
Natural Resources Wales Response

Application for the erection of a
slurry store and all associated
works at Lower Fawnog, Fawnog
Lane, Upper Sarnau,
Llanymynech, SY22 6QW

Prepared for DE & MR Davies

The logo for Roger Parry & Partners is located in the bottom left corner. It consists of a dark blue square with a white border. Inside the square, the text "Roger Parry" is written in a large, yellow, sans-serif font, and "& Partners" is written in a smaller, white, sans-serif font below it. A yellow diagonal shape is at the bottom right of the square.

Roger
Parry
& Partners

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1. INTRODUCTION

- 1.1 This statement is prepared and submitted in connection with the planning application for a slurry store and associated works at Lower Fawnog, Fawnog Lane, Upper Sarnau, Llanymynech, SY22 6QW (24/0067/FUL).
- 1.2 Natural Resources responded to the application and this statement addresses their comments.

2. NATURAL RESOURCES WALES RESPONSE



Ein cyf/Our ref: CAS-248329-D3Q6
Eich cyf/Your ref: 24/0067/FUL

Powys County Hall
Spa Road East
Llandrindod Wells
LD1 5LG

Dyddiad/Date: 09 February 2024

Annwyl Syr/Madam/Dear Sir/Madam,

BWRIAD/PROPOSAL: Erection of slurry store and all associated works.

LLEOLIAD/LOCATION: Lower Fawnog, Llanymynech, SY22 6QW

Thank you for consulting Cyfoeth Naturiol Cymru (CNC)/Natural Resources Wales (NRW) about the above, which we received on 31 January 2024.

We have concerns with the application as submitted because inadequate information has been provided in support of the proposal. To overcome these concerns, you should seek further information from the applicant regarding pollution prevention. If this information is not provided, we would object to this planning application. Further details are provided below.

Pollution of controlled waters

We have reviewed the Planning Statement dated January 2024 by Roger Parry & Partners. We understand that the proposed slurry store is to overwinter slurry in line with the Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 (CoAPR) and there will be no increase in the existing livestock numbers at the farm.

Due to the limited detail submitted with this application we do not consider there is sufficient information to allow you to determine no impact on water quality in the area. We consider additional information is required to confirm that:

- Capacity of the store
- Confirmation it will be designed and built to the CoAPR standards.
- Calculations for the total farm slurry production (including dirty water) with clear indications on what is directed to the proposed and existing slurry stores.

We refer you to our [website](#) which identifies the information needed to support agricultural developments.

Any slurry produced should be managed in line with The Water Resources (Control of Agricultural Pollution) (Wales) Regulations 2021 and [Code of Good Agricultural Practice guidance](#). Any new channels or pipes to an existing slurry storage system must comply

with the Regulations 2021 and we should be informed of any substantial changes at least 14 days before construction begins. Further information on what we require is available on our website at [Natural Resources Wales / Silage and slurry storage](#).

Other Matters

Our comments above only relate specifically to matters included on our checklist, *Development Planning Advisory Service: Consultation Topics* (September 2018), which is published on our [website](#). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests.

We advise the applicant that, in addition to planning permission, it is their responsibility to ensure they secure all other permits/consents/licences relevant to their development. Please refer to our [website](#) for further details.

If you have any queries on the above, please do not hesitate to contact us.

Yn gywir / Yours faithfully

Cinzia Sertorio

Cynghorydd - Cynllunio Datblygu/Advisor - Development Planning
Cyfoeth Naturiol Cymru/Natural Resources Wales

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Croesewir gohebiaeth yn Gymraeg a byddwn yn ymateb yn Gymraeg, heb i hynny arwain at oedi./Correspondence in Welsh is welcomed, and we will respond in Welsh without it leading to a delay.

