sediment goes into the water and that it remains in the field.



HAYMEADOW



The range area

acres).

extends to 16.19 for

hectares in total (80

the proposed unit (40

acres and in total 32.38

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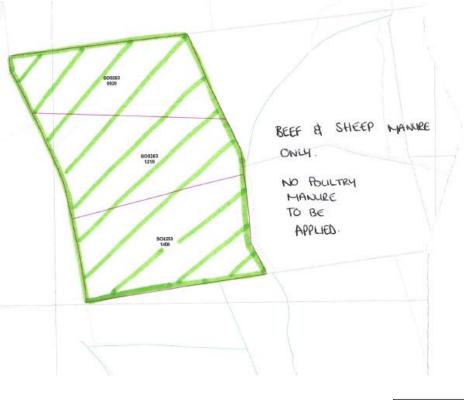
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JOB:	Proposed Free Range Poultry Extension
CLIENT:	AJT Powell
TITLE:	Range Plan
LOCATION:	Wern, Llanyre, Llandrindod Wells, Powys
SCALE:	Identification Purposes Only
DATE:	Jul-20
DRAWING NO:	GEJ/POWE/RP 2
DRAWN BY:	GEJ

The birds within the free range unit will graze the designated land in a rotational field system. The birds will step out of the building through the pop holes provided and onto a veranda, which shall ensure that the ground is not poached and compacted by the birds. The veranda shall also ensure that the feet of the birds are cleaned prior to entering the building. The birds will then be directed to those fields available for grazing in rotation to prevent over stocking of the ground and ensure the fertility of soil. Good pasture management is essential, and it is paramount the problems of parasitic intestinal worms and coccidian oocysts are avoided.

Electric fencing shall surround the ground used as part of the enterprise to prevent predators entering onto the land.

The range area extends to 16.19 for the proposed unit (40 acres and in total 32.38 hectares in total (80 acres).



All hedgerows within the Range area will be double fenced with chicken stock proof fencing. The range area field boundaries are 90% hedgerows and the business wish to protect them. The hedgerow boundaries also act as shelter for the birds therefore it is important to protect them.

All watercourses will be fenced out using chicken fencing to prevent the birds damaging the watercourses and bank structures. Also, to prevent pollution of the watercourse.



Land drains will be placed where the ranging area slopes towards any sensitive water receptor to make sure that no sediment goes into the water and that it remains in the field.



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JOB:	Proposed Free Range Poultry Extension
CLIENT:	AJT Powell
TITLE:	Range Plan
LOCATION:	Wern, Llanyre, Llandrindod Wells, Powys
SCALE:	Identification Purposes Only
DATE:	Jul-20
DRAWING NO:	GEJ/POWE/RP 3
DRAWN BY:	GEJ