3. COMMENTS ADDRESSED

3.1 We consider additional information is required to confirm that:

- Capacity of the store
- Confirmation it will be designed and built to the CoAPR standards
- Calculations for the total farm slurry production (including dirty water) with clear indications on what is directed to the proposed and existing slurry store

Capacity of the store – please see slurry calculations below (Store 3)

We confirm that the slurry store will be designed and built to the CoAPR standards

Calculations of slurry production – please see slurry calculations below

Stores, yard and roof rainfall, parlour washings and wash water entry

Baseline farm data

Farm name / reference	Lower Farning
Total farmable area (hectares)	142 Ha
Slurry store 10 figure grid reference (e.g. SE354829496)	SJ2172615295
Cattle in herd/ pig herd size (includes calves, heifers, bulls, sows, finishers etc)	180 dairy cows
Cows in milk	170
Milk yield/cow	7000 litres
Depreciation buildings (%)	5 %
Interest rate (%)	6.75 %
Water cost (£/m ³)	1.8 £/m ³
Slurry spreading cost (£/cubic metre)	3.0 £/m ³
Water storage cost (£/cubic metre)	85.0 £/m ³
Dwell water cost (£/square metre)	5.0 £/m ²
Roofing cost (£/square metre)	120.0 £/m ²
Slurry store cost (£/cubic metre)	75.0 £/m ³

Slurry storage capacity for rectangular & circular tower stores

	Length (m)	Width (m)	Circumference of circular store (m)	Diameter of circular store (m)	Depth (m) (less 0.3m freeboard)	Capacity (m ³)	Surface area (m ²)	Surface area to store (m ²)	Tick if Covered Store
Store 1	34.78	14.02			2.6	1268	488	488	<input type="checkbox"/>
Store 2	40.13	18.05			2.7	1956	724	724	<input type="checkbox"/>
Store 3	25.5	18.2			6.9	3202	464		<input checked="" type="checkbox"/>
Store 4						0	0	0	<input type="checkbox"/>
Store 5						0	0	0	<input type="checkbox"/>
Store 6						0	0	0	<input type="checkbox"/>
Store 7						0	0	0	<input type="checkbox"/>
Store 8						0	0	0	<input type="checkbox"/>
Store 9						0	0	0	<input type="checkbox"/>
Store 10						0	0	0	<input type="checkbox"/>
Store 11 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 12 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 13 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 14 - circular				0.0		0	0	0	<input type="checkbox"/>
Store 15 - circular				0.0		0	0	0	<input type="checkbox"/>
Total existing capacity						6426	1676	1212	

Freeboard : reduce the depth to allow for freeboard (0.3 metres for a steel or concrete store)

Slurry separator

Do you operate a separator for the slurry entering the store(s)?	No
% reduction in slurry	

Adjust the % to reflect the average reduction in slurry volume (refer to manufacturers guidance)

Parlour washings to slurry store

Parlour washings to slurry store	Yes
Parlour washing litres per cow per day (l/h/d)	20

Note: Suggested 5 to 15 l/h/d robotic milkers (check with manufacturer); 20 l/h/d low pressure system; 30 l/h/d high pressure system.

Uncovered areas of dirty yards, silage silos and earth bank surrounds to slurry store

	Length (m)	Width (m)	Area (m2)
Yard 1			692
Yard 2			1228
Yard 3			2312
Yard 4			0
Yard 5			0
Yard 6			0
Yard 7			0
Yard 8			0
Yard 9			0
Yard 10			0
Yard 11			0
Yard 12			0
Yard 13			0
Yard 14			0
Yard 15			0
Yard 16			0
Yard 17			0
Yard 18			0
Yard 19			0
Yard 20			0
Total yard area			4232

Note: For each yard please either enter yard dimensions and the tool will calculate the yard area, or if yard area known please enter the yard area in m2.

Roof water area to slurry store

	Length (m)	Width (m)	Area (m2)
Roof 1			0
Roof 2			0
Roof 3			0
Roof 4			0
Roof 5			0
Roof 6			0
Roof 7			0
Roof 8			0
Roof 9			0
Roof 10			0
Roof 11			0
Roof 12			0
Roof 13			0
Roof 14			0
Roof 15			0
Total roof area			0

Livestock	Age	Liveweight/milk yield (litres)	Number of livestock	% collected as slurry	Annual N output kg/year	Daily excreta (lit/day)	Total collected as slurry (lit/day)	Total N (kg/year)
Cattle								
Dairy Cow	After first calf	High (> 9000)		100%	115.0	64.00	0	0
Dairy Cow	After first calf	Medium (9000-9000)	180	100%	101.0	53.00	9540	18180
Dairy Cow	After first calf	Low (< 8000)		100%	77.0	42.00	0	0
Dairy heifer replacement	From 12 months to calving	-		100%	61.0	40.00	0	0
Dairy heifer replacement	2 to 12 months	-		100%	29.0	20.00	0	0
Beef Suckler	Over 24 months	Large (> 500)		100%	83.0	45.00	0	0
Beef Suckler	Over 24 months	Small (< 500)		100%	61.0	32.00	0	0
Grower	Over 24 months	-		100%	50.0	32.00	0	0
Grower	12 to 24 months	-		100%	50.0	26.00	0	0
Grower	2 to 12 months	-		100%	28.0	20.00	0	0
Bulls Beef	Over 2 months	-		100%	54.0	26.00	0	0
Bulls for breeding	Over 24 months	-		100%	48.0	26.00	0	0
Bulls for breeding	2 to 24 months	-		100%	50.0	26.00	0	0
Calf	Under 2 months	-		100%	1.4	7.00	0	0
Total number of cattle			180			Totals for cattle	9540	18180

Action points	
Number of months of storage	7
Maximum likely 2 day rainfall	71
Recommended reception pit size (m3)	325
Farming Rules for Water recommendations	You comply with the guidance for minimum storage of 6 months
Roof water collection recommendations	
Slurry store cover recommendations	

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Days	30	31	30	31	31	28	31	30	31	30	31	31	365
Total cattle excreta as slurry (m3)	286	296	286	296	296	267	296	286	296	286	296	296	3482
% Cattle excreta to slurry store (100% for housed dairy, 20 to 50% if housed overnight, 10% for grazed dairy)	100	100	100	100	100	100	100	100	100	100	100	100	
Total pig excreta as slurry (m3)	-	-	-	-	-	-	-	-	-	-	-	-	-
% Pig excreta to slurry store	100	100	100	100	100	100	100	100	100	100	100	100	
Total other livestock excreta as slurry (m3)	-	-	-	-	-	-	-	-	-	-	-	-	-
% Other excreta to slurry store	100	100	100	100	100	100	100	100	100	100	100	100	
Excreta to slurry store (m3)	286	296	286	296	296	267	296	286	296	286	296	296	3,482
Slurry separated (m3)	No	-	-	-	-	-	-	-	-	-	-	-	-
Parlour washings (m3)	Yes	102	105	102	105	105	105	102	105	102	105	105	1,241
Pig wash water (m3)	0.0	-	-	-	-	-	-	-	-	-	-	-	-

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Grid reference average rainfall (mm)	75	88	88	108	96	67	63	59	54	55	39	54	848
Own average rainfall (mm)													
Adjusted likely rainfall, (mm)	86	102	101	124	111	78	73	68	62	64	45	63	975

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total
Storage required	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	
Yard run off area to slurry store (m3)	4232	430	426	525	468	328	309	288	264	269	190	265	4,126
Slurry store rainfall to store (m3)	1212	123	122	150	134	94	88	83	76	77	54	76	1,182
Roof water area to store (m3)	0	-	-	-	-	-	-	-	-	-	-	-	-
Total cubic metres (m3)	857	955	936	1,076	1,003	785	798	-	-	-	-	-	6,410
Cumulative production (m3)	857	1,811	2,748	3,824	4,827	5,611	6,410	6,410	6,410	6,410	6,410	6,410	6,410
Total storage capacity (m3)	6426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426	6,426
Capacity less production (m3)	5,569	4,615	3,678	2,602	1,599	815	16	16	16	16	16	16	16

Cost/Benefits	Net Benefit £/year
Divert roof water	0.0
Divert roof water & harvest	0.0
Roof dirty yard	-28103.4
Roof dirty yard & harvest water	-62092.4

The cost/benefit is based on a slurry storage cost of £75/cubic metre

There are two main concrete slurry stores (existing) at Lower Fawnog as well as various channels running through cubicle sheds. All slurry, parlour washings and silage effluent is contained in the slurry stores. No roof water goes to the slurry stores.

Above shows the calculations of the slurry produced, which has been calculated between October and February to provide the storage requirement for the business